DSM US Investor Event 2016

22 – 23 September 2016

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HEALTH NUTRITION MATERIALS

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Safe harbor statement

- This presentation may contain forward-looking statements with respect to DSM's future (financial) performance and position. Such statements are based on current expectations, estimates and projections of DSM and information currently available to the company. DSM cautions readers that such statements involve certain risks and uncertainties that are difficult to predict and therefore it should be understood that many factors can cause actual performance and position to differ materially from these statements. DSM has no obligation to update the statements contained in this presentation, unless required by law.

- 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

- **Food Specialties**
- Hydrocolloids
- Human Nutrition & Health | Introduction
- Dietary Supplements
- i-Health
- Early Life Nutrition
- Nutrition cost & efficiency program
- Animal Nutrition & Health | Introduction
- Green Ocean
- Resins & Functional Materials
- Engineering Plastics
- Dyneema
- Advanced Surfaces

Food Specialties

Ilona Haaijer, President DSM Food Specialties

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DSM Food Specialties: Our vision

Dynamic and improving

Better tasting
Reduced sugar, salt or fat
Enhanced (fiber, protein)
Healthier

Produced more efficiently
Less waste
More sustainable

Serving consumers around the world, from niche to masses, for today and generations to come

ENABLING BETTER FOOD FOR EVERYONE

Apply state-of-the-art science in biotechnology, unlocking value for customers

We partner with and serve the food industry

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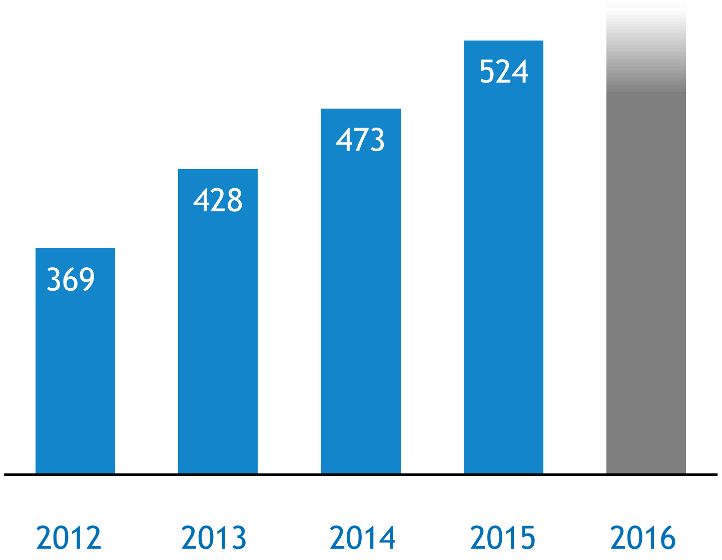
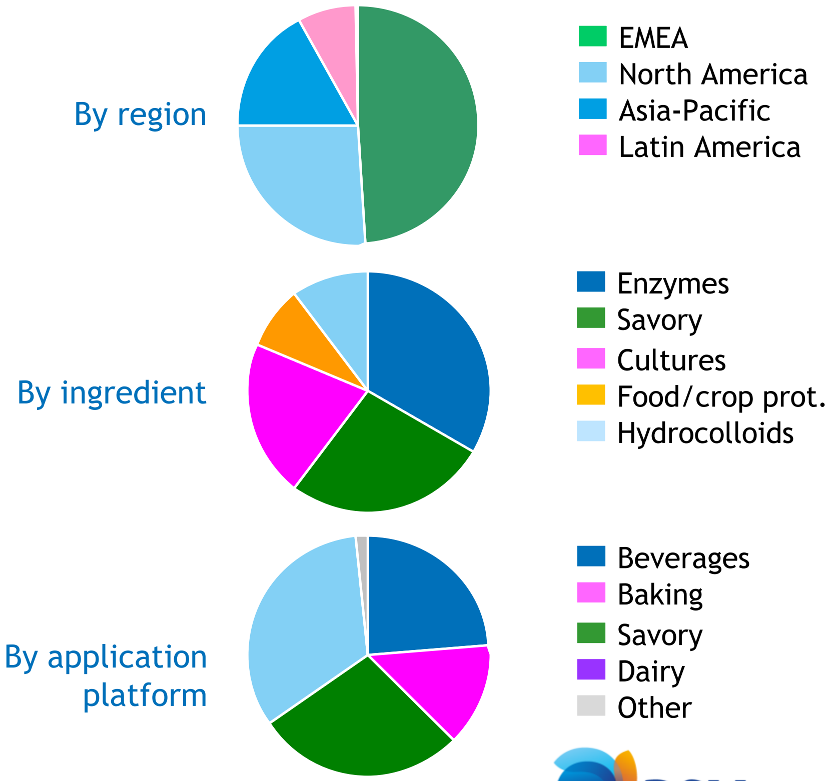
DSM Food Specialties: Healthy growth in sales & profitability

Sales - €m*



* Including sales of hydrocolloids

2015 Sales* overviews



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Key dynamics driving the food specialties space

Health	Sugar, salt and fat reduction, without compromise on taste & mouthfeel
Convenience and taste	Convenience and taste are key purchase drivers, above price
Clean label	Strong consumer demand for ‘kitchen cabinet’ ingredients, removal of undesired chemicals, clean and clear labels
More and Faster	Rapidly growing world population, food production more than 8 times more efficient since 1940
1 billion new consumers	Diverse cultures, eating habits and taste/flavor preference, localized solutions key despite globalisation

Well placed to serve megatrends across the market

Platform

Sugar Reduction	Digestive Health	Taste Modulation	Food chain Efficiency	Bio-preservation

Core to Solution

Stevia	Lactase Enzyme	Yeast Extracts	Enzymes & Cultures	Natamycin

Solution toolbox

- Combinations of HI sweeteners and lactase enzymes
- Enzymes, pro-and prebiotics (fibers)
- Savoury flavors, enzymes, cultures
- Enzymes, Cultures, Preservation systems
- Natamycin, Enzymes, Cultures, Preservation systems

Industry

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Solutions across value chains: e.g. dairy industry

Farm supply → Farm → Raw milk → Milk processing → Distribution → Consumer






Animal Health

Silage cultures

Vitamins

Fodder & Premix

Clean Cow

Quality Control

Antibiotic residue testing

Innovative functionalities

Milk, cheese, yogurt & whey production

Enzymes

Cultures & Probiotics

Natural Ripening

Gellan gum & pectin

Freshness & Shelf-life

Natural preservation

Packaging materials

Health & Nutrition

Lactose-free

Low sugar, low fat

Taste & Texture

Digestive health

Nutritional lipids

Vitamins

Beta-Carotene

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Enzyme Solutions

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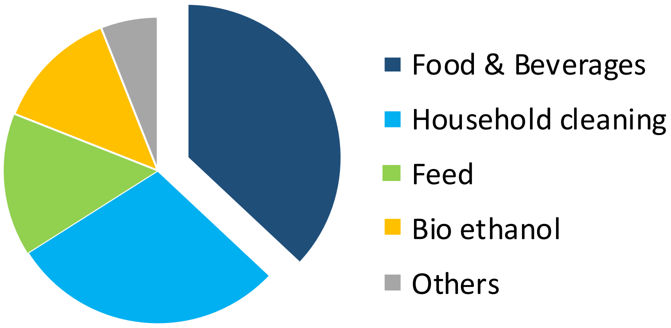
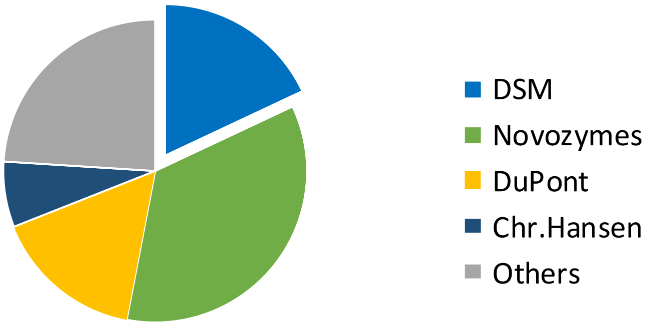
Enzymes: a highly attractive growth market for DSM

2015 Global Enzymes market € 3.0bn, CAGR ~5%



2015 Competitive landscape in the global Food & Beverages enzymes market



Market drivers for Food & Beverages

- Need for natural sustainable solutions
- Increasing demand for processed food
- Increasing raw material prices

DSM well positioned

- Innovation & development capabilities
- Broadest portfolio in Nutritional ingredients, enabling offering combinations in solutions
- Global network in Food & Beverages

Spotlight: PreventASe® preventing acrylamide formation

- PreventASe® enzyme reduces acrylamide up to 90% in a wide range of food products and processes
- Acrylamide is a substance (Maillard reaction) that can be formed during high-temperature processing of foods
- Provides Food Manufacturers complete peace of mind in terms of adhering to or be ahead of regulatory standards and consumer health concerns

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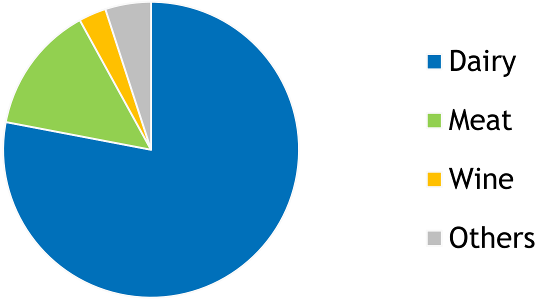
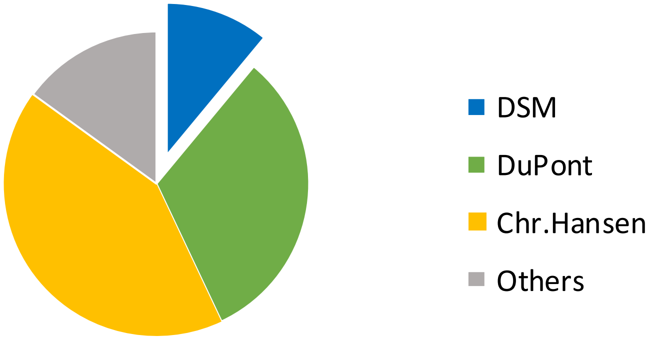
Cultures

Cultures: DSM clear, creditable alternative to market leaders

2015 Global food cultures market ~€1bn, CAGR ~6%



Competitive Landscape in the cultures market



Market drivers for cultures

- Healthy dairy products
- Globalization/fast industrialization of fermented milk products
- Ongoing expansion to new application areas

DSM well positioned

- Fermentation technology know-how
- Broad portfolio in Nutritional ingredients, enabling offering combinations in solutions
- Access to dairy industry worldwide

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Spotlight: Unique proposition for greek yoghurt

- Greek yoghurt is a very popular thick and creamy yoghurt, high in protein and low fat properties

- DSM has developed a specific range of cultures for this type of yoghurt: Delvo®Fresh Greek Legends

- Delvo®Fresh Greek Legends provides the desired taste, texture and low fat properties, typical for this Yoghurt with a better appearance

- Due to its lower fermentation time it has additional processing advantages for producers

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Savoury

Savoury: Salt reduction & flavor enhancement

DSM, leading supplier of yeast based taste components

- Clean label solutions for every taste direction
  - ✓ Standard Yeast Extracts, Process Flavors & High nucleotide Yeast Extracts
- Salt reduction toolbox
- Taste modulation (mouthfeel, masking)
- Flavorings solutions through biotechnology

Market drivers

- Salt reduction without compromising on taste
- Clean label solutions
- Regional and local taste preferences
- Convenience (“snack on the go”)

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Stevia

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Consumers and governments globally moving away from sugar

THE IRISH TIMES

Sugar tax set to be introduced in budget due to obesity concerns

THE HUFFINGTON POST

Sugar Is Not Only a Drug but a Poison Too

FINANCIAL TIMES

Mexico urged to double tax on sugary drinks

theguardian

Childhood obesity: retailers urge mandatory cuts to food sugar levels

CNN Money

Philadelphia passes a soda tax

Herald Sun

Hidden sugar harms our children's teeth and health

South China Morning Post 南華早報

Hong Kong impose a sugar tax and warning labels

TIME

Sugar Is Definitely Toxic, a New Study Says

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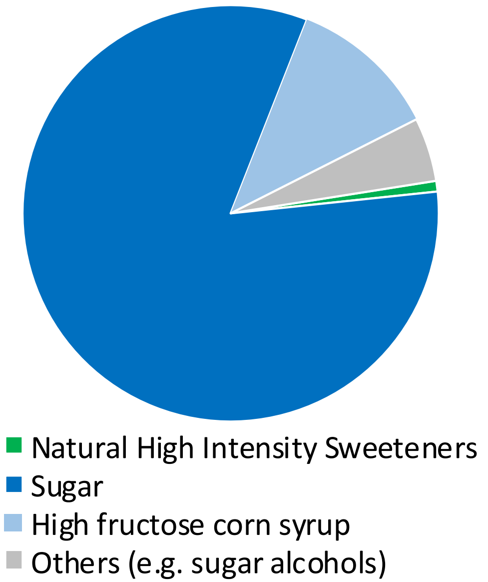
Sugar reduction offers big opportunity for DSM's Stevia

- Sugar is ~80% of current sweetener market
- Stevia is the only viable and large scale new alternative in the foreseeable future
- Fermentative Stevia is the future for:
  - ✓ Sustainable production
  - ✓ Several relevant sweetener molecules, eg
    - ✓ Reb A, the most *available* in plants
    - ✓ Reb M, the most *potent* rebaudioside, but not very available in plants
    - ✓ Potentially Reb D
- DSM has developed a unique cost effective technology to produce Reb A and Reb M

2016 global market for sweeteners: >€60 bn



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DSM's fermentative Stevia helps meet growing market demand

Reliable quality

Answer to consumers for non-artificial sweet taste without the calories. Identical to plant-extracted Stevia but at a higher purity. Consistent quality, not dependent on agricultural circumstances

Sustainably produced

Fermentative Stevia has significant sustainability benefits in water and land usage – as less than 10% of the actual Stevia leaves can be used to produce steviol glycosides

With a flexible supply

DSM unlocks the potential for further sugar reduction via tailor-made sweet solutions with shorter lead times and more flexible scalability potential

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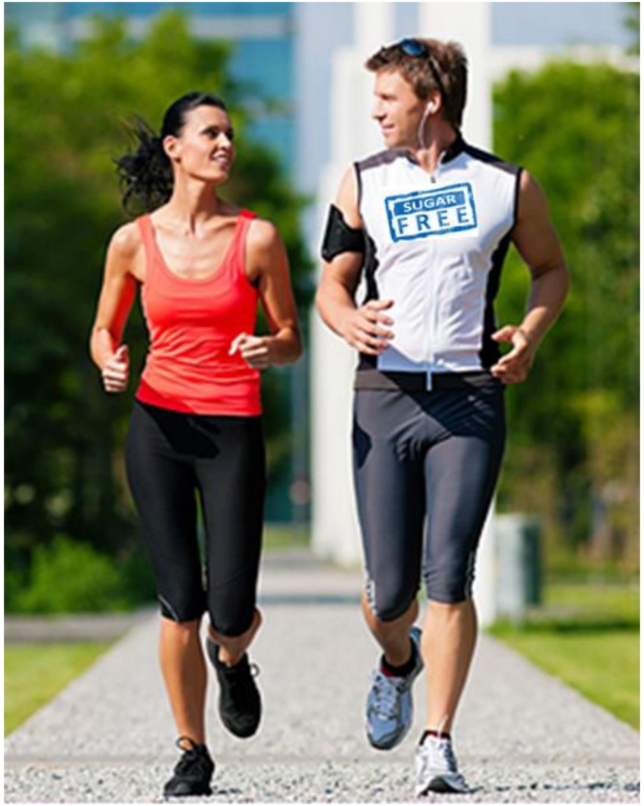
DSM well on track to capture the Stevia potential

- DSM's development program for Stevia well on track:
  - ✓ Regulatory submissions as well as FTO/IP work streams ongoing
  - ✓ Launch plans in close cooperation with major customers
  - ✓ Commercial availability projected by end of 2018

- DSM well positioned
  - ✓ Biotech powerhouse with strong track record in development of bio-based blockbusters
  - ✓ Unique process to produce cost efficient Reb A & M, unlocking full sugar reduction potential
  - ✓ Via its broad and global nutrition network, access to attractive segments for fermentative Stevia, application knowhow including global access to F&B Industry



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Hydrocolloids: Exciting Innovative Growth Platform

Xiangwei Gong, Business Director Hydrocolloids

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What are **hydrocolloids?**

- Hydrocolloids are thickeners and stabilizers that dissolve, disperse or swell in water to provide a broad range of critical functionalities and physical attributes, including gelling, texture, mouthfeel, viscosity, suspension and emulsification
- DSM's Hydrocolloids (versatile polysaccharides) are derived from nature through extraction or fermentation

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Hydrocolloids: Main functionalities & applications

功能
Functionalities

凝胶 Gelling & Texturizing	增稠 Thickening	稳定 Stabilizing	膳食纤维和益生元 Dietary Fiber & Prebiotic

应用
Applications

- 糖果 Confectionery
- 橘子酱 Marmalades
- 果酱 Jams
- 烘培 Bakery Products

- 低糖饮料 Low Sugar Beverage
- 蛋白饮料 Protein Drinks
- 酸奶 Yoghurt

- 蛋白质稳定 Protein Stabilisation
- 果汁饮料 Juice Beverage
- 营养果粒 DSM's Nutri-beads

- 代餐 Meal Replacement
- 咀嚼片 Fiber Tablets

Three major underlying trends driving hydrocolloids

- Affordable nutrition, dairy & alternative proteins
- Consumer's demand for "Natural and Wholesome" foods
- Recognition of the benefits of probiotics and prebiotics

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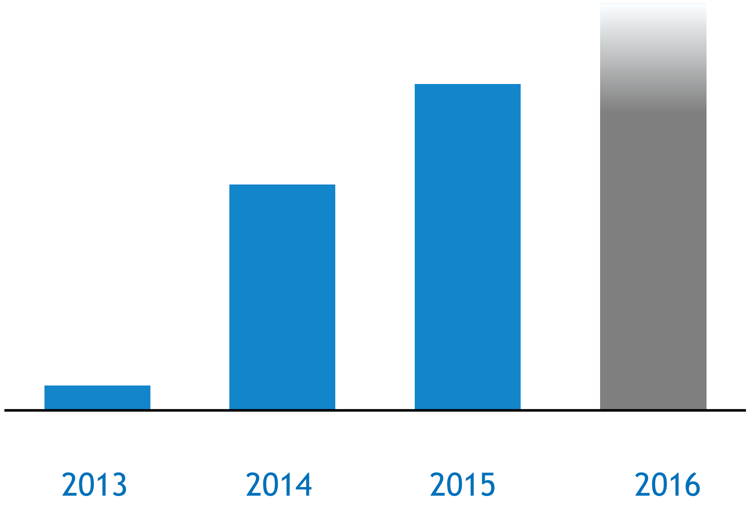
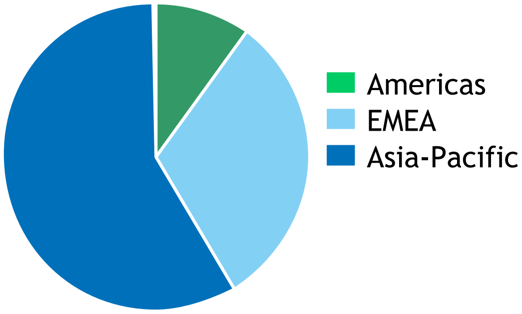
DSM in hydrocolloids: Strong growth in sales with above average profitability

Sales - €m

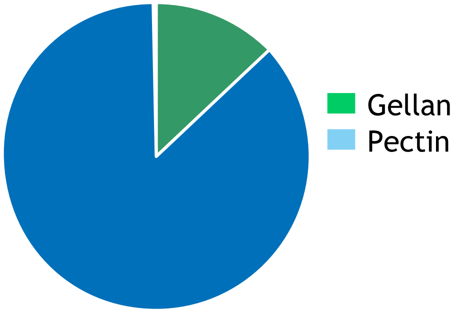


2015 Sales ~€50m

By region



By ingredient



Key businesses of DSM Hydrocolloids are gellan gum and pectin

DSM Hydrocolloids

Gellan Gum

Pectin

Production facility Gellan gum
DSM Zhongken Biotechnology (China)

Production facility Pectin
DSM Yantai Andre Pectin (China)

Spotlight on Pectin

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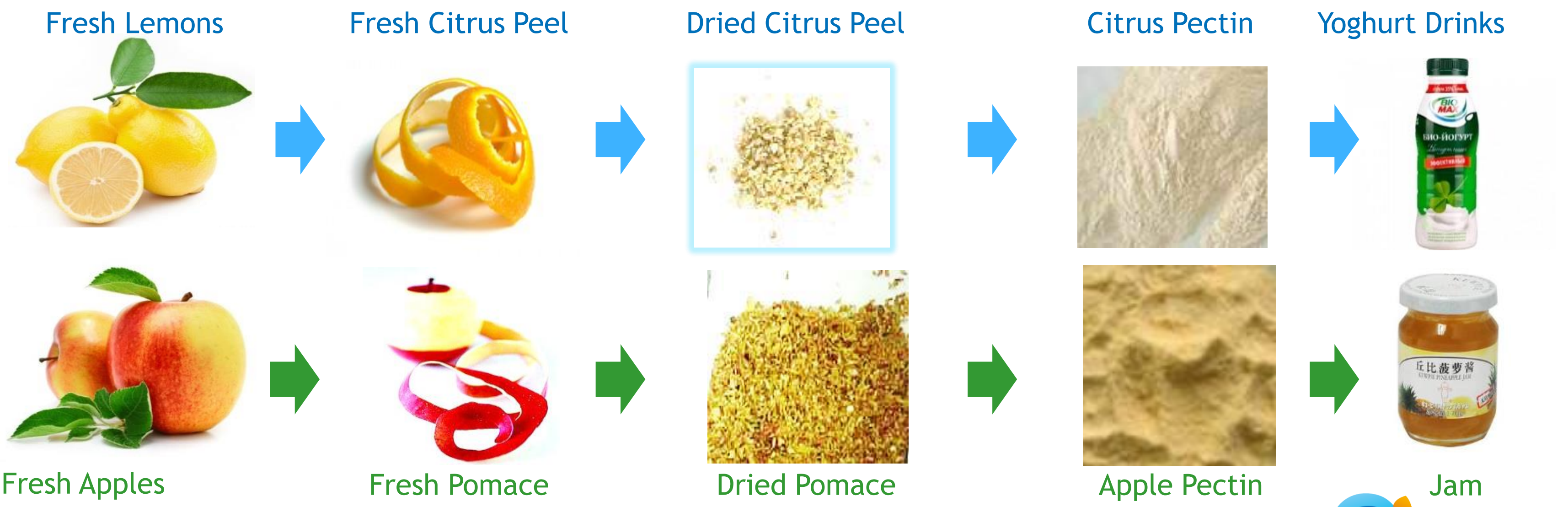
Pectin production: Nature is our source

- Pectin is a major component of cell walls of plants; DSM extracts it from apple pomace and citrus peels
- Application is gelling / stabilizing agent in food jellies and beverages: dairy/yoghurt drink, jam & marmalade, confectionary, beverages, bake stable fruit preparation, fruit spread, glazing, texture improvement



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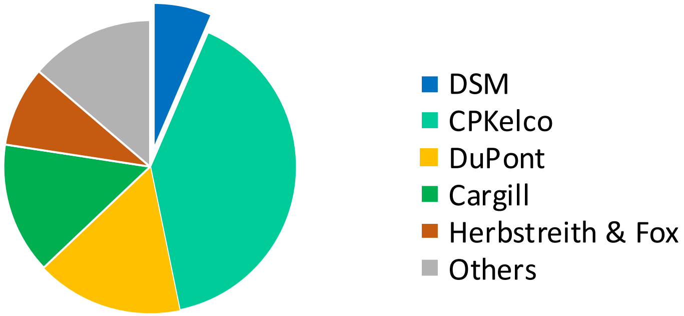
Pectin: a highly attractive growth market for DSM

2015 Pectin market ~€600m, CAGR ~5%

- Largest traditional markets for pectin are Europe and USA
- Fastest growing markets are China (>8%), rest of Asia (>5%) and Russia (>5%)
- Main competitors have their production concentrated in Europe and LATAM

2015 Concentrated competitive landscape in the global pectin market



Market drivers for Pectin

- Need for natural solutions, clean label
- Need for affordable, healthy and tasty solutions
- Need for stable solutions
- Need for comfort

DSM well positioned

- Production facility in China (largest producer in Asia), where market grows the fastest
- Innovation agility and global supply chain
- DSM's high quality reputation
- Access to DSM's global Nutrition network
- Cost position in China

Spotlight on Gellan Gum

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Gellan Gum: Sustainable fermentative gelling agent

- Gellan Gum is a natural, multi-functional polysaccharide produced by a sustainable fermentation process (with glucose/soy as feedstock)
- Application is a gelling / stabilizing agent in food jellies, beverages, dairy drinks, plant protein drinks, yoghurt, yoghurt drinks, drinking jellies, dysphagia food
- Sustainable fermentative nature-based alternative stabilizer replacing for instance carrageenan

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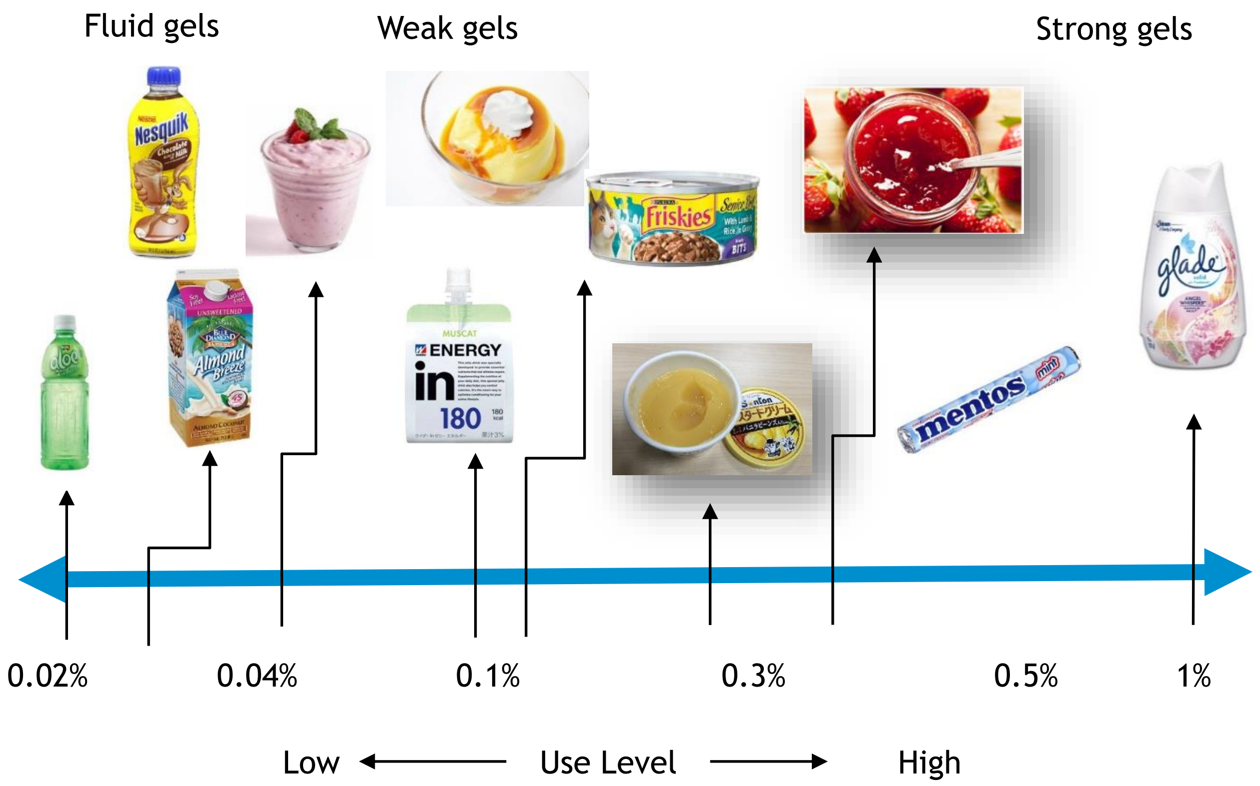
Imagine texture possibilities with Gellan Gum



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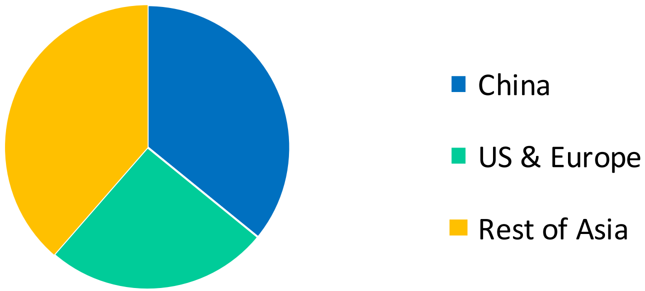
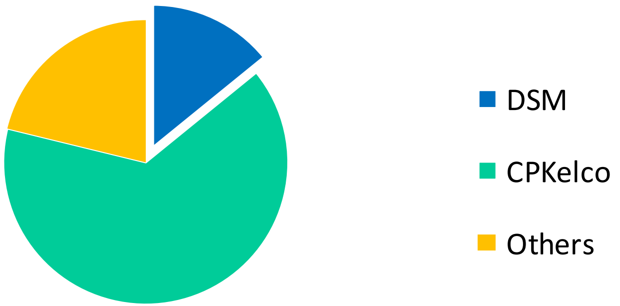
Gellan Gum: markets expected to double in 5 years

2015 premium gellan-gum market ~€100m, with double digit CAGR



2015 Competitive landscape; DSM aiming at higher end market



Market drivers for gellan gum

- Need for natural solutions, clean label, wholesome foods
- Need for affordable, healthy and tasty solutions
- Need for stable solutions

DSM well positioned

- Technology know how, fermentation competences
- Application breadth and agility
- Access to DSM’s global Nutrition network
- DSM’s high quality reputation

Innovation in hydrocolloids: Nutri-bead

Innovative Product Example : Nutri-beads – Nutrients That You Can Feel in Your Mouth!

- Provide customers with experience of "**nutrients that you can feel in your mouth**"
  - ✓ Improves nutrient stability, reduce oxidation
  - ✓ No flavor impact from nutrients such as DHA
  - ✓ Simplifies stabilization of hydrophobic nutrients such as DHA, vitamins A, D, E
  - ✓ Heat stability for both pasteurization and UHT processes, applicable in dairy, beverages and other applications
- Customizable formulations and texture

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Strategy going forward in hydrocolloids

- Pursue double digit growth through organic growth (via innovation, M&S excellence, capacity expansions)
  - ✓ Secure global top 3 positions in pectin and gellan gum
- Bolt-on acquisitions & partnerships
- Use DSM broad Nutrition network and access to (high-end) customers to globally leverage the position in hydrocolloids
- Use DSM's technological competences (a/o fermentation) to strengthen best in class cost position of DSM's Chinese manufacturing asset base
- DSM hydrocolloids will have a significant contribution to achieving DSM's ambitions in Nutrition, via double digit growth at above average margins

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Human Nutrition & Health

Jeremy Xu, President of Human Nutrition & Health

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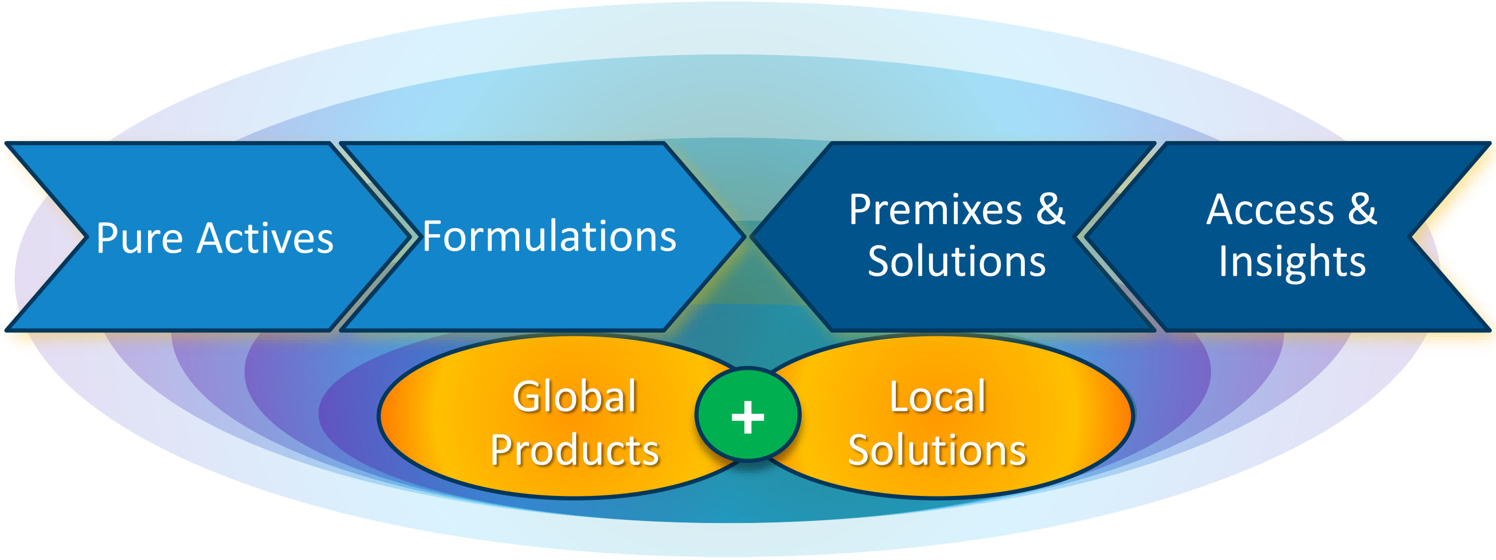
DSM provides local nutritional solutions on a global scale

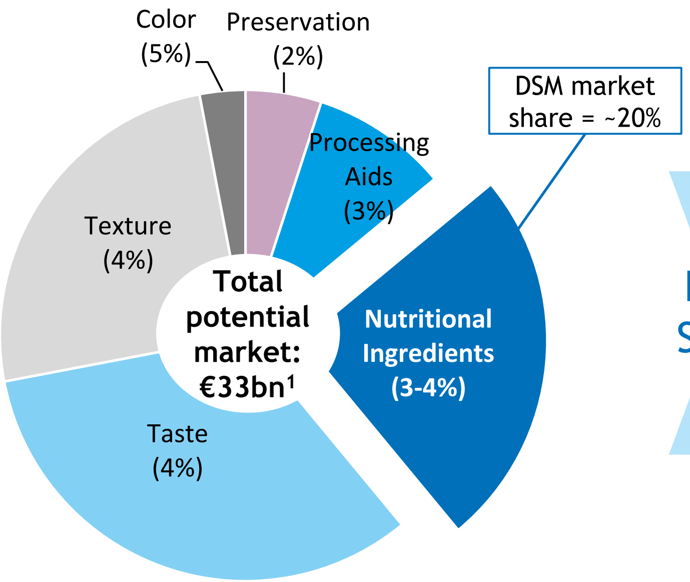
- DSM is global leader in nutrition, with broadest portfolio of specialty nutritional ingredients, global presence and an unparalleled local network
- DSM is uniquely positioned in all steps of the value chain: the production of pure active ingredients, their incorporation into sophisticated forms, the provision of tailored premixes and forward solutions



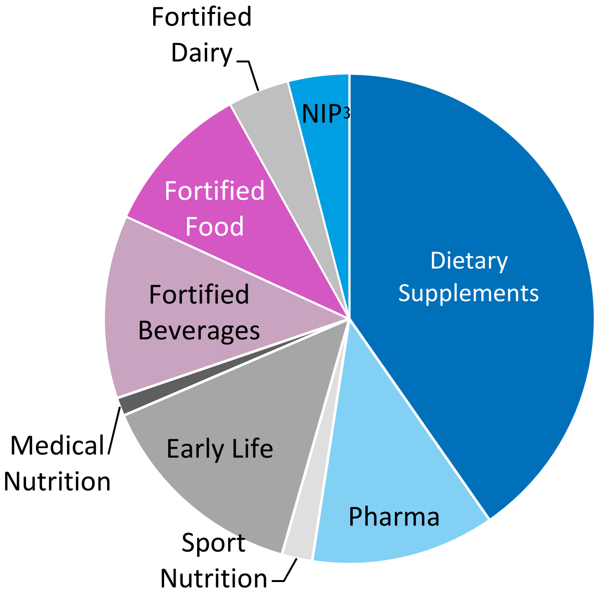
Our Human Nutrition is leading in nutritional ingredients

Specialty Food Ingredients market and growth

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



Diversified application landscape[2]



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Growth Human Nutrition: Step-up to above market growth

Human Nutrition[1]	Key 2016-2018 actions driving profitable growth

- Repair growth in North-America, returning Dietary Supplements (Vitamins, Omega-3) and F&B to growth
- Continued double-digit growth of i-Health business
- Accelerating forward solutions and premix globally
- Capture business in Pharma, Clinical, and Sports Nutrition
- Upgraded organization, new tools, rigorous execution

1 At steady prices, CAGR %

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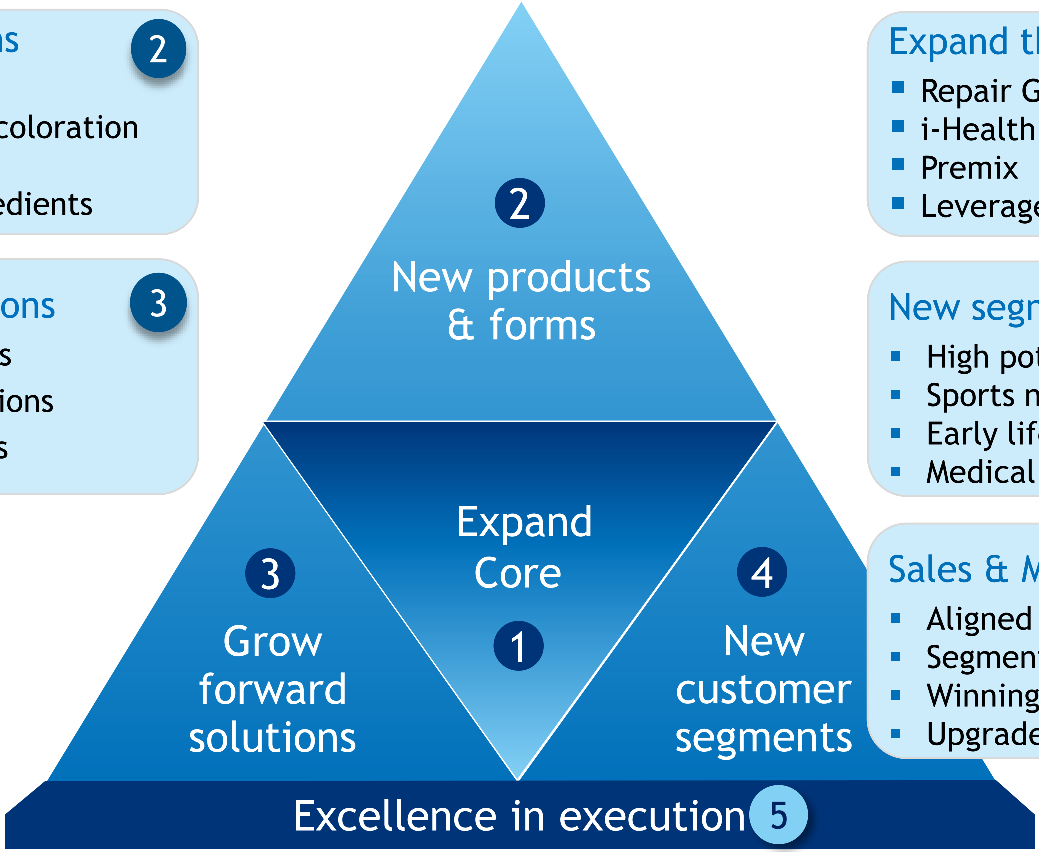
Strategy 2018: Profitable growth in Human Nutrition & Health

New products /forms (2)
- Vitamin Forms
- Fermentation based coloration
- New Lipids / Meg3
- New Nutritional ingredients

Grow forward solutions (3)
- Retail Ready solutions
- Premix forward solutions
- Malnutrition solutions



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

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

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

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Dietary Supplements

Jeremy Xu, President DSM Human Nutrition
Tobe Cohen, Business Director NA Dietary Supplements

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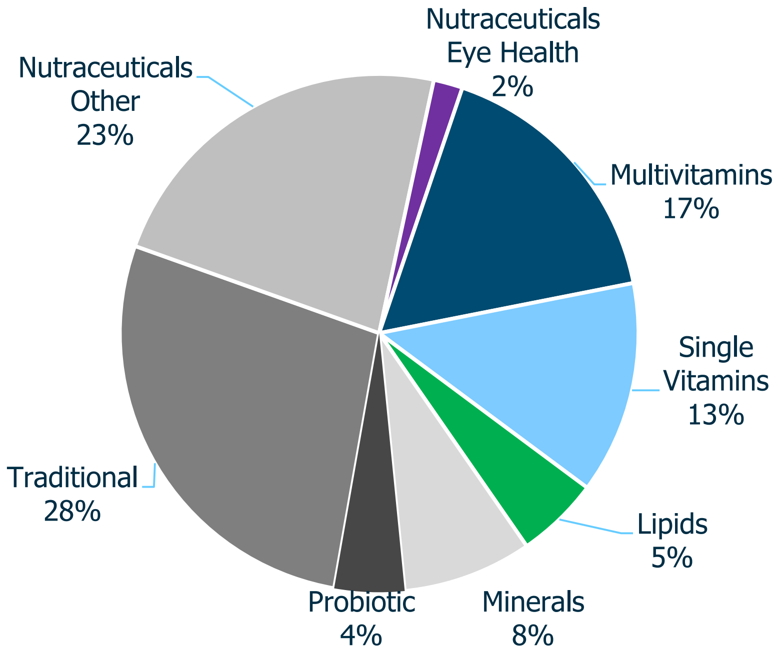
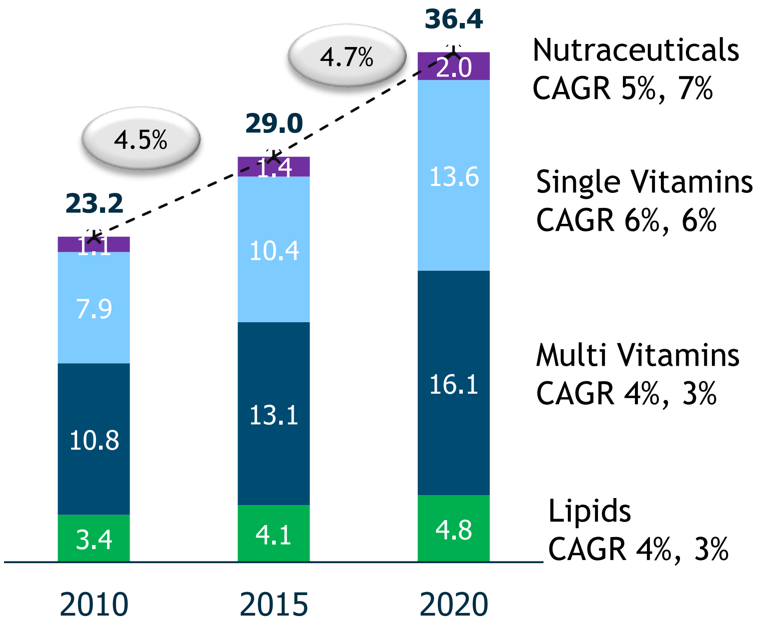
A highly attractive, large and growing market

Total consumer market ~ €78bn



Key categories



Macro trends remain favorable for growth

Growth in emerging markets

- Strong growth especially in Asia

Health & Wellness

- Aging population
- Consumer prefer preventative health
- Regulatory control (supportive for consumer confidence)
- Innovation: technology is making things more accessible

New channels

- E-commerce growth (Web shops, “web-doctors”)

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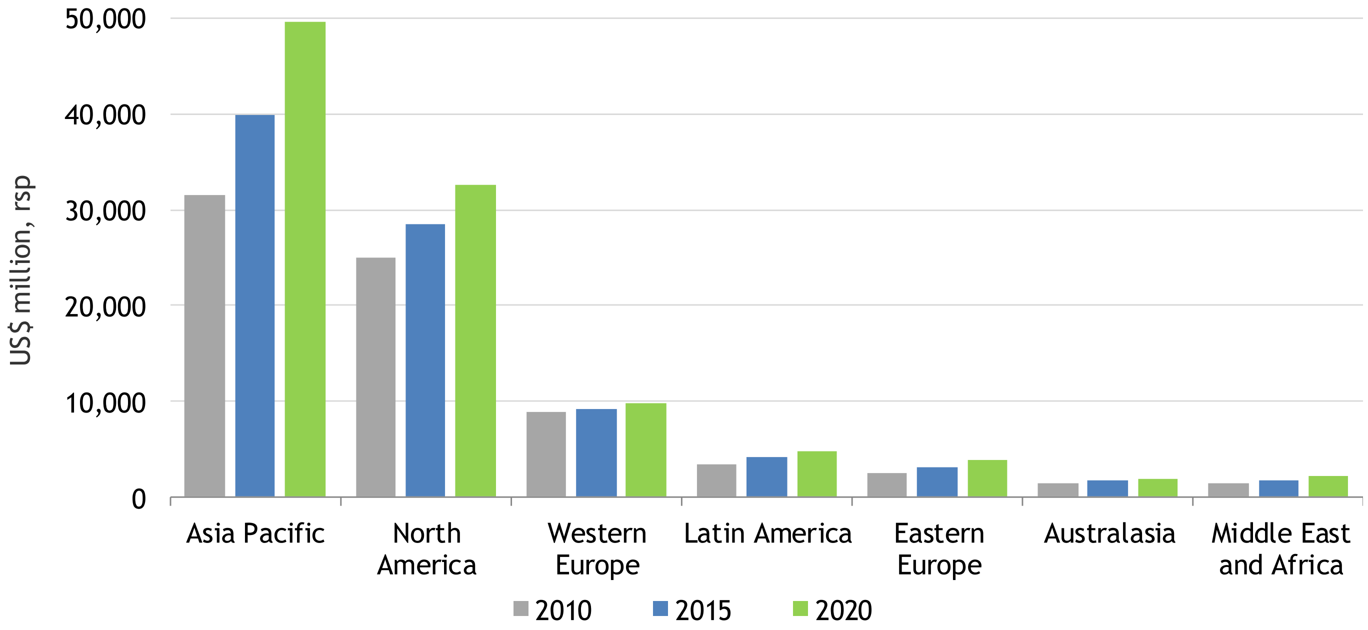
Strongest growth & highest potential in Asia Pacific

VDS Sales by region – 2010 to 2020



Euromonitor Passport, OTC Developments 2016

North American supplement overview

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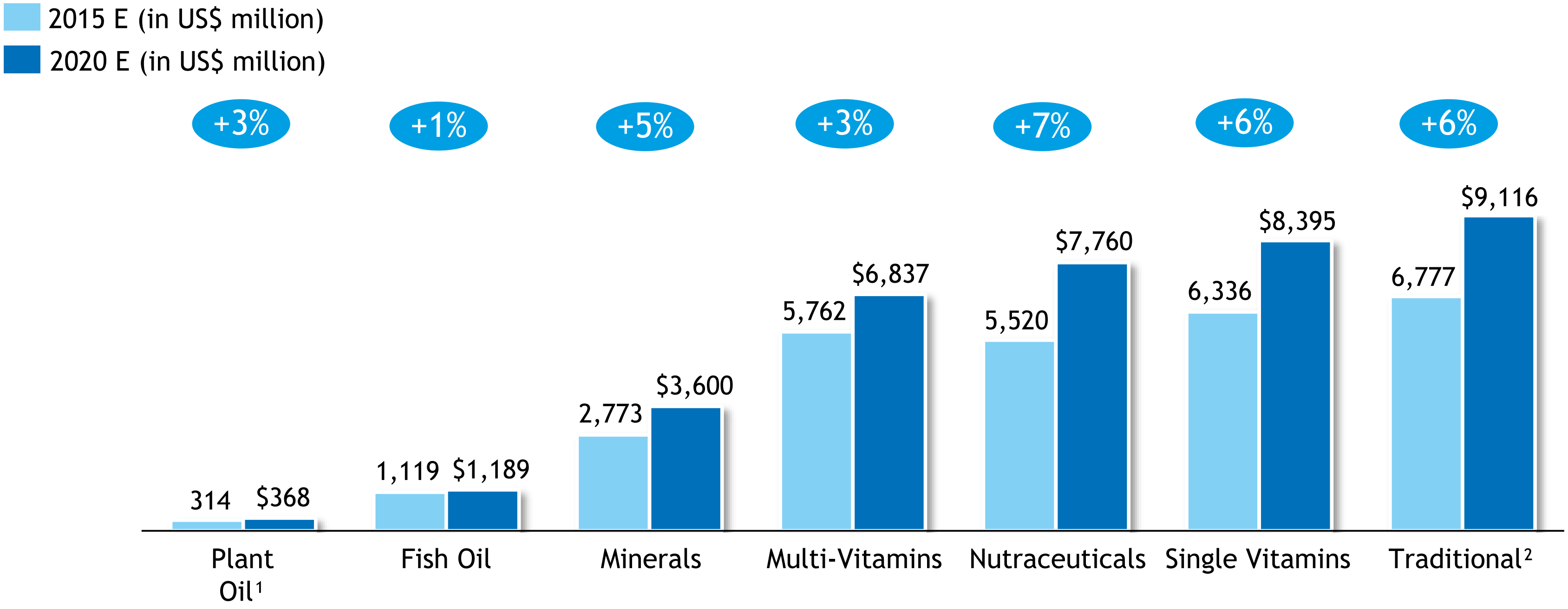
Continued growth expected, well above GDP in North America



Sources: NBJ Report 2015
[1]Plant Oil: Includes Algal, ALA, Flaxseed, etc…)
[2]Traditional: Includes Herbs & Botanical ingredients such as Turmeric & Multi-Herbs.

Key priorities for DSM to drive growth in North America

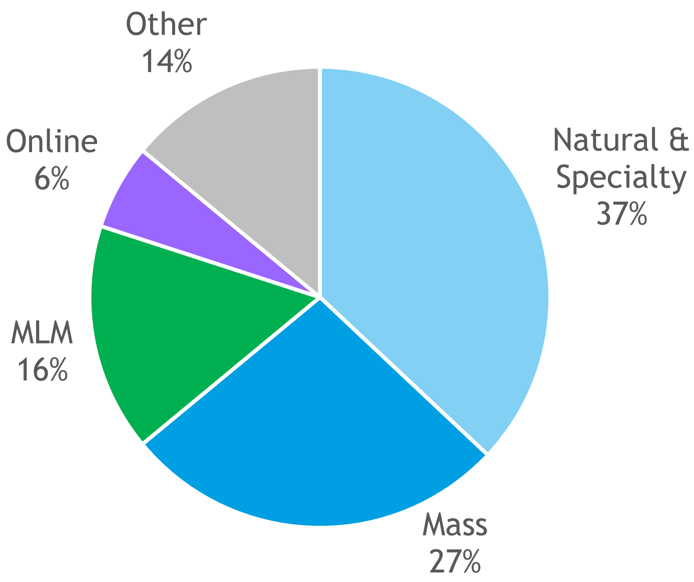
1. Broaden our customer base

2. Reinvigorate core categories

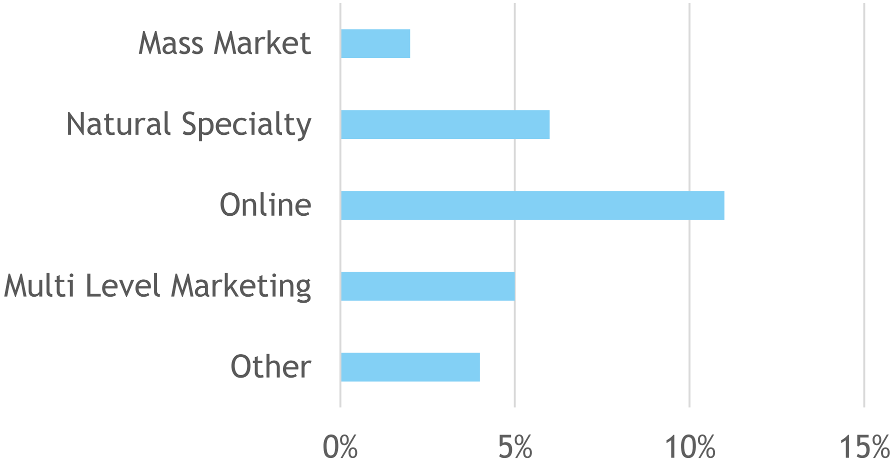
3. Capture greater value through broadening solutions

Broaden customer base to underdeveloped, faster growing segments

~US$29bn market (2015)



Market segment growth rates



[1] Excludes GNC/Nutra Business
[2] Margin Excluding Life's DHA Website. Margin Increases to 63% when Life's DHA is Included.
Sources: DSM 2014 Internal Numbers. 2015 NBJ Report. Nielsen Data for 52 Weeks ending 2/20/16.

Strategic marketing driving focused growth

- Strategic marketing implemented
  - ✓ Increased insights & developed value propositions specific to each segment
- Customer segmentation
  - ✓ Focus on the highest opportunities: winning customers and channels
  - ✓ Distribution partners for smaller customers
  - ✓ Penetrate new customers and segments
- Upgrading organization and tools, stronger execution

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Example:
METAFOLIN - Vitamer

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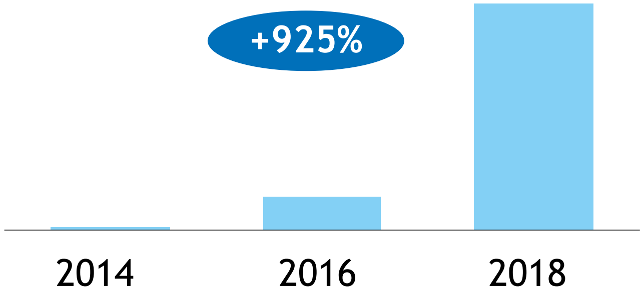
METAFOLIN® | A naturally-occurring form of folate

- 1 out of 3 people are unable to metabolize folic acid
- METAFOLIN is a biologically active folic acid
- Can be well absorbed in the body and ensures adequate up take of folic acid
- IP is in advanced enzymatic processes
- Unique and promising product

Metafolin sales - US$



Product Form	Typical Price US$/kg
Folic Acid	US$ 300
Metafolin	US$ 20,000

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Key priorities for DSM to drive growth in North America

1. Broaden our customer base

2. Reinvigorate core categories

3. Capture greater value through broadening solutions

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Meg 3C resolves the key unmet needs in the category

54%

Of Fish Oil supplement buyers buy once and do not return to the category.

Barriers to Overcome:

- Large pill size
- Fishy burp
- Too expensive

Nielsen; Nov. 2016; HH Panel

47%

Of Omega-3 supplement shoppers walk away without making a purchase in the VMS section

Barriers to Overcome:

- Difficulty Finding
- Hard to Choose
- Not on Promotion

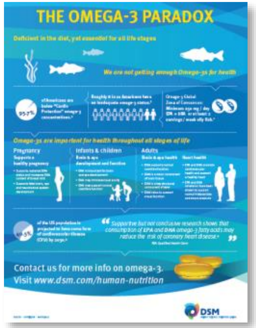
DSM 2016 Omega-3 Shopper Insights Study

Global Launch Toolkit for Meg 3C

3C Core Sales Presentation

Global/NA Marketing & Innovation Video

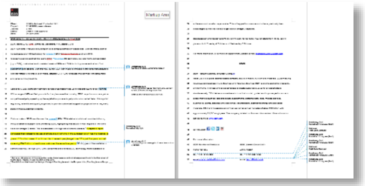
Updated Digital Assets



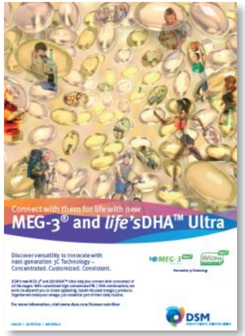
Infographic

Brochure

Global Supply Chain Video



Media Release Template



Launch Event Concept

Whitepaper/Webinar

Specifications

Launch Event Pre-mailer

healthy marketing team

HMT Workshop Guidelines

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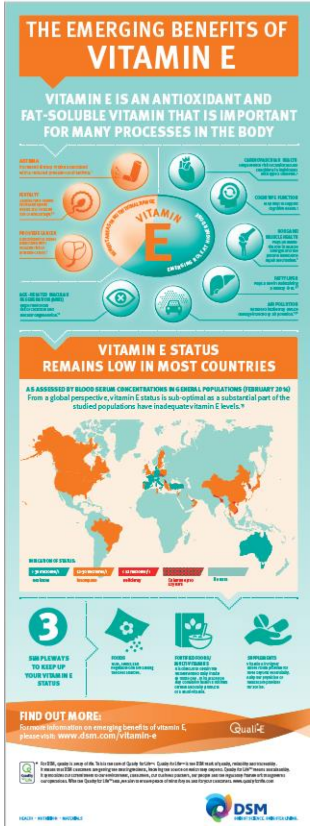
Reinvigorate core categories



Int. J. Vitam. Nutr. Res., 2016, 1–21 1

Review

A Systematic Review of Global Alpha-Tocopherol Status as Assessed by Nutritional Intake Levels and Blood Serum Concentrations

Szabolcs Péter[1], Angelika Friedel[1], Franz F. Roos[1], Adrian Wyss[1], Manfred Eggersdorfer[1], Kristina Hoffmann[2], and Peter Weber[1]

[1]DSM Nutritional Products Ltd., Kaiseraugst, Switzerland
[2]Mannheim Institute of Public Health, Social and Preventive Medicine, Medical Faculty Mannheim, Heidelberg University, Mannheim, Germany

Received: September 16, 2015; Accepted: November 11, 2015

Prenatal supplementation with DHA improves attention at 5 y of age: a randomized controlled trial[1]

Usha Ramakrishnan,[2] Ines Gonzalez-Casanova,[2] Lourdes Schnaas,[3] Ann DiGirolamo,[4] Amado D Quezada,[5] Beth C Pallo,[2] Wei Hao,[2] Lynnette M Neufeld,[6] Juan A Rivera,[5] Aryeh D Stein,[2] and Reynaldo Martorell[2]*

[2]Hubert Department of Global Health, Rollins School of Public Health, Emory University, Atlanta, GA; [3]Division of Public Health, National Institute of Perinatology, Mexico City, Mexico; [4]Center of Excellence for Children's Behavioral Health, Georgia Health Policy Center, Georgia State University, Atlanta, GA; [5]Health and Nutrition Research Center, National Institute of Public Health, Cuernavaca, Mexico; and [6]Global Alliance for Improved Nutrition, Geneva, Switzerland

Global survey of the omega-3 fatty acids, docosahexaenoic acid and eicosapentaenoic acid in the blood stream of healthy adults

CrossMark

Ken D. Stark [a,*], Mary E. Van Elswyk [b], M. Roberta Higgins [c], Charli A. Weatherford [d], Norman Salem Jr. [e]

[a] *University of Waterloo, Department of Kinesiology, 200 University Avenue, Waterloo, ON, N2L 3G1, Canada*
[b] *Scientific Affairs, Van Elswyk Consulting, Inc., 10350 Macedonia St., Longmont, CO 80503, USA*
[c] *MEDetect Clinical Information Associates, Inc., PO Box 152, Skippack, PA 19474, USA*
[d] *Weatherford Consulting Services, Poteet, TX, USA*
[e] *DSM Nutritional Products Ltd., 6480 Dobbin Road, Columbia, MD 21045, USA*

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Key priorities for DSM to drive growth in North America

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2. Reinvigorate core categories

3. Capture greater value through broadening solutions

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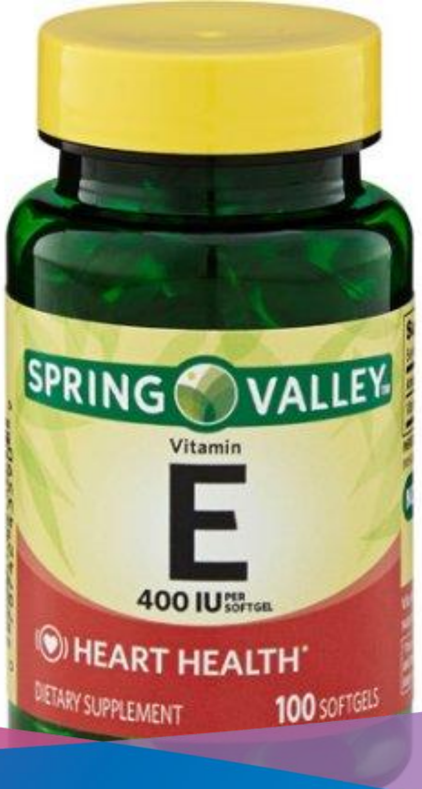

Broadening Solutions
Retail-ready solutions

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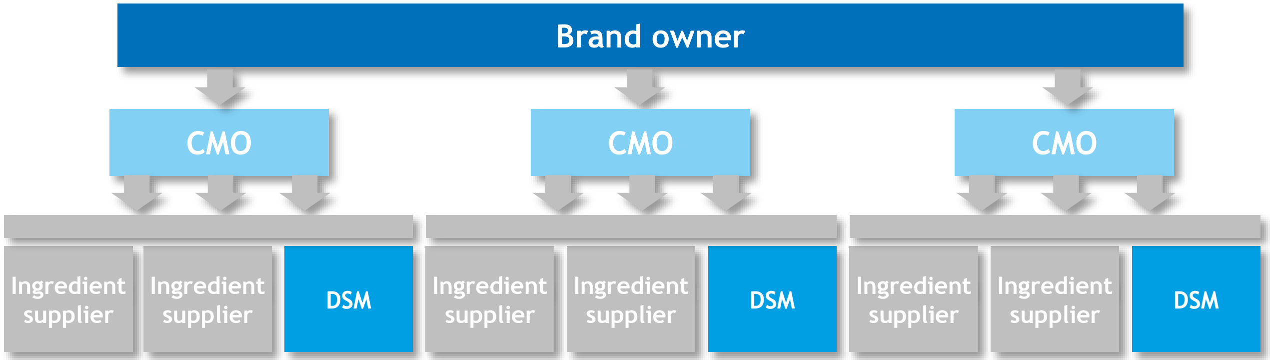
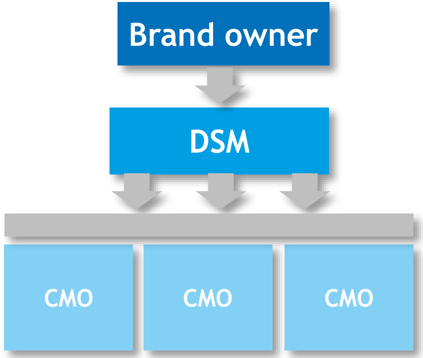
Retail-ready solutions allow for simplified, turnkey products.

Old model



Retail solutions model



Benefits

- Quality Assurance ✓
- Transparency ✓
- Pricing Power ✓
- Sourcing Expertise ✓
- Inventory Management ✓
- Regulatory Expertise ✓
- Marketing & Category Development Expertise ✓
- Innovation ✓

- Dramatically simplifies the supply chain
- Provides enhanced flexibility, efficiency and value for our customers

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Grow forward solutions space | Retail-ready solutions

- Capture greater share of value chain through providing one stop shop at highest quality

- Building mutually beneficial relationships with customers who are also suppliers

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A range of brands are well suited to this new capability

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Dietary supplements will continue to drive growth:

1. Attract new customers and drive targeted solutions

2. Drive innovation and invigorate core categories.

3. Capture more of the total value through advanced solutions.

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- Food Specialties
- Hydrocolloids
- Human Nutrition & Health | Introduction
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- Nutrition cost & efficiency program
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- Green Ocean
- Resins & Functional Materials
- Engineering Plastics
- Dyneema
- Advanced Surfaces

i-Health

Wes Parris, Business Director i-Health

ROYAL DSM
HEALTH NUTRITION MATERIALS

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High Growth, High Margin CPG Business

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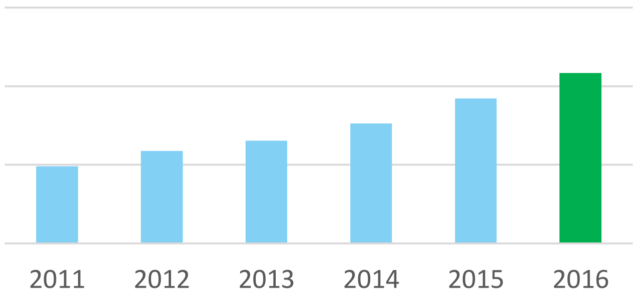
i-Health in one view

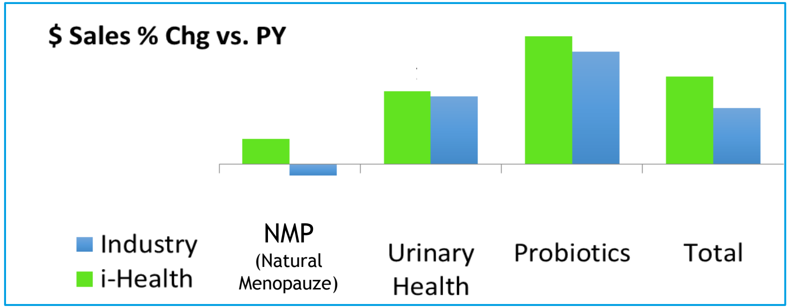
i-Health overview

- Acquired by DSM in 2011, managed as a wholly owned subsidiary
- Sales & Marketing expertise with very strong understanding of the consumer and very strong relationship with retailers
- Strategically links DSM to the consumer and retailer

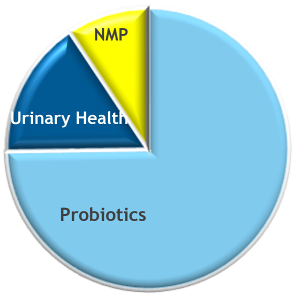
Sales - US$m



i-Health outpaces industry growth



Category overview



*Syndicated market data based on Nielsen 52 wk w/e 7/9/16

Key segments and drivers

Key Drivers

Microbiome Health
Probiotic Health

- Culturelle is the #1 U.S. Probiotic Brand & #2 Global Probiotic Brand
- Digestive, Health & Wellness and kids segments
- Strong multichannel distribution (Hospital, Natural and Mass)
- Strong Consumer brand awareness

Healthy Aging
Natural Healthy Aging Solutions

- Estroven-#1 natural menopause solution
- AZO Bladder Control - The 1st natural supplement to address bladder control issues
- Ovega – 3 - The #1 all natural, vegetarian Omega -3 to address heart health

Urinary Health
Pain relief and prevention

- AZO is the #1 OTC urinary brand and the only brand to address detection, pain relief and prevention
- AZO Yeast is the #1 all natural yeast infection product

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Driving growth through category innovation

2013-2014

2015-2016

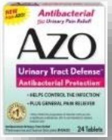
Estroven Weight Management
First to claim help for menopausal weight management

Culturelle Adult Chewables
New form expands consumer base

AZO Bladder Control
Created new natural bladder control category

Culturelle Digestive Health Ex. Strength
Providing growth from more committed loyal consumer base

AZO Cranberry Gummies
New form in commodity category



AZO Urinary Tract Defense
New, antibacterial claims

Culturelle Pro-Well
Expands probiotic benefits to heart health with Omega-3s

Culturelle Kids Regularity
Expands Kids line with new benefits

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Full 360° Marketing Program to Drive Consumer Awareness and Trial

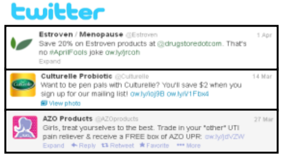
TV

Print

Digital

Social Media

Facebook Advertising



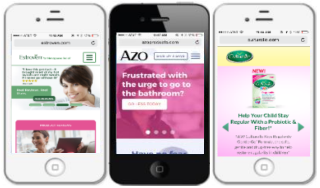
Sampling

Cause Marketing

Medical Marketing

Digital Coupons

Mobile



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Television ads

Future areas of innovation | Consumer insight driven innovation focused on microbiome leadership and proactive health & wellness

Position Culturelle as the probiotic megabrand in the broader health and wellness space- beyond digestive and immunity

Broaden the brand beyond menopause to help consumers 45-65 with their biggest health concerns

Broaden into new areas that address more of their health and wellness needs

i-Health global expansion and footprint

2014

- North America

2016

- North America
- China
- S. Korea

2018

- North America
- China
- S. Korea
- APAC

2020

- North America
- China
- S. Korea
- APAC
- LATAM

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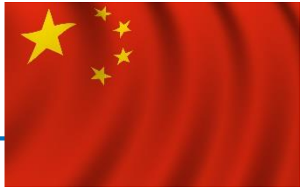
Go-to-market strategy | China



- Expansion strategy focused on distribution and consumer brand building
- Aggressive marketing support deployed to drive growth

Mom and Baby
National Tours

Medical Marketing

Trade Marketing

TV
Advertising

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Go-to-market strategy | South Korea

- International marketing supporting ongoing brand building

In Store

Seoul Kids Fair

Infomercial

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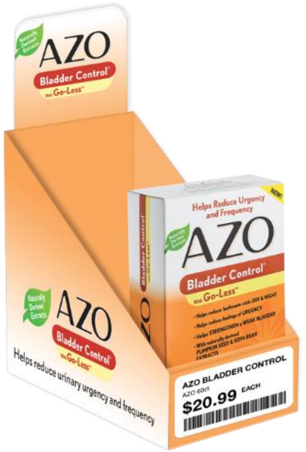
Expanding i-Health business to Australia

- Currently Launching AZO Bladder Control with Go-Less™
- Followed by launch of Menopause Relief + Weight Loss
- Developing strong 360° consumer support for these launches to build awareness



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- Advanced Surfaces

Early Life Nutrition

Ethan Leonard - Business Director Early Life & Medical Nutrition

ROYAL DSM
HEALTH NUTRITION MATERIALS

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DSM's Position on Importance of Breastfeeding

Human milk represents the nutritional gold standard for infant nutrition and DSM strongly supports and follows the WHO recommendation that infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and long-term health. Thereafter, older infants and young children should receive nutritionally adequate and safe complementary foods, while continuing to breastfeed for up to two years or more. DSM believes that breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants and is also an integral part of the reproductive process with important implications for the health of mothers.. For many reasons, however, not every infant will be fed breast milk exclusively for 6 months. Indeed, some mothers choose not to breastfeed; some mothers may breastfeed only part of the time and a small percentage perhaps cannot breastfeed their babies. Infant formula, although it can never equal breast milk, is formulated in an attempt to ensure that the most nutritionally complete substitute possible is made available for babies who are not breastfed. Breast milk should be the nutritional gold standard by which formula milk should be assessed. The industry's goal over the years has been to continually improve the quality and safety of infant formula. We believe that components like DHA and ARA, as well as other infant nutrition innovations, help achieve this goal http://www.dsm.com/corporate/sustainability/managing-sustainability/position-papers.html#

ELN is a significant market for the ingredients DSM supplies

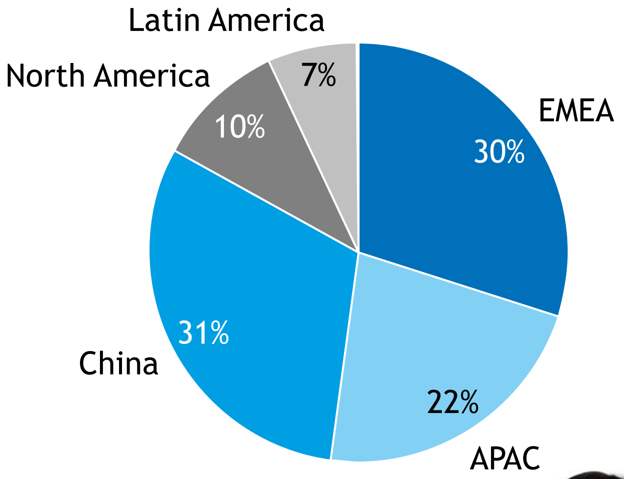
- The ELN segment is composed of three primary sub-segments:
  - ✓ Infant formula/follow-on formula (0-12 months)
  - ✓ Children's products, including growing-up milks, weaning foods, toddler milks, etc.
  - ✓ Maternal nutrition (preconception through breastfeeding)
- It's a substantial attainable market for DSM ingredients
- Segment volume is growing in low to mid single digits; DSM is tracking the market
- DSM's pillars are DHA & ARA and premixes; material share in these categories
- Innovation will provide new opportunities and revenue streams

INF & GUM is a highly attractive ~€45 billion retail market

- Infant Formula (INF) & Growing-up Milks (GUM) sub-segments represent >90% of the attainable market
  - ✓ INF & GUM retail market (€27bn and €18bn respectively)
  - ✓ Internal projected volume CAGR through 2020 is 2–3%

Key trends and drivers:

- Birth and breastfeeding rates
- Economic development and stability
- Consumer base renews annually
- Demand for best nutrition to support optimal growth and development
- Demand for quality and trusted multinational brands
- Chinese consumption drives demand, although recently slowed
- New China regulations creating short-term volatility; should ultimately be positive



Source: Euromonitor 2016

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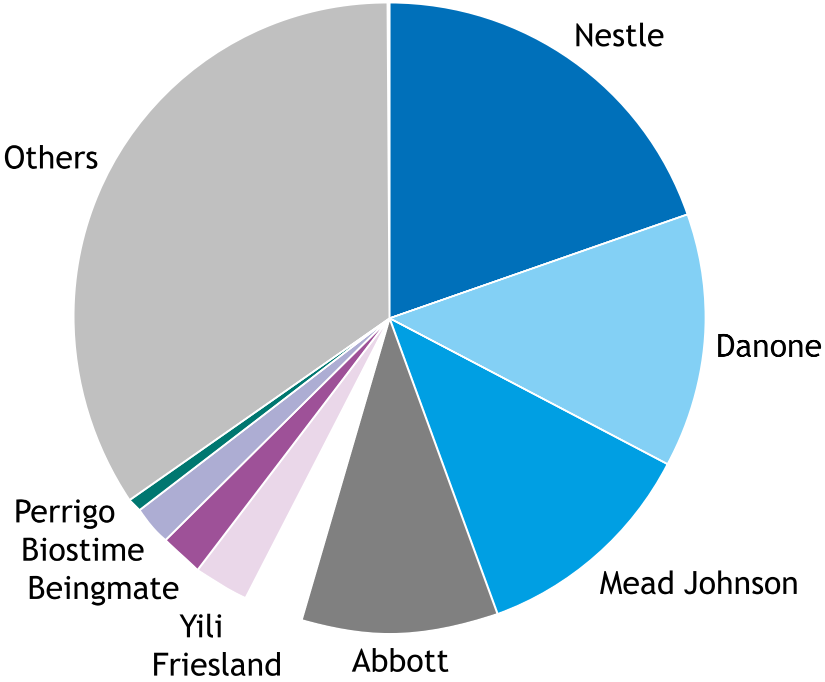
Serving a highly concentrated industry

- Premium products continue to outperform standard formulas
- Differentiation and developmental benefits drive innovation
- Quality and safety requirements increasingly robust
- Regulatory and marketing restrictions becoming more demanding for manufacturers
- Highly concentrated industry, top 5 companies account for ~60% of volume

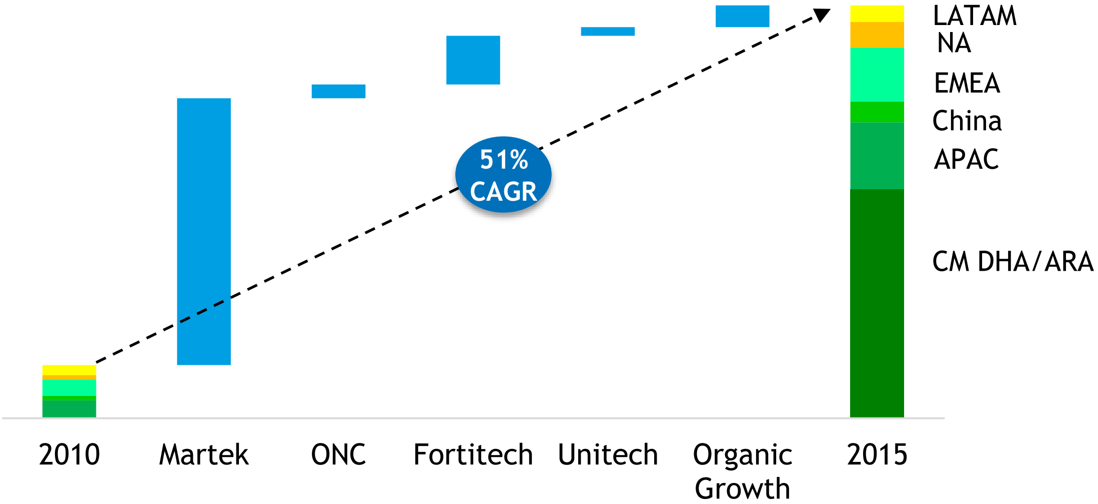


Source: Euromonitor 2016

DSM is a leading player in the market, having grown global share through focused acquisition and organic growth



DSM ELN sales by region - €m*





- ELN revenue represents ~25% of DSM HNH sales
  - ✓ Margin is above Company and HNH averages
  - ✓ Long-term supply contracts with major customers
  - ✓ DSM's market share remains significant
  - ✓ Global IP portfolio for *life'sDHA* and *life'sARA* remains relevant
  - ✓ Chinese share is domestic only, actual share is much higher

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ELN is sweet-spot for DSM & our core values are aligned with our customers

- DSM's core values, science, quality, safety and innovation, are aligned with ELN industry
- ELN companies are unique because they consistently:
  - ✓ Develop science-based nutritional solutions
  - ✓ Prioritize product quality and safety; 100% consistency!
  - ✓ Recognize value in working with high quality suppliers, provides "peace of mind"
- DSM continues to invest and innovate to maintain its quality, safety & business leadership

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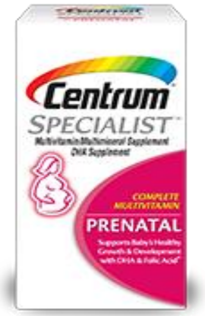
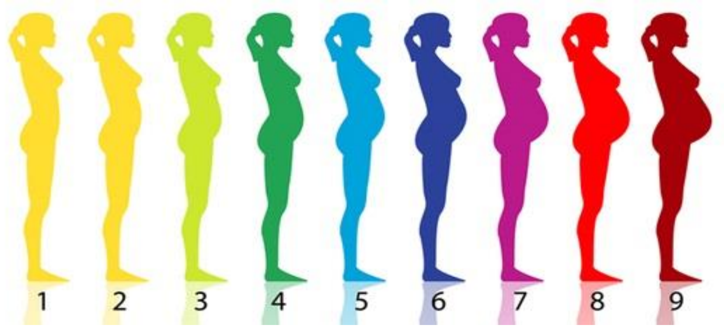
Maternal nutrition represents an important growth opportunity

- Global maternal nutrition retail market is ~€1.2 billion
  - ✓ High growth potential due to low consumption and under-fortification

Key trends and drivers:

- Baby's health and development is directly linked to mom's nutrition
- Governments, NGOs and regulatory bodies emphasizing nutrition
- Less regulation and faster speed to market
  - ✓ Opportunity to create consumer/HCP awareness
- Breastfeeding is on the rise

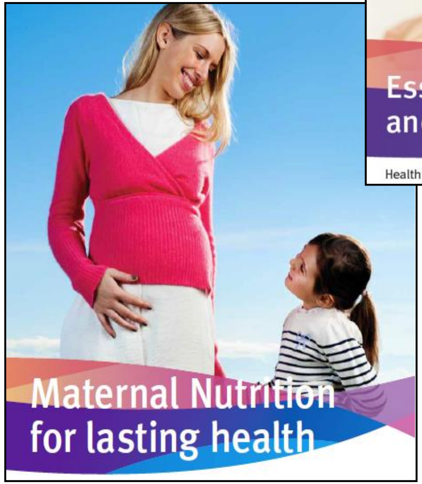




Source: IMS and Nielsen (2014 and 2015)

What customers value in DSM, and why they stay with DSM

- ✓ DSM's commitment to quality
- ✓ History of safe use and no adverse events
- ✓ Concept development and consumer testing
- ✓ Marketing and public relations
- ✓ Nutrition science and advocacy
- ✓ Technical support
- ✓ Regulatory expertise
- ✓ Security of supply and sustainability



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Reasons to believe in the ELN segment

- The fundamental drivers of the segment remain sound
  - ✓ Desire to provide best developmental opportunity
  - ✓ Consumer market renews annually
  - ✓ Success of premium products
  - ✓ Emphasis on quality and safety
  - ✓ China is prioritizing increased births

- ELN will continue to be a relatively stable market, led by a small number of multinationals
  - ✓ Continued consolidation in China should favor DSM and its customers
  - ✓ DSM has substantial and long-standing relationships with segment leaders

Reasons to believe in ELN business

- Newly formed dedicated global ELN team will drive regional growth
  - ✓ Focused regional teams
  - ✓ "Global products/Local Solutions" operationalized
- DSM ingredients are currently used by over 100 ELN companies
  - ✓ DSM is the primary global supplier for most major multinationals
  - ✓ Many customers are in multi-year supply agreements
  - ✓ Expect to maintain overall share position through strategic initiatives
  - ✓ Innovation and continued operational improvements underpin financial goals

DSM is well-positioned to continue as the leading supplier and partner to the Early Life Nutrition industry

DHA/ARA REFERENCE SLIDE

life’sDHA and life’sARA: Developmental Importance Primer

Docosahexaenoic Acid (DHA) 22:6 n3

- Important component of all cell membranes
- Important in infant development
- Maintains cardiovascular, visual and neural function through life
- Preferentially crosses the placenta as a key nutrient for the fetus
- Always found in human milk

Arachidonic Acid (ARA) 20:4 n6

- Essential for growth
- Important for infant development
- Precursor of immune regulators and cell regulation molecules
- Crosses the placenta as a key nutrient for the fetus
- Always found in human milk

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Nutrition cost & efficiency program

Richard Oosterhoff, VP Nutrition Operations Americas

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DSM Nutritional Products Operations
Dedicated to delivering the best value chain in our industry

A network of 18 global products sites

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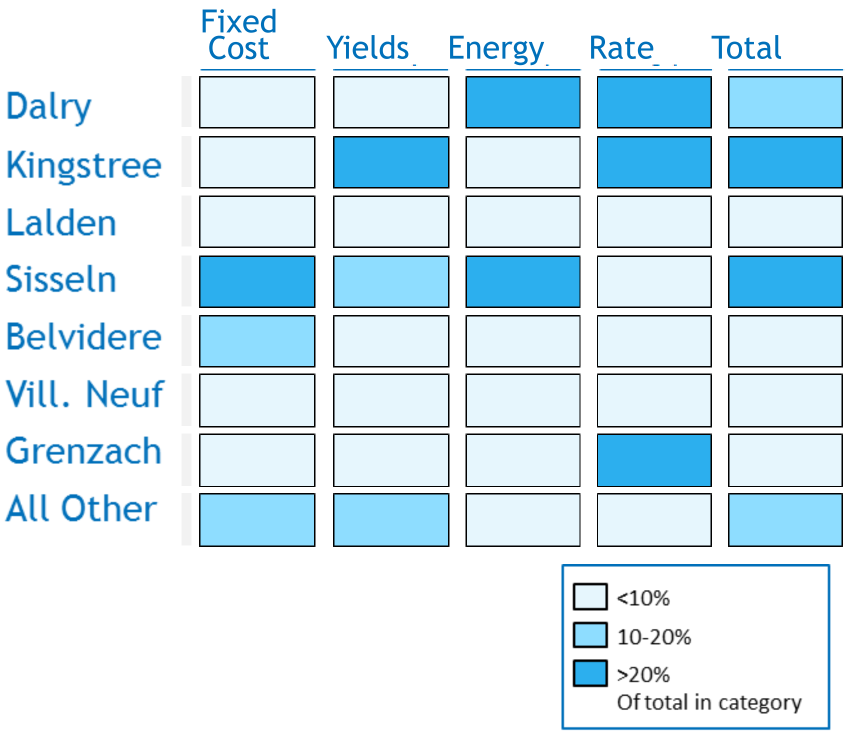
Rigorous effort undertaken to realize gains across all major manufacturing sites



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

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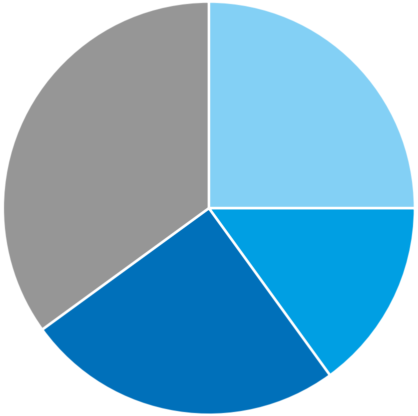
Nutrition-specific improvement program (recap Q2)

Savings: €130-150m

Cost improvements

Efficiency gains
(Yield & Energy)
“Making the same with less inputs”



Purchasing
“Lowering the cost of our direct raw materials”

Fixed cost reduction
(~100 FTE)
“Lowering costs”

Throughput gain in sold-out units
“Getting more volume out of the same equipment”

Work stream closely monitored and on track

		Current status
Purchasing	▪ Purchasing savings implemented	
Fixed cost reduction	▪ Cost reduction programs are being executed. Remaining part will be captured in the upcoming period	
Throughput gains	▪ Increased output at sold-out units on track	
Efficiency gains	▪ Substantial number of measure sheets have been implemented, resulting in unit costs reduction ▪ Targeted gains for 2018 confirmed	

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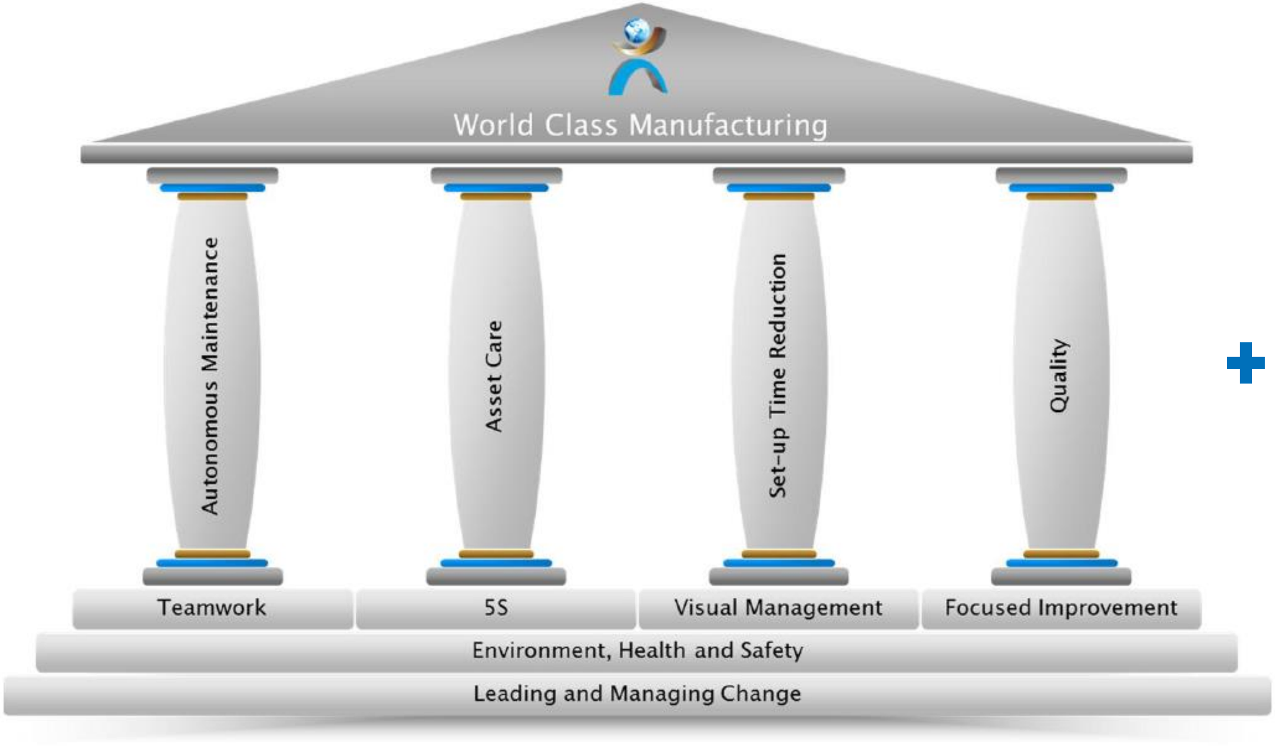
DSM integral continuous improvement

- One DSM manufacturing culture of continuous improvement is the basis for the Nutrition Manufacturing cost improvements
- Heavily investing in capability building and bottom up engagement of the total work force to drive improvements and to be best in class
- Using best practices and tools across the company

Based on proven concepts deployed at many companies



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Supported by process technology developments centers in Sisseln (Switzerland) and Winchester (United States)

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In Nutrition we had a successful journey of continuous improvement, we know how to do this… AND HOW TO DELIVER

1 Standardized work processes (Manufex)
- Blueprint approach
- Main focus on fixed cost

+

2 Manufex anchoring, 6-Sigma roll-out
- Primarily focus on variable cost

+

3 Lean Manufacturing with technology focus
- Strengthening a bottom up continuous improvement culture
- Sites in the lead

+

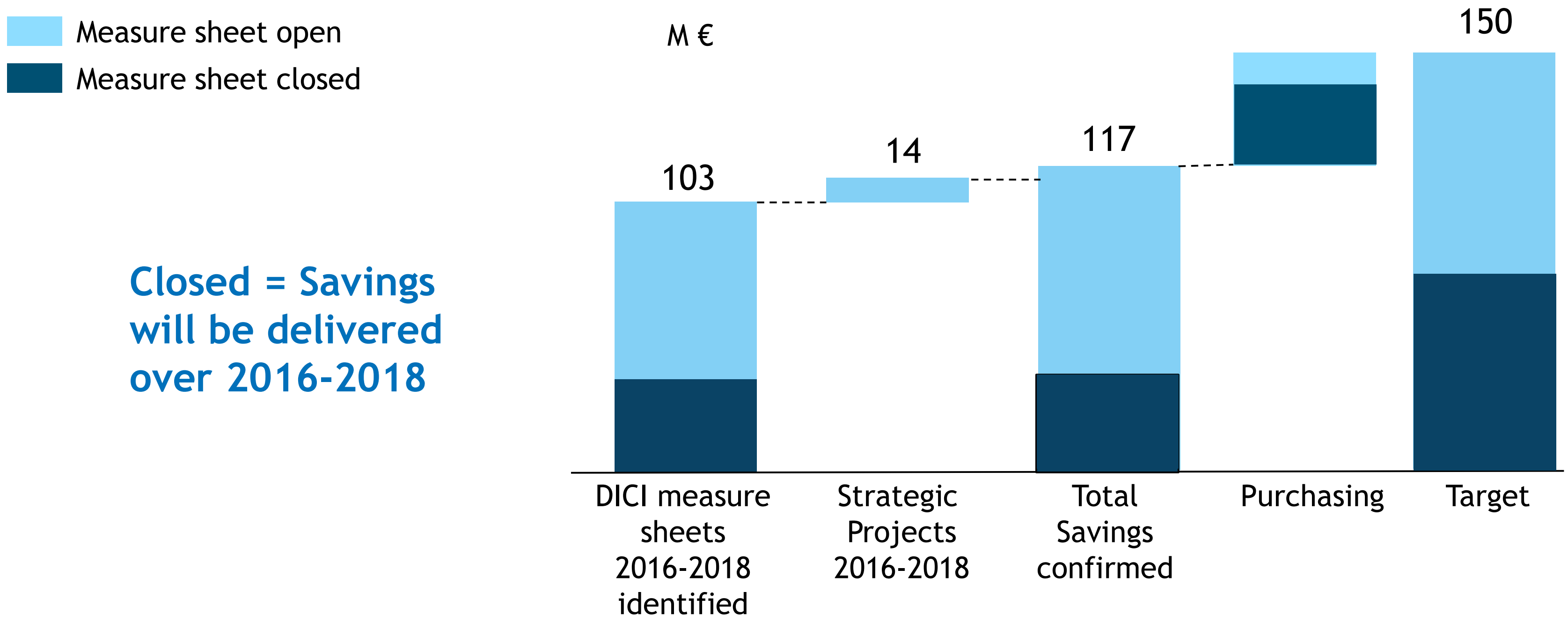
4 Create a continuous improvement culture at all levels
- Mindset & Behavior
- Deep Diagnostics
- Capability building for all

DSM Nutritional Products was recently benchmarked by McKinsey as a top 10% tier player in the industry

2003 2006 2012 2015

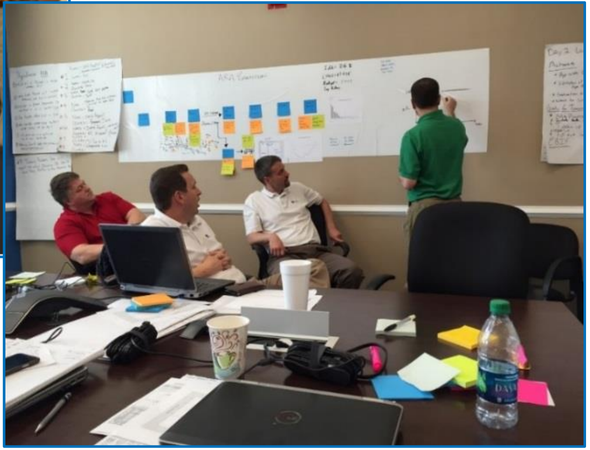
DICI + Purchasing measure sheet update Q2 | Tracking on target

Closed = Savings will be delivered over 2016-2018



- Global deployment of DICI program: done in Belvidere (PoC), ongoing in Dalry and Kingstree (Wave 1), in preparation for Lalden, Piura and Freeport (Wave 2)

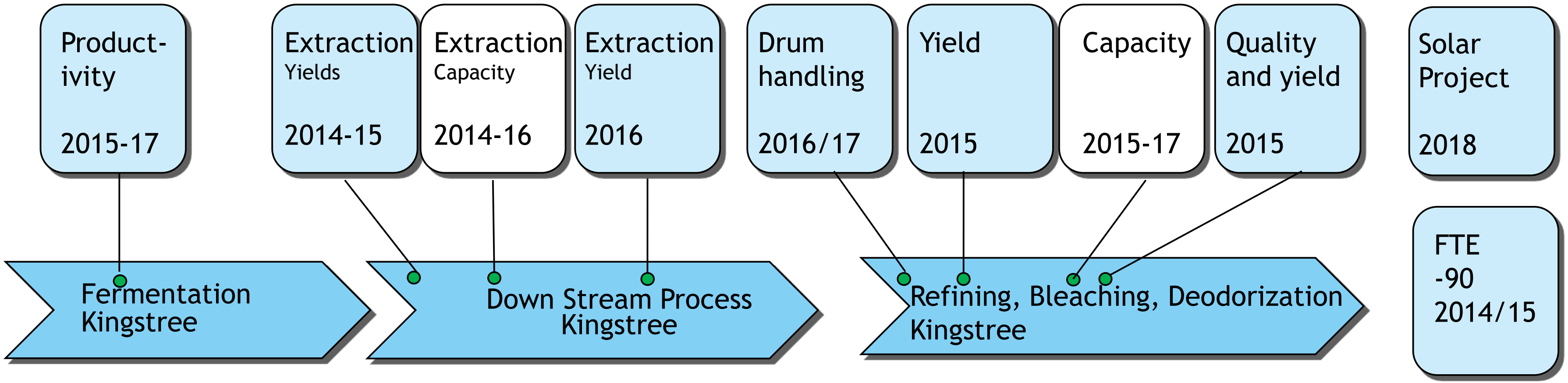
Kingstree | DICI in action: An example



- Latest focused improvement action led to US$1.2m savings per year by combining ALL knowledge of ALL employees.
- Through: Teamwork, 5S, Visual Management and focused improvement
- More focused improvement actions planned

Kingstree is increasing competitiveness

- Kingstree is delivering 11% of the total savings goal
- Our pipeline of further improvement potential is strong and will continue to grow
- Since the acquisition our manufacturing cost went down with 40% per unit produced.



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- Food Specialties
- Hydrocolloids
- Human Nutrition & Health | Introduction
- Dietary Supplements
- i-Health
- Early Life Nutrition
- Nutrition cost & efficiency program
- **Animal Nutrition & Health | Introduction**
- Green Ocean
- Resins & Functional Materials
- Engineering Plastics
- Dyneema
- Advanced Surfaces

Animal Nutrition & Health

David Blakemore – President Animal Nutrition & Health

ROYAL DSM
HEALTH NUTRITION MATERIALS

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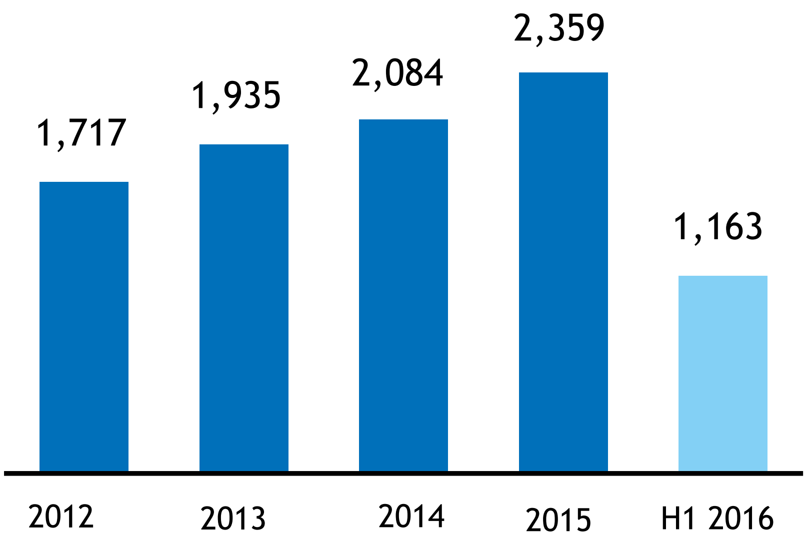
A full value chain player, providing active ingredients, delivery systems, and nutritional and premix solutions globally and at a local level

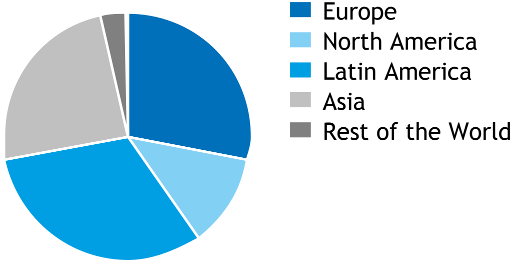
Animal Nutrition & Health in one view

Sales - €m



Sales overview

By region

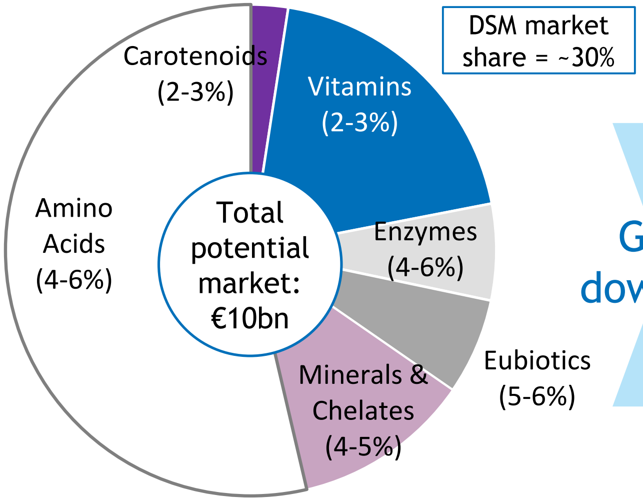


Global premix network

Complete feed ingredients portfolio targeting attractive markets

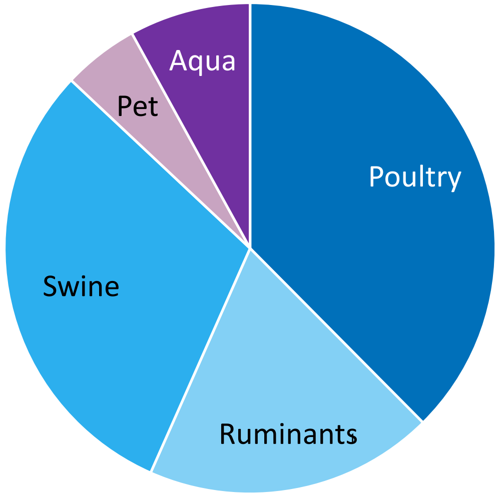
Animal Nutrition market by product (excl. premix)

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



Growing downstream

Animal Nutrition application landscape[1]

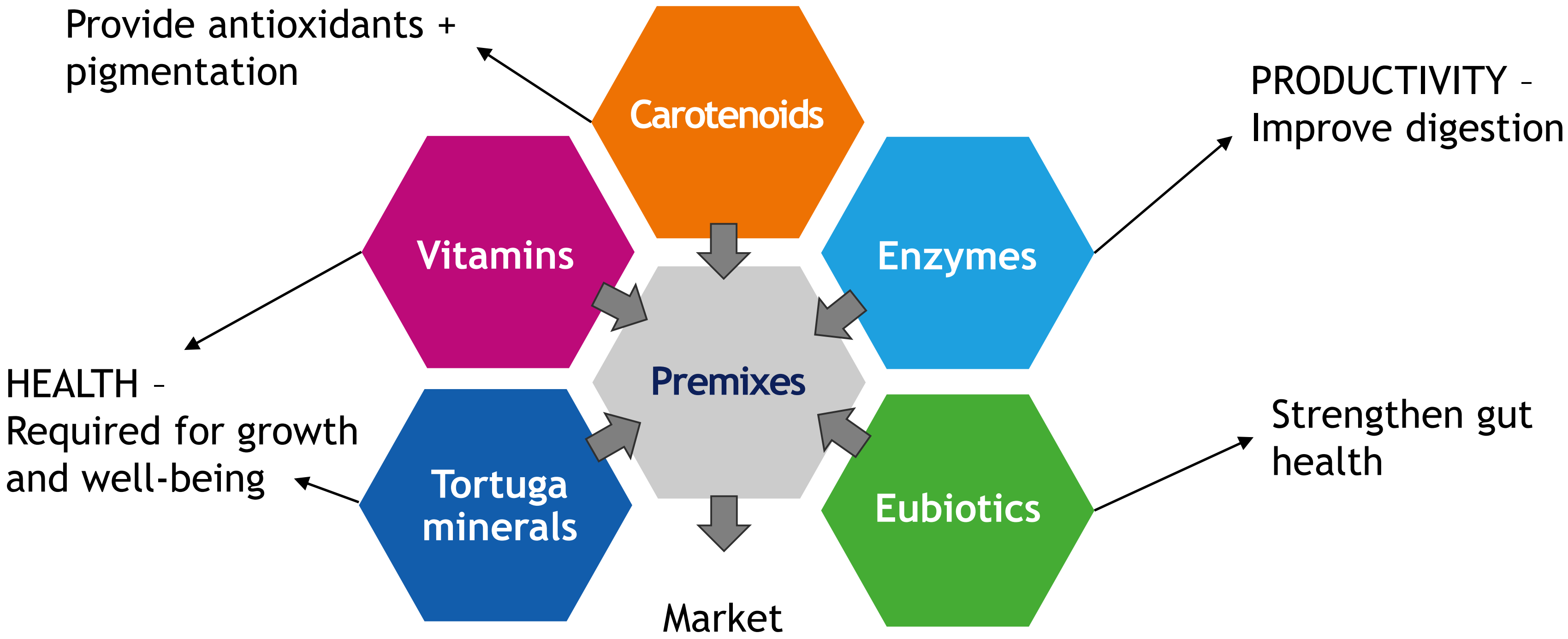


1 Landscape includes Carotenoids, Vitamins, Enzymes, Eubiotics and Minerals/ Chelates

GLOBAL PRODUCTS & LOCAL SOLUTIONS

A highly skilled and motivated team, the broadest range of ingredients in the industry, and a global pre-mix network enable us to provide today's unique solutions and identify tomorrow's unmet needs

DSM has the **broadest portfolio in the industry**



A deep technical understanding of the animal nutrition market coupled with a strong passion to make a difference

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DSM is uniquely position in the value chain

Feed Ingredients (soy, corn, etc.) ~€140bn

Specialty feed additives >€10bn

Chinese players

Premix

Nutrition serv. & consultants

Various consultants

Medical feed additives >€10bn

Compound feed - €198bn

Additives for pasture raised animals

Processors / farmers - >€1,200bn

Animal Nutrition & Health

Sustainable Animal Nutrition to Address the Human Need for Animal Sourced Proteins

Focused on sustainable animal nutrition

- Advocate science-based knowledge about balanced diets; the right amount and quality of proteins are essential
- Improved end product quality and food safety
- Support small-scale farmers with training and services

- Reduce use of scarce resources
- Reduce greenhouse gas emissions from livestock
- Reduce food waste

- Care for safe and controlled production, including animal welfare
- continuous drive to increase animal health

- Capture the opportunities of new, emerging technologies
- Combat antibiotic resistance
- Improved gut health
- Find and develop new sources of protein and marine omega-3 oils

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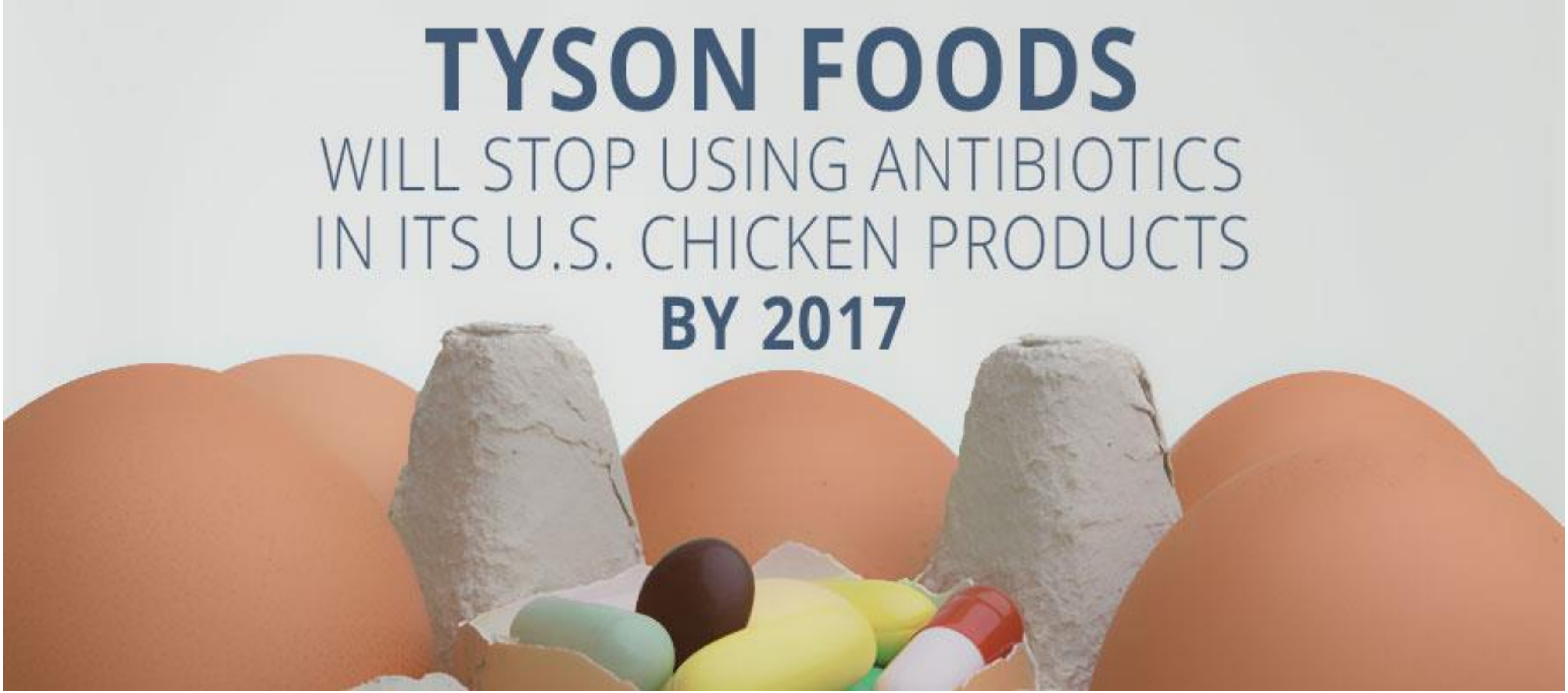
Large customers push for antibiotics replacement



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Approach to antibiotic-free, healthy animals

- Animal Husbandry
- Animal Welfare
  - ✓ "Downtime & Density"
- Nutrition
  - ✓ Feed Quality
  - ✓ Vitamins & Minerals
  - ✓ Enzymes & Eubiotics
- Life Stages

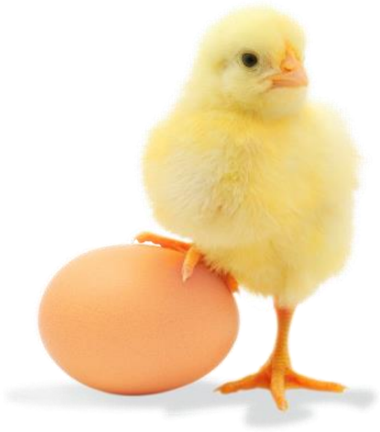
OVN™
OPTIMUM
VITAMIN NUTRITION

Hy•D®

Victus™

Animal Nutrition & Health

Our Strategy



Our Strategy for Profitable, above market **growth**

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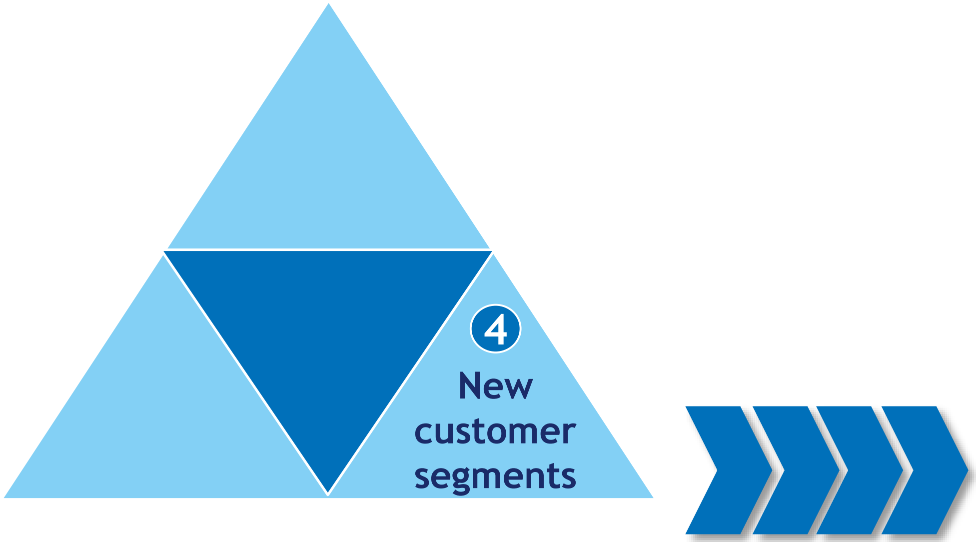
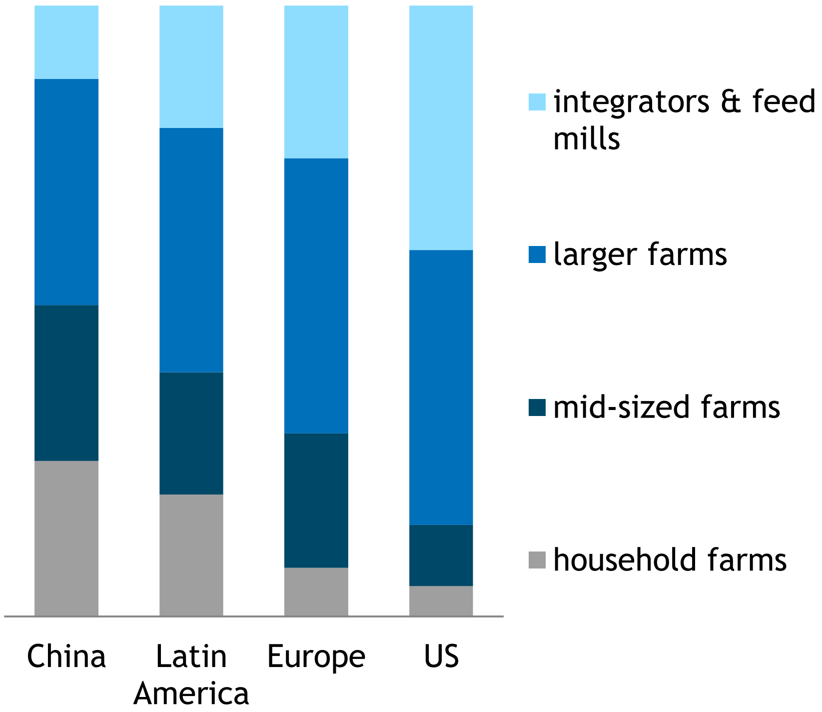
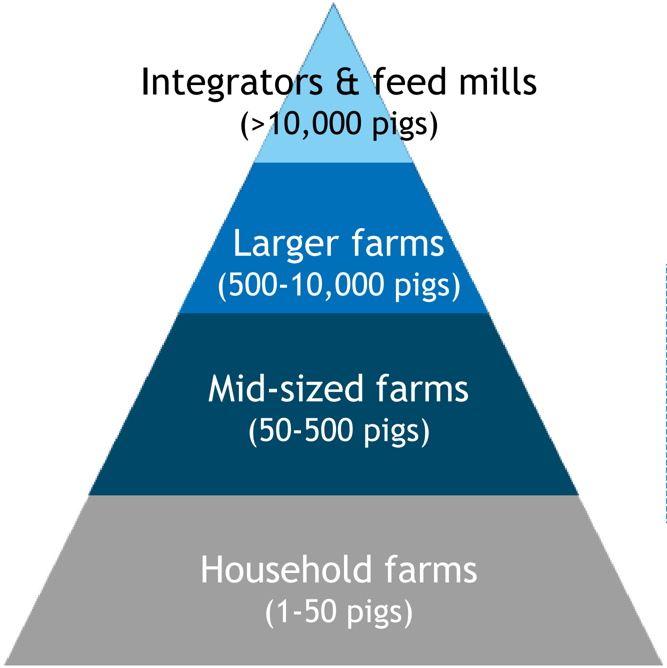
Designing and executing the right channel strategy





Drive growth via penetration of new customer segments



- Traditional B2B
- Current B2C premix business, focused on ROVIMIX brand
- Overall B2F channel strategy, combining the strength of our ROVIMIX brand and portfolio + a NEW brand YiWeiZhuang (YWZ) + NEW mobile order/payment platform
- YWZ product portfolio incorporating enzymes and full vitamin supplementation, with animal husbandry solutions
- Small, non-professional farms, not served

[1] Scope on slide is swine industry China

Animal Nutrition & Health

Well positioned to deliver above-market growth as the unrivaled leader in the animal protein value chain

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Green Ocean

Amanda Ruess – Project Director Green Ocean

Chris Lindsay – Director Nutrition R&D Biotechnology

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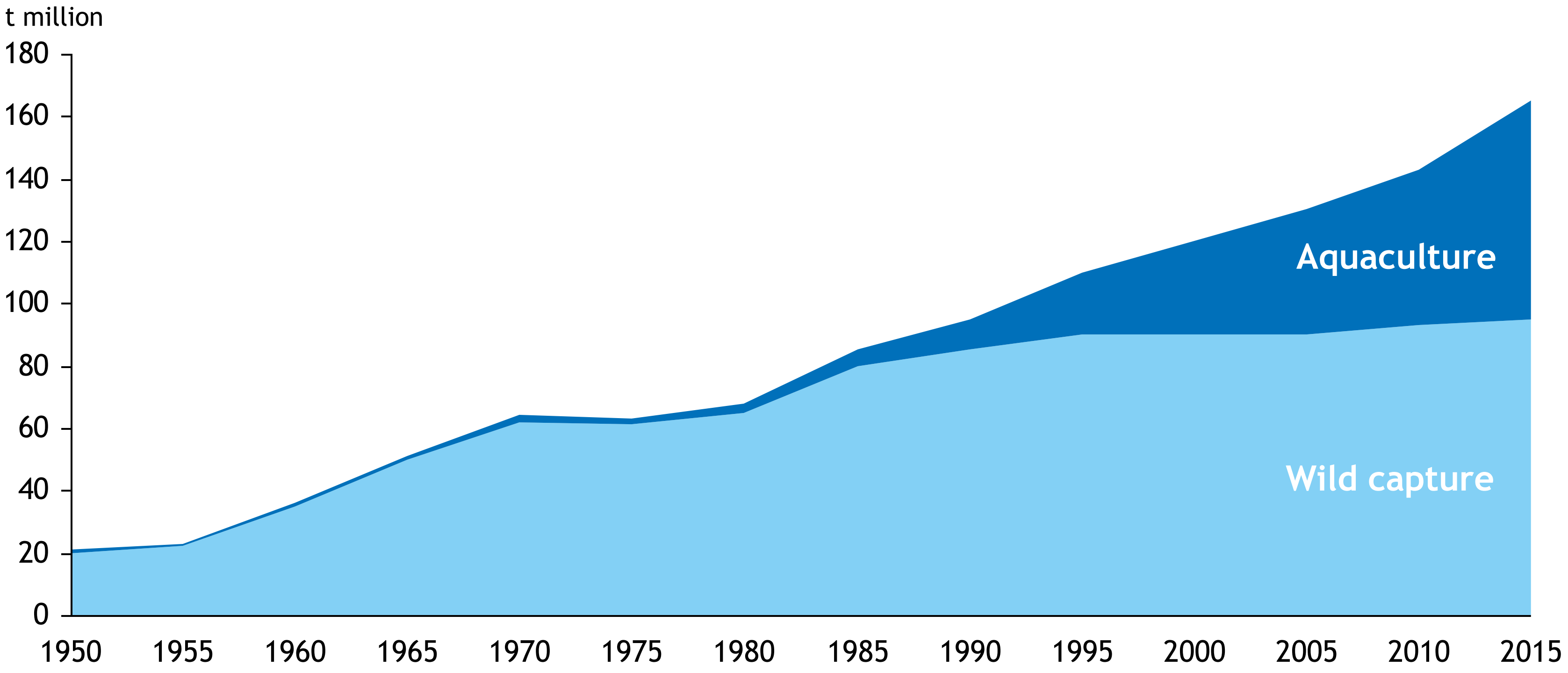
A disruptive technology revolutionizing the Omega-3 industry by going directly to Nature's Choice – Algae!

Green Ocean | The sustainable solution for aquaculture

Aquaculture needed to cover increasing demand for fish



Source: FAO The state of the world's fisheries and aquaculture 2016

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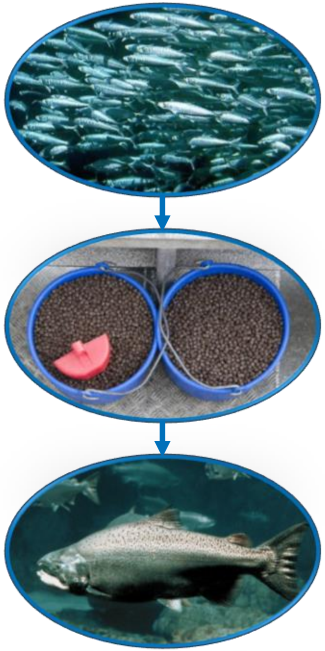
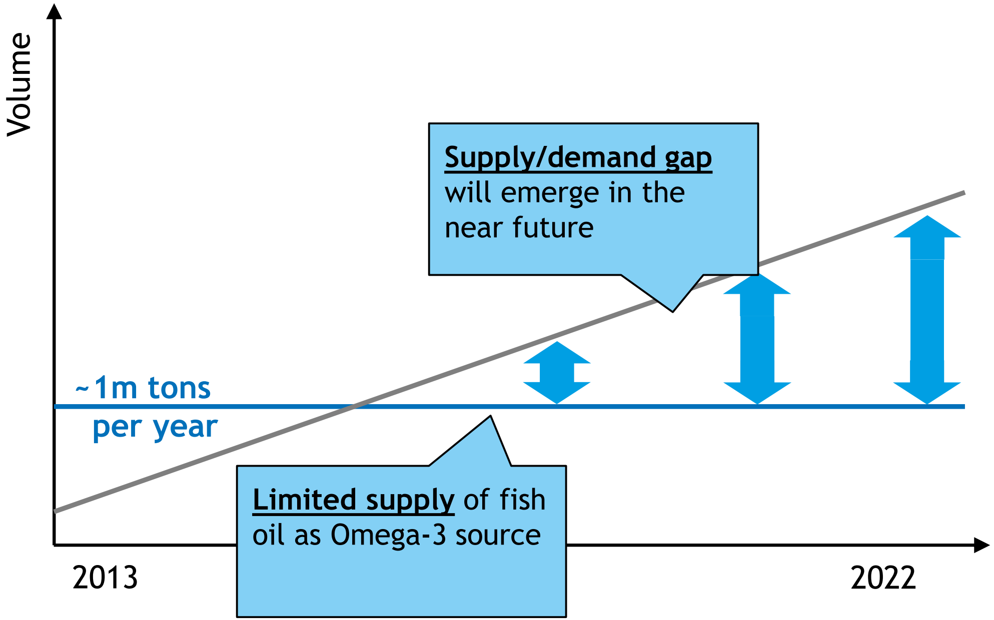
Aquaculture is the biggest consumer of fish oil





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Retailers rely on a responsible value chain to provide consumer confidence

Omega-3's are essential for fish and human health

Salmon need EPA & DHA

- Nature's choice – 2 Omega-3's - key fatty acids found in natural balance
- Essential nutrition to support normal growth and health

EPA & DHA are key for human health

- Human needs – 2 omega 3's - essential in all life stages
- British Nutrition Foundation advises a weekly intake of 1.5g EPA and DHA

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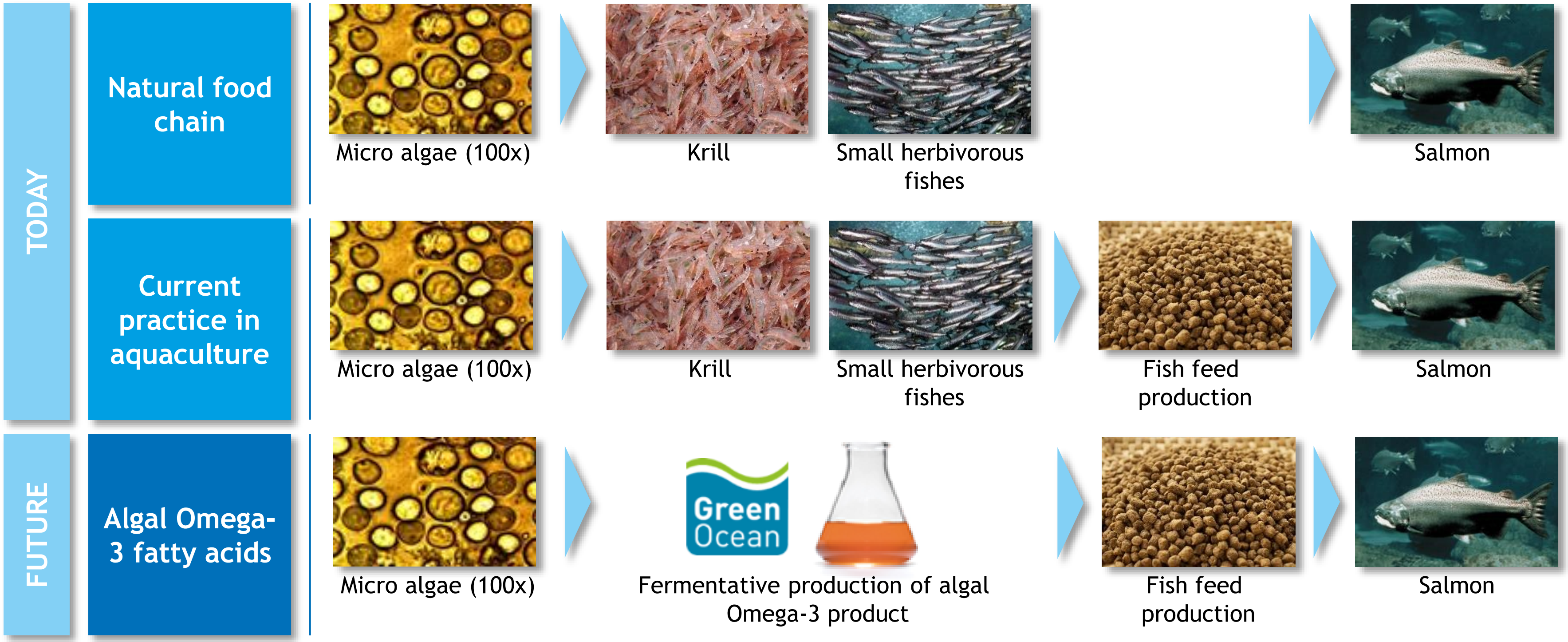
Nature’s source | Green Ocean’s marine algal Omega-3



Martek know-how driving our new EPA and DHA form

- IP protected
- Leveraged DSM’s experience in Nutritional Lipids

Martek

Bio-prospecting for new strains

Strain Screening for high EPA content

Process development at the lab scale

Scale up / pilot plant

Low cost production

Green Ocean

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A complementary partnership in aquaculture

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- Cultivation of marine organisms
- Biotechnology capabilities in development and operations

EVONIK
INDUSTRIES

- Industrial amino acid biotechnology executing volume fermentation processes

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The solution for the farmer

- Ease of use and reliability
  - 2 essential Omega-3's
  - Easy to handle oil
  - Concentrated
  - Formulation flexibility
- Securing confidence and reputation within the value chain

In the aisle | As a customer, you make your choice

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DSM Resins & Functional Materials

Patrick Niels – President DSM Resins & Functional Materials

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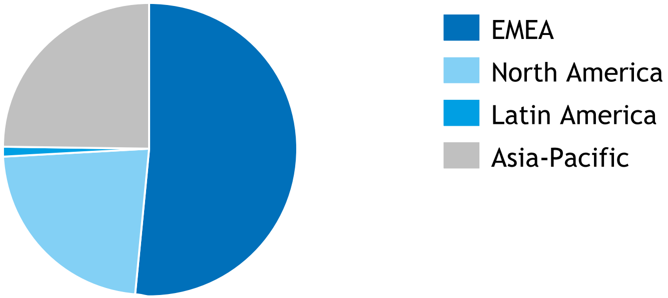
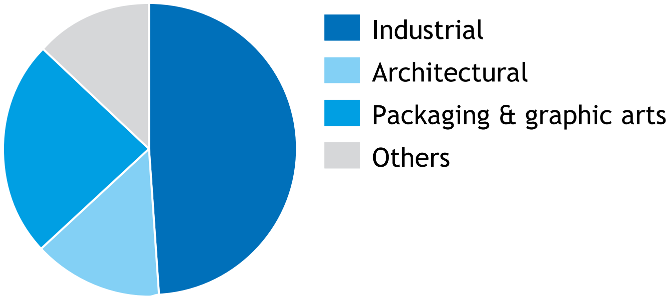
Resins and Functional Materials in one view

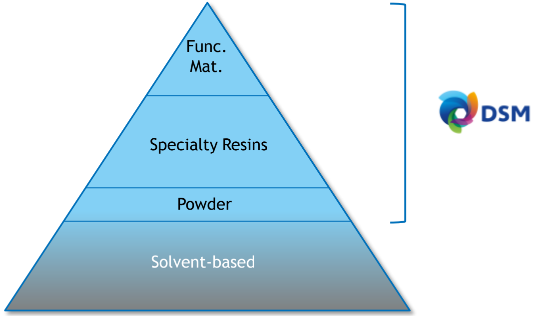
Sales by region (%)



Sales by end market (%)



Extensive portfolio in sustainable specialty resins



Resins and Functional Materials consists of 5 business lines

Sustainable Coating Resins

DSM-AGI

Powder Coating Resins

Specialty Resins

Functional Materials

Fiber Optic Materials

SOMOS 3D Printing

UV

Applications for Industrial and Packaging applications

Powder

Very sustainable technology for Industrial Coating

Waterborne

High performance low/ no VOC coatings and packaging

Fiber Optics

Protecting Optical Fibers

3D printing

Prototyping and small runs

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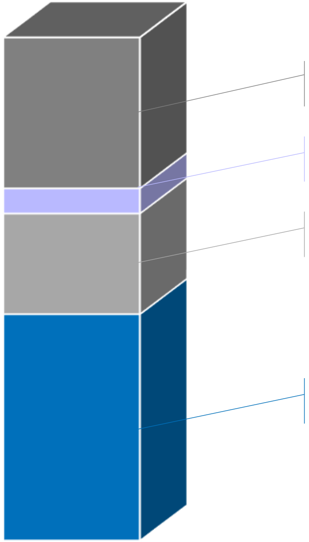
Resin is a key component in coatings



~30%: Water or Volatile Organic Compounds

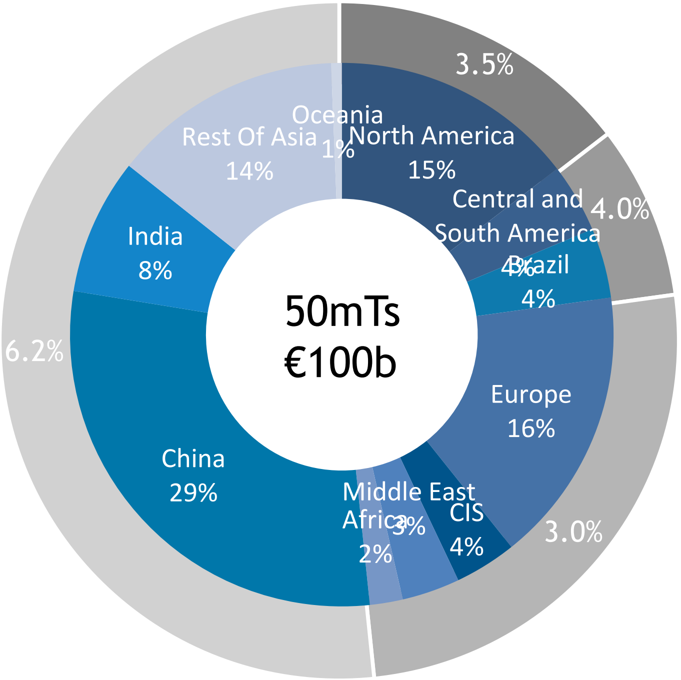
~5%: Additives & Preservatives

~20%: Pigments

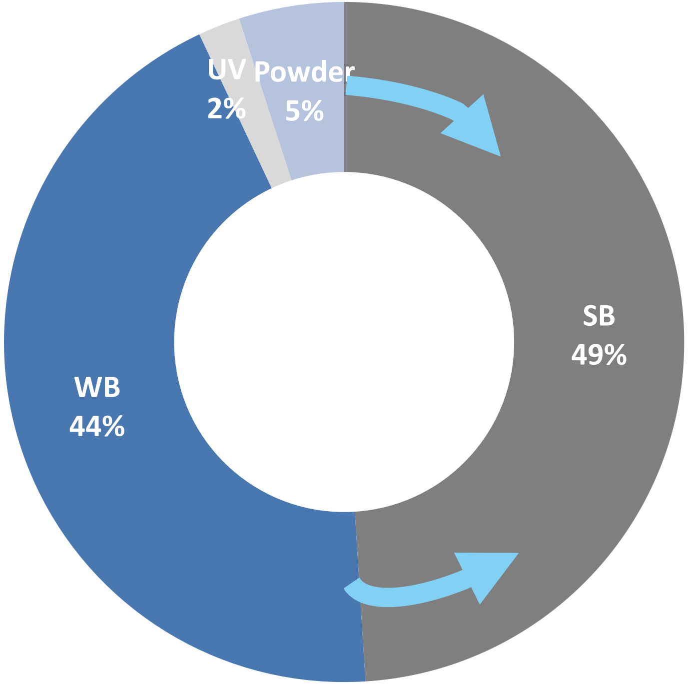
~45%: Resin (binder)

Global coatings market 2016-2019 | Growth in sustainable technologies

Sales by end market (value)



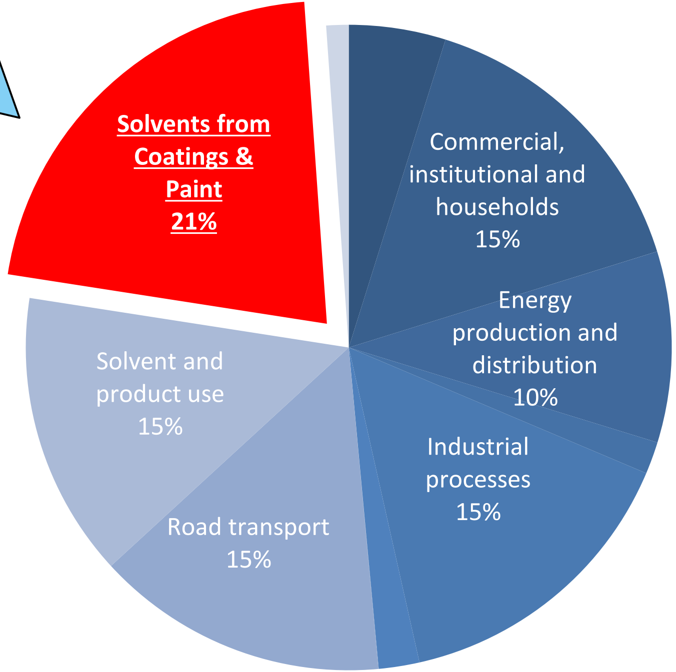
Market increasingly shifts away from solvent-based



Coatings contribute 21% to global Non-Methane Volatile Organic Compounds ('NMVOC')

Global emission of NMVOC (%)

8,500kTs global emission of solvents from Paints and Coatings



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Resins & Functional Materials is ideally positioned as the industry continues to move to more sustainable coatings

	Resins - ~€30bn		Customer base >€100bn	Impression of end market
Solvent-based resins	DSM	ARKEMA, Allnex	Sherwin Williams, PPG, AkzoNobel, SunChemical (a member of the DIC group), Corning, Jotun	IKEA, HP, GM, The Home Depot, Tetra Pak, China Telecom, John Deere, Under Armour, AECOM
Powder resins	DSM	Allnex, SJ 神剑		
Water-based resins	DSM	BASF (The Chemical Company), Dow		
UV curing resins	DSM	ARKEMA, Allnex		

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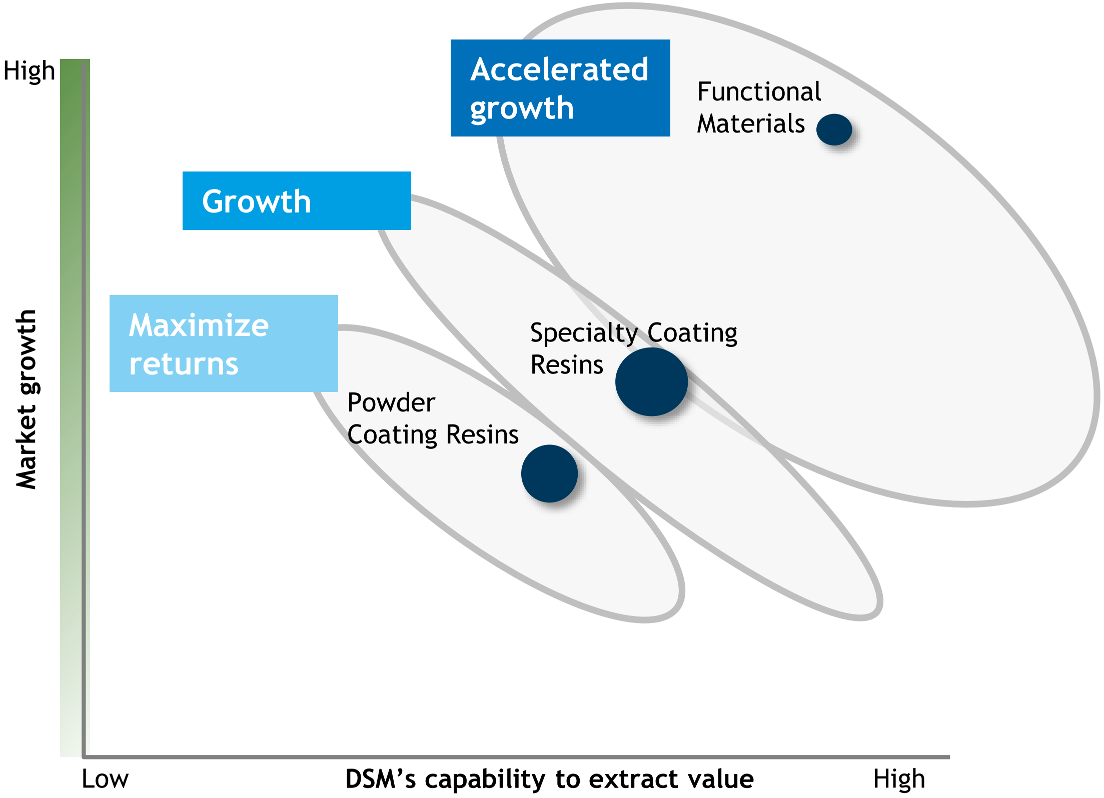
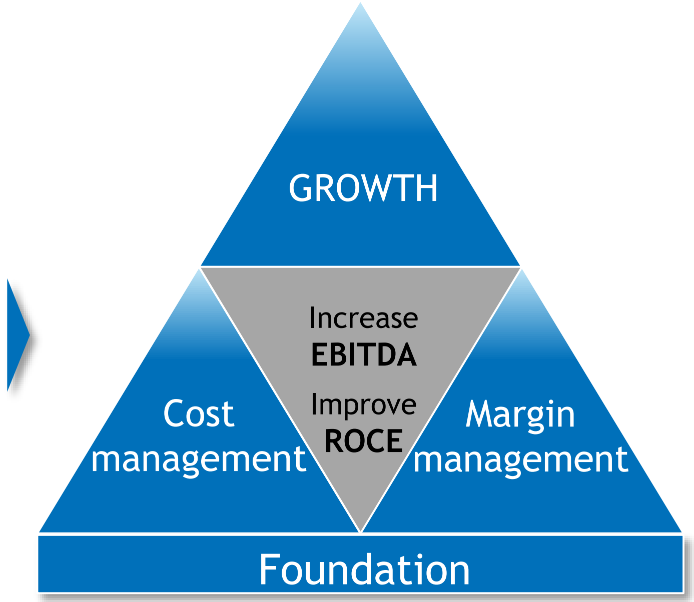
Strategy 2018 | Focus on well-defined, higher-growth specialty segments, while maximizing returns in Powder Coating Resins





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Sustainability as a business driver I Continued focus on innovations driven by sustainable coatings solutions

Solvent borne

Water borne

Powder

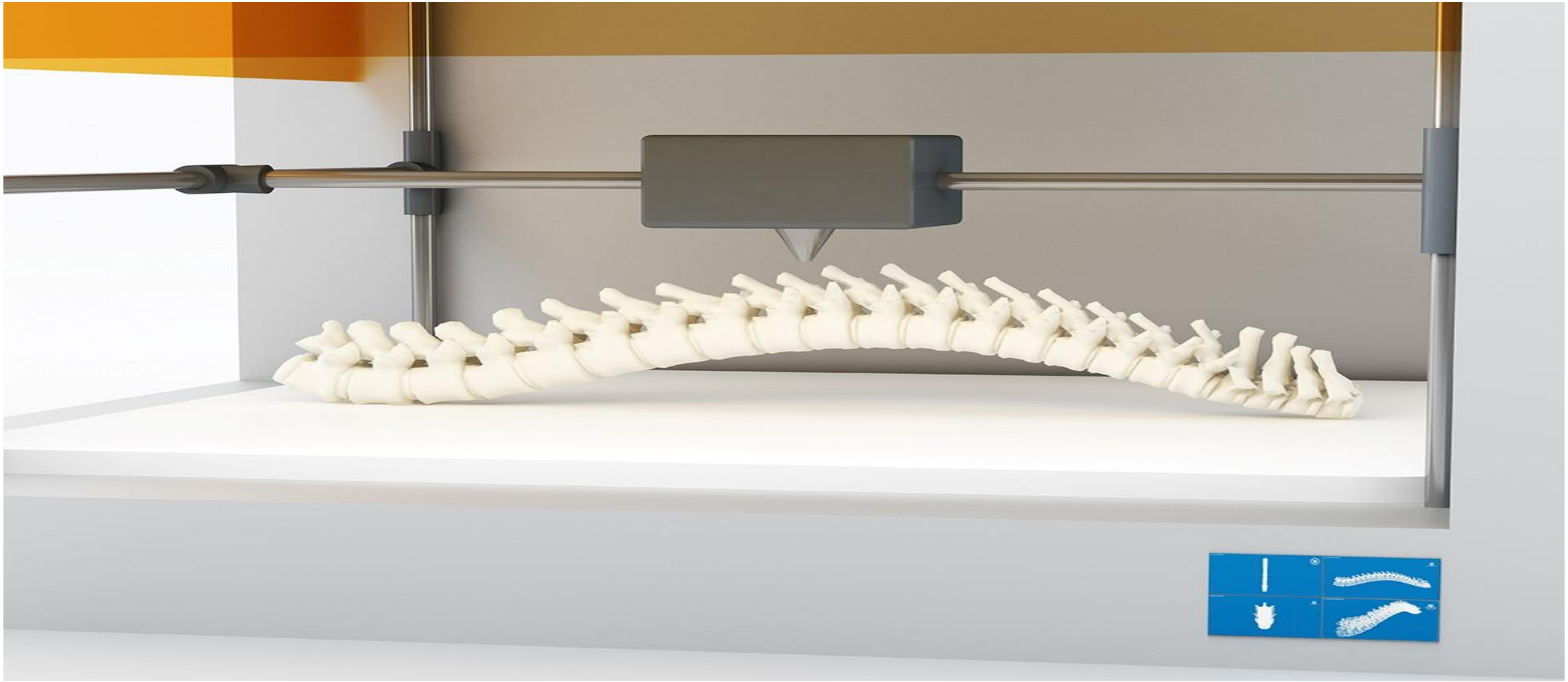
UV

Growth in powder coating resins | New powder technology for wood and plastics

Growth in specialty resins | Transforming the Chinese, solvent-based, sea freight container industry

Growth in specialty resins | Circularity by design: 100% recyclable carpet

Growth in 3D printing | High end materials providing step change in design and prototyping for our customers



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Growth in fiber optics | Enabling greater reliability and performance for ever increasing data transmission

Wrap-up

- Industry changes driven by market and (environmental) legislation provide significant headroom for Resins and Functional Materials
  - Profit from significant portfolio shift toward specialty, value-added technologies
  - Continue growth after shift from solvent-borne technologies to sustainable solvent-free products and low emission paints and coatings
- Capitalize on our innovation pipeline
  - Innovation solely focused on more sustainable, high quality resins technologies and solutions
  - ‘Move the needle’ in the short term with low temperature curing powder coatings, biobased paint resins and circular carpet

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DSM Engineering Plastics

Roeland Polet – President DSM Engineering Plastics

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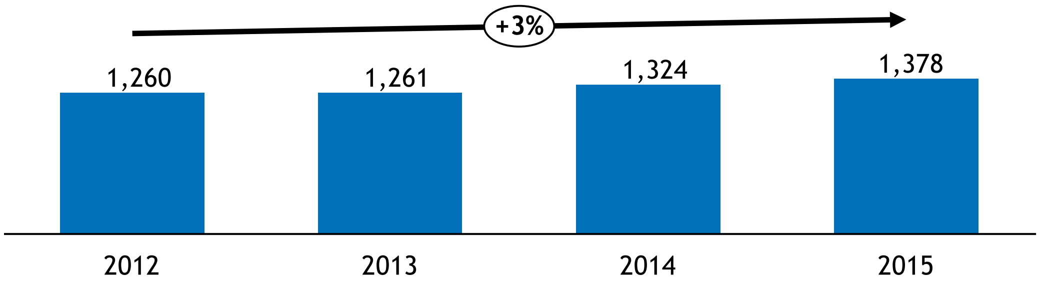
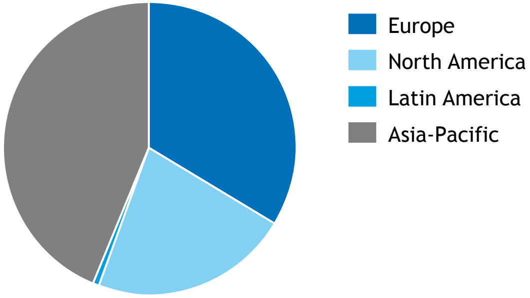
DSM Engineering Plastics in one view | A leading, technology and science driven supplier of specialty materials solutions to the global market

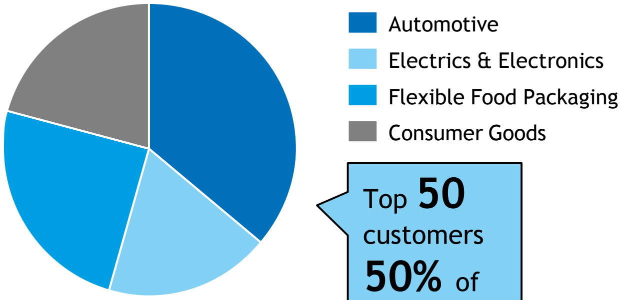
Sales (€m) | 2012-15



Sales by region (%) | 2015



Sales by end market (%) | 2015



Top **50** customers **50%** of revenue

Global leading market positions in:

- High Temperature Polyamides
- Thermoplastic Elastomers
- PET Specialties
- Polyamide 6

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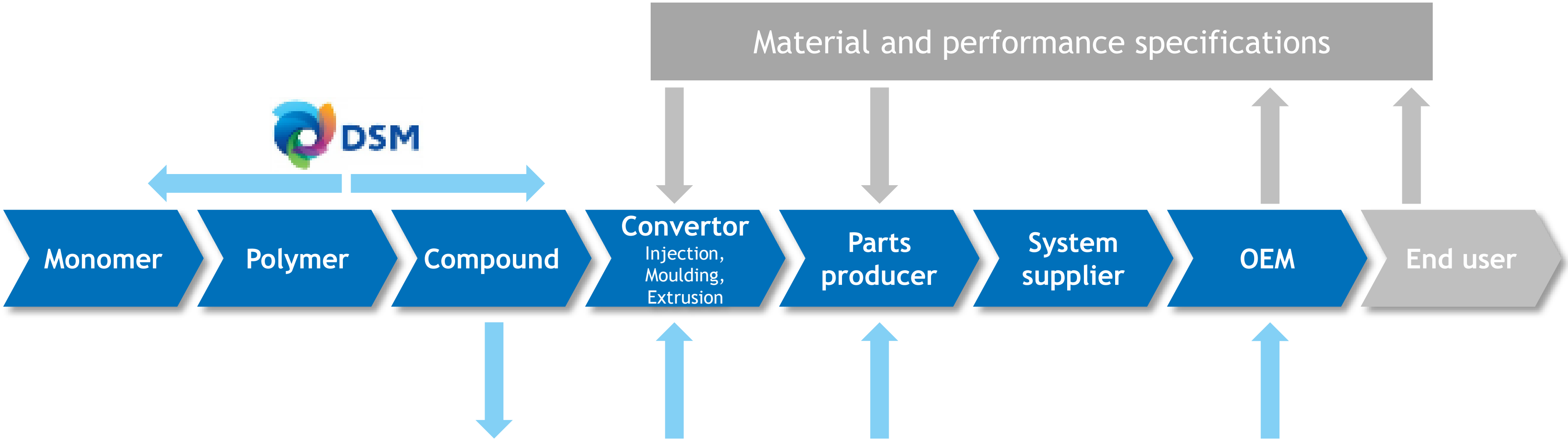
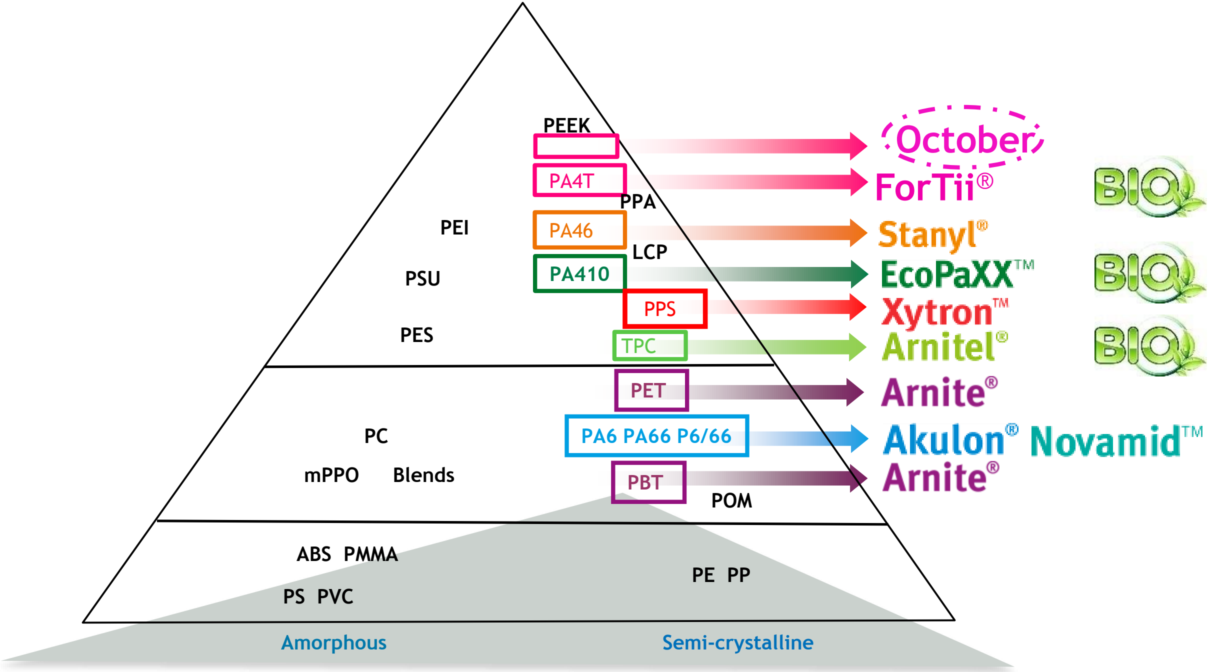
Value chain driven by application development at leading OEMs and system integrators



Engineering Plastics' solutions provide high value-add materials combined with design and processing support

- 75% of our business is highly specified by leading global brands
- Value is captured at the converters
- Commercial and technical resources equally distributed throughout the globe

Engineering Plastics has one of the broadest portfolios of high performance plastics



- Engineering Plastics continues to create innovative polymer platforms
  - New technology launch in October
- Xytron PPS was added to the portfolio by completing joint venture with NHU (China) in Q3 2016

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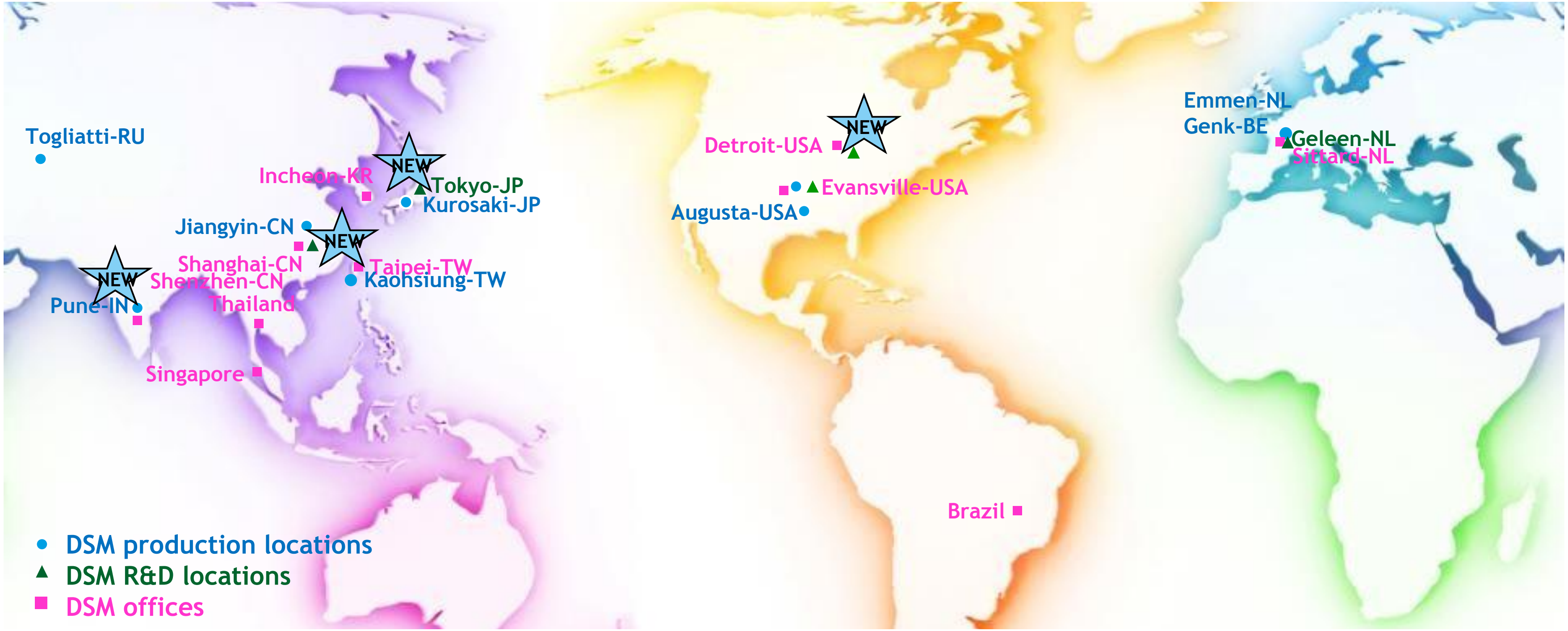
Extensive global product coverage compared with peers

PA6	PA66	HTPA	LCPA	PBT	PET	TPC	PPS	LCP	PEEK	PEI/PES
DSM	DSM	DSM	DSM	DSM	DSM	DSM	DSM			
BASF The Chemical Company	BASF The Chemical Company	BASF The Chemical Company	BASF The Chemical Company	BASF The Chemical Company						BASF The Chemical Company
DuPont	DuPont	DuPont	DuPont	DuPont	DuPont	DuPont				
SOLVAY asking more from chemistry®	SOLVAY asking more from chemistry®	SOLVAY asking more from chemistry®	SOLVAY asking more from chemistry®				SOLVAY asking more from chemistry®	SOLVAY asking more from chemistry®	SOLVAY asking more from chemistry®	
				Celanese	Celanese		Celanese	Celanese		
				سابك sabic						سابك sabic
EMS EMS-GRIVORY		EMS EMS-GRIVORY	EMS EMS-GRIVORY							
LANXESS	LANXESS			LANXESS						
UBE			UBE							
		EVONIK INDUSTRIES	EVONIK INDUSTRIES						EVONIK INDUSTRIES	

Engineering Plastics has a strong global presence serving global customers

Amount of global customers is growing at double digit rates each year

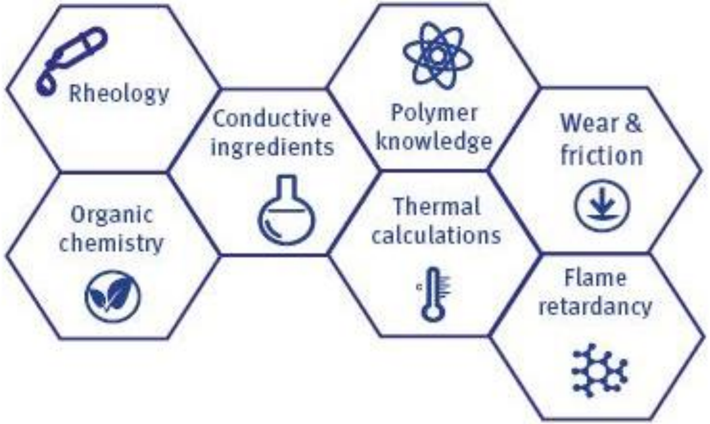


Consistent investments in technology and IP

R&D facts

Over 1,100 active patents, 30 patents filed each year

Competences



Deep competences to co-develop with customers

Continuously seeking to shift towards higher-value, specialty materials, introducing more advanced grades

Lever for growth

- More stringent legislation on fuel consumption and emission reduction lead to the continuous quest by OEMs for weight reduction of automotive components

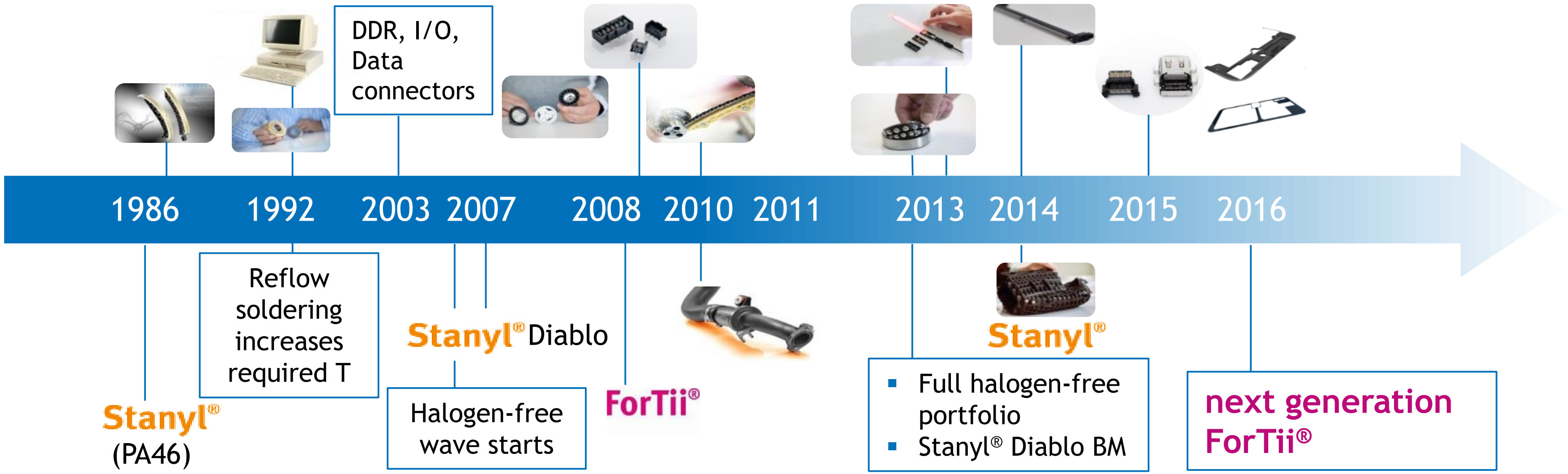
Value Proposition

- 40-50% lighter than metal

DSM: First one in commercializing engine and transmission oil pans in PA6

Akulon UltraFlow Grades:
Improve productivity even further

As the inventor of the high temperature polyamides space, DSM materials are now in 87% of all cars and in almost every mobile device



- Stanyl® PA46 was the first high performance polyamide in the market and opened a new class of materials: High Temperature Polyamides (HTPA)
- Launched in 2008, DSM's semi-aromatic polyamide, ForTii® (PA4T), combines the benefits of existing PPA with improved high temperature mechanics of Stanyl PA46
- Unique proprietary position with PA46, PA4T
  - In Q4 2016 DSM will launch next generation high performance polyamide family, opening new market space

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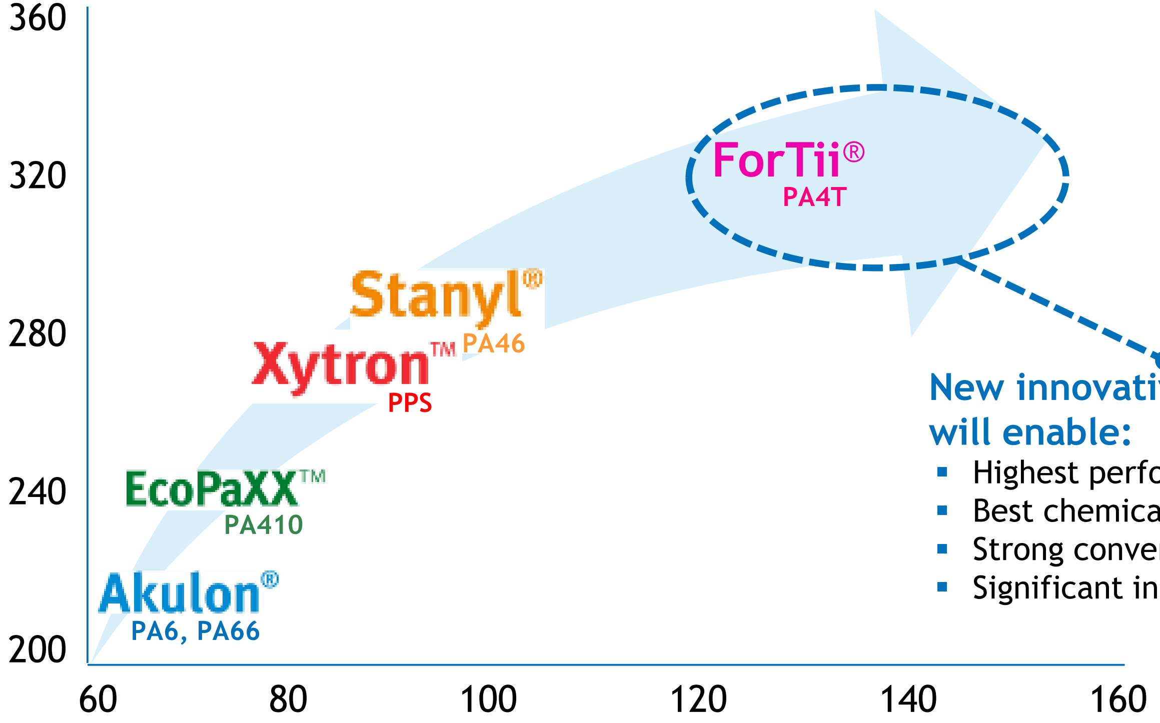
Today, DSM has the most extensive portfolio, enabling a wide range of operating temperatures



New innovative materials will enable:

- Highest performing polyamide
- Best chemical resistance
- Strong conversion economics
- Significant initial OEM Approvals

High performance plastics for Automotive

The continuous quest for fuel and emission reduction

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Engineering Plastics in Automotive | 4 strong levers for growth in the market

Fuel & Emission Reduction
- Increase Engine Efficiency
- Electrification
- Weight Reduction
- Friction Reduction

More Safety
- More Active Safety Systems
- More Passive Safety Systems
- Advanced Lighting Systems
- Connectivity

Total market potential: >€10bn

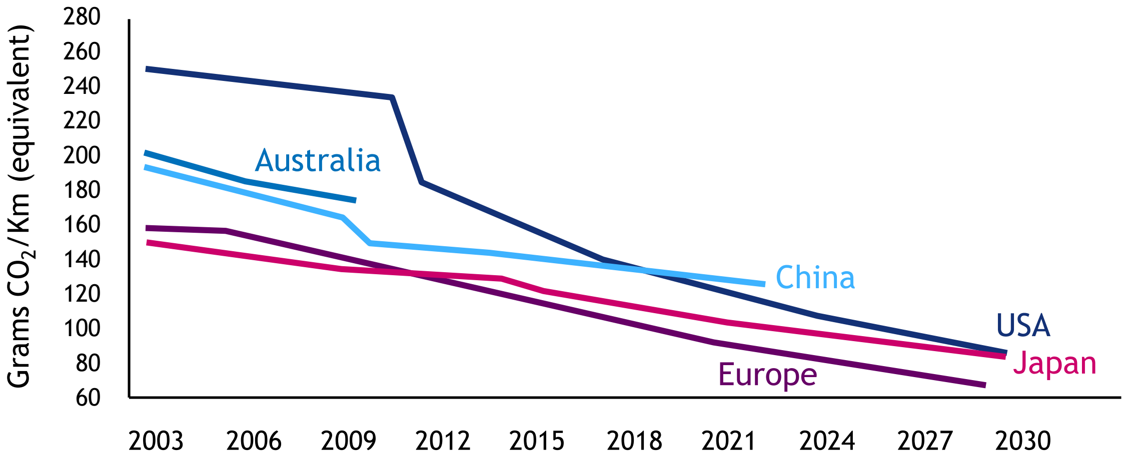
Connectivity & Comfort
- Electronification & Digitization
- Infotainment on Board
- Autonomous Vehicles

Increase Car Builds
- Increase in middle class in emerging regions
- Increased age of fleet in certain parts of the world

- These 4 levers are driven by regulation in the western world
- These levers will be accelerated in the developing economies
- All levers will increase of the amount engineering plastics in cars

In Automotive, stricter environmental regulations drive substitution growth towards high temperature resistant specialty plastics

CO_2 requirements in different regions



- Continuous global push for lower CO_2 emissions, or increased fleet MPG (miles per gallon) has automotive manufacturers focus on:
  - Lower car weight
  - Increased fuel efficiency requiring high performance materials
  - Increased electrification of the car

Growth in automotive | New Stanyl HR grades for significant friction reduction

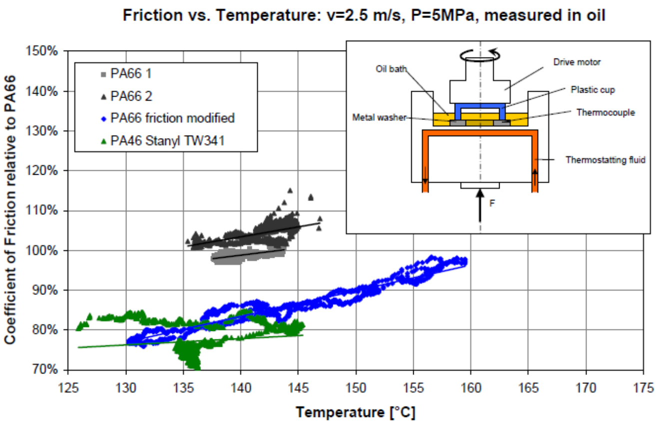
Levers for Growth:

- More stringent legislation on fuel consumption and emission reduction lead to the implementation of low friction components in engine and transmission

Value Proposition:

- Stanyl offers lowest friction at elevated temperatures
- This will result in 1% fuel down or 1 gr/km less CO_2 reduction versus PA66 alternative

Stanyl vs. PA66 friction



Growth in automotive | Improving engine efficiency using lighter, long-term heat resistant solutions

Levers for Growth:

- More stringent legislation on fuel consumption and emission reduction lead to the implementation of engine efficiency improvements such as integrated air inlet manifolds and highly sophisticated turbo systems where temperatures up to 230ºC do occur

Value Proposition:

- Stanyl Diablo has market superior high heat performance
- 40-50% lighter than metal

Air inlet manifolds integrated with Charge Air Cooler in Stanyl® Diablo PA46

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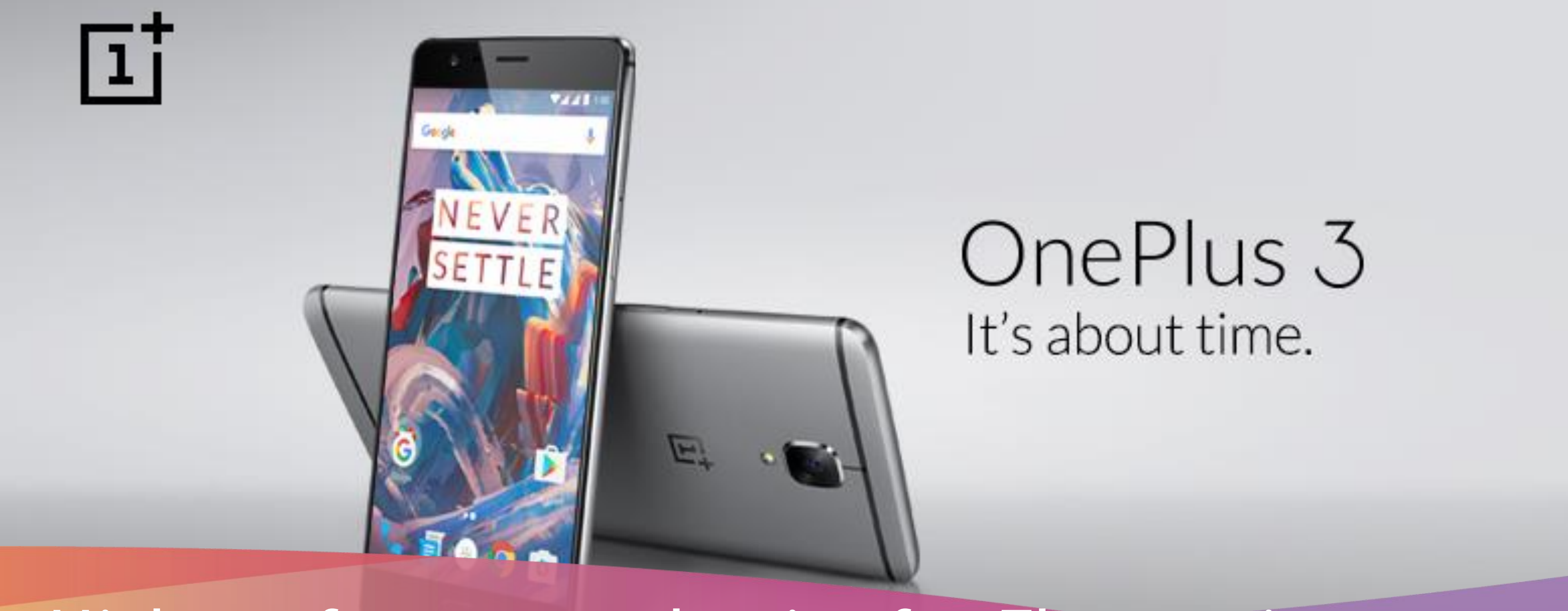

High performance plastics for Electronics

The continuous quest for miniaturization

Engineering Plastics in Electronics | Multiple levers for growth

Mobility
- Thinnovation
- Flexible touch
- Displays
- Wireless
- Weight reduction

Cloud computing
- Memory increase
- DDR4/5
- 5G

Digital health
- Wearable electronics
- Design towards fashion

Connected cars
- Computerized cars
- Sensors
- Remote Software service
- 5G

Total market potential

>€5bn

Connected Home
- Sensors
- Battery storage
- IP controlled devices

Green design

Halogen free, recycling, RoHS, Reach, WEEE

Energy efficiency

Control energy use of electronic devices and servers

- All levers in electronics represent significant potential for growth
- DSM has been an active development partner in the industry for 20+ years

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Growth in Electronics | Stanyl and ForTii mobility and cloud computing

Product of Choice in these demanding applications

Levers for Growth:

- Convergence to universal connectivity through USB-C
- Massive increase in cloud computing requiring DDR connectivity for server farms

Value Proposition:

- Stanyl and ForTii offer high temperature resistance as required in reflow soldering processes
- Stanyl and ForTii allow for thin-wall designs because of their excellent flowability

USB-C connectors

DDR4/5 connectors

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Growth in Electronics | Quest for thinnovation continues to push

Levers for Growth:

- Thinnovation quest in a multitude of electronic devices

Value Proposition:

- Stanyl and ForTii offer high temperature resistance as required in reflow soldering processes
- Stanyl and ForTii allow for thin-wall designs because of their excellent flowability

Mobile phone antennas and splitters

Frames mobile phones

Growth in Electronics | Broadest range of engineering plastics offers many solutions for the critically important wearables segment

Levers for Growth:

- Booming segment of Wearables yields a multitude of opportunities for materials such as Arnitel TPC

Value Proposition:

- Arnitel TPC allows vibrant and (very light) colorful products with elegant design, able to retain an elegant, silky look and feel
- DSM EP adds value to OEMs because of other electronic device related competencies

Printed Electronics

4G, Bluetooth
GPS Antennas

NFC, RFID,
Wireless Charging
Antennas

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We have the portfolio, the scale, the presence and the customer equity that makes us the supplier of choice for leading brands all over the world

- With one of the broadest ranges of specialty engineering plastics, DSM is ideally positioned to profit from clear global growth levers
- We have strong partnerships in winning, global segments
  - Partners in key industries including Automotive, Electronics
  - Focus on market and application areas which have demonstrated growth potential of 1.5 – 2X GDP
  - Well positioned to capture growth driven by globalization of manufacturing and design footprint of major brands across the globe
- Consistent above peer investment in technology

- Food Specialties
- Hydrocolloids
- Human Nutrition & Health | Introduction
- Dietary Supplements
- i-Health
- Early Life Nutrition
- Nutrition cost & efficiency program
- Animal Nutrition & Health | Introduction
- Green Ocean
- Resins & Functional Materials
- Engineering Plastics
- **Dyneema**
- Advanced Surfaces

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DSM Dyneema® – The world's strongest fiber™

Golnar Motahari Pour – President DSM Dyneema

ROYAL DSM
HEALTH NUTRITION MATERIALS

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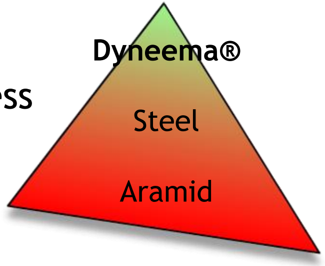
Dyneema® in one view

- Dyneema is the brand for the ultra-high-molecular-weight polyethylene fiber (UHMWPE), unidirectional sheet, tape and fabric invented and manufactured by DSM
- Dyneema combines:
  - Light weight with incredible strength
    - 15x stronger than steel
    - 40% stronger than aramid
  - High Abrasion and Cut resistance
  - Incredible durability
- Dyneema, the greenest strength™
  - Lowest carbon footprint in application lifetime compared to alternative materials:
    - Less material needed to achieve a given performance
    - High durability and long service lives
    - Compared to other fiber producers lowest carbon footprint in manufacturing process



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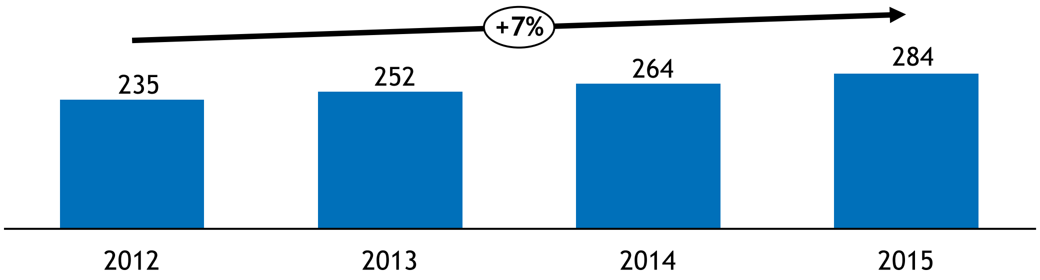
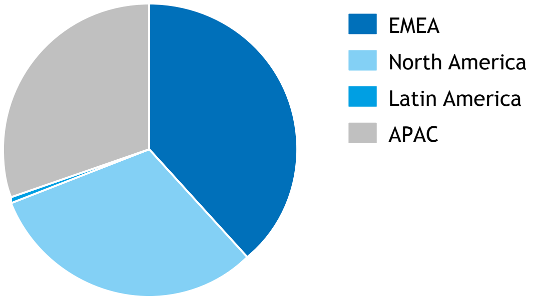
DSM Dyneema in one view

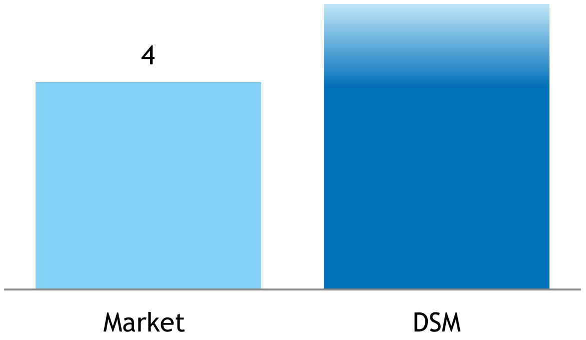
Sales (€m) | 2012-15



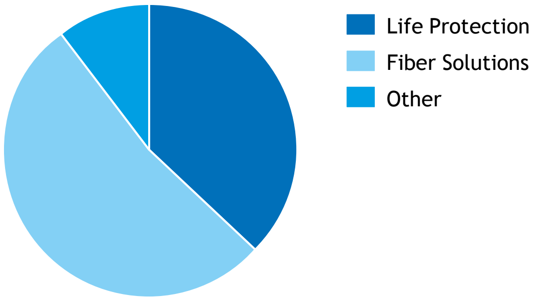
Sales by region (%) | 2015



Expected growth 2016-18



Sales by end market (%) | 2015



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Dyneema is the only UHMWPE player with assets in 3 main continents

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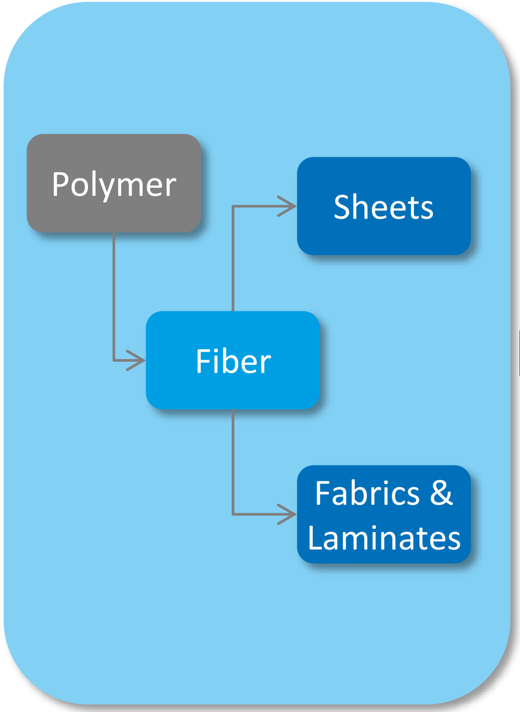
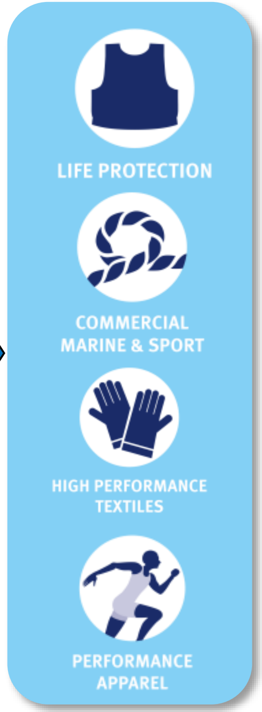
A versatile portfolio enabling innovative solutions

Technologies and form factors



Key markets



Overview

Industry	Applications	Value proposition
▪ Military & Law Enforcement	▪ Ballistic Vests, Inserts, Helmets, Vehicle protection	▪ Lightest weight protection and increased comfort
▪ Maritime, Fishing, Offshore, Industrial, Aviation	▪ Ropes, cables, slings, nets, fishing and yachting lines	▪ Lower operation cost and increased worker's safety
▪ Automotive, Manufacturing, Food	▪ Cut resistant gloves, Protective workwear	▪ Better cut protection at higher comfort level
▪ Sports & Lifestyle	▪ Jeans, Athletic Footwear, Sports Apparel	▪ Ultra lightweight, improved durability, increased protection

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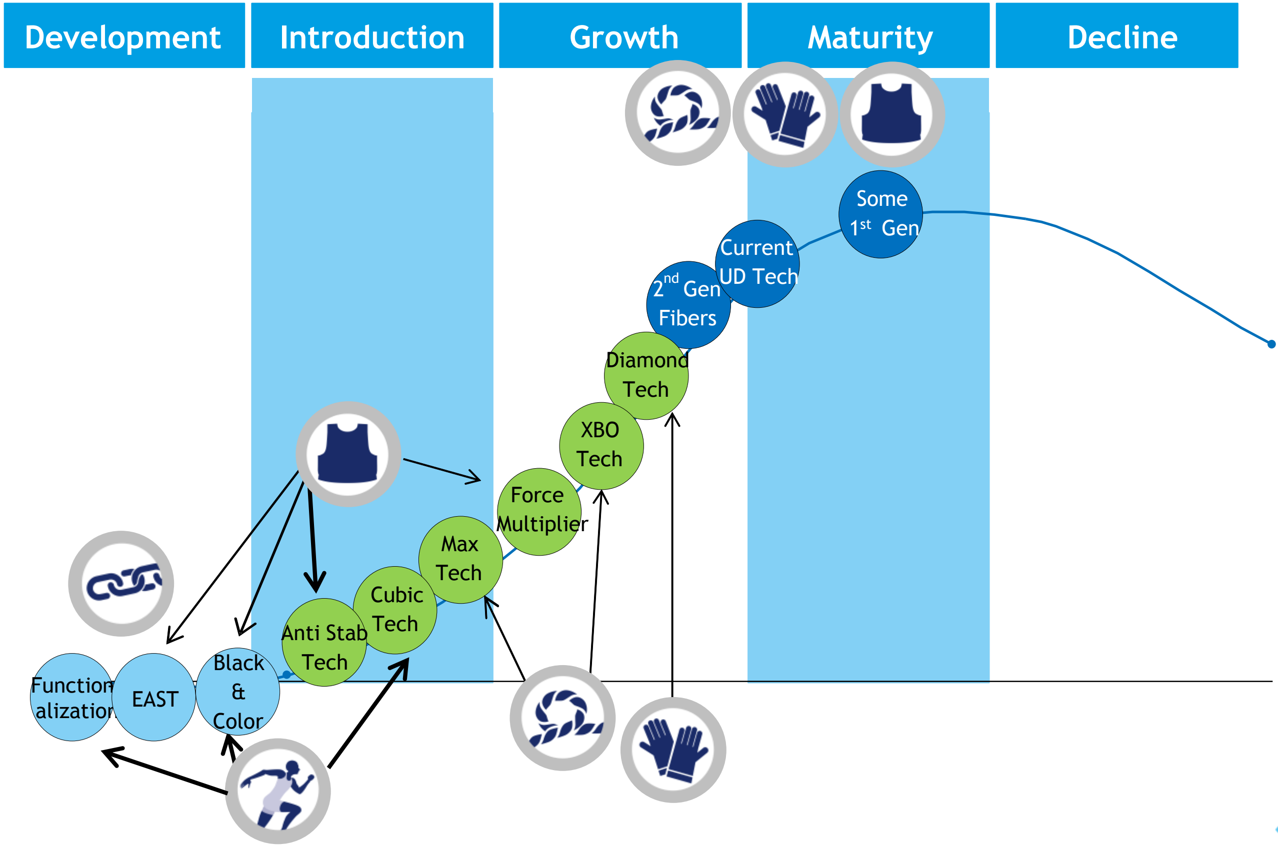
Innovative pipeline for further growth into existing and new markets and applications



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Spotlight on Life Protection

Bullet resistant body armor

Dyneema Force Multiplier Technology

WITH Dyneema®

Setting new standard for ballistic armor protection

Manufacturer: Point Blank ENTERPRISES, INC.

Customer: POLICE DEPARTMENT CITY OF NEW YORK

"Alpha Elite™ bullet resistant vests with Dyneema are the "Rolls Royce" of ballistic protection"

- Protection with up to 30% reduced weight
- High comfort and flexibility

Spotlight on Commercial Marine

Breakthrough solution in permanent subsea anchoring

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Dyneema Max Technology

- ➢ **Reduced system and installation costs**
- ➢ **Increased worker's safety during handling**

Customer: WireCo® WorldGroup

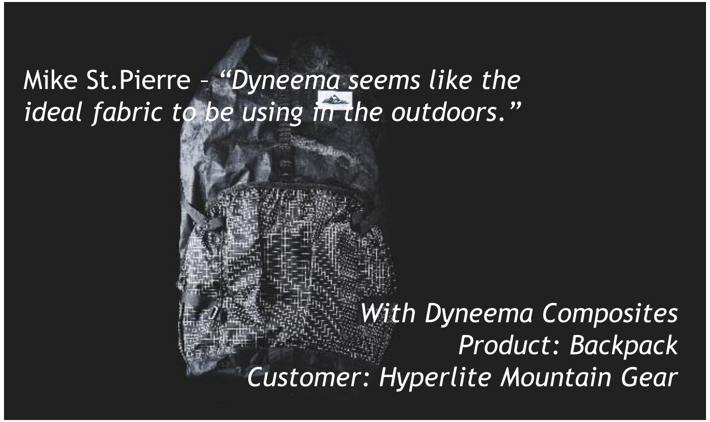
Product: *Riser tethers, made with Dyneema DM20, for Floating Production, Storage and Off-loading vessel (FPSO); Anchoring for 25 years*

<u>Sérgio Leite, sales director, Lankhorst:</u>
"Riser tethers are very technical products that demand the highest levels of mechanical and fatigue performance over many years. The strength and durability of Lankoforce Dyneema DM20 makes it ideal for just this type of application"

Spotlight on Performance Apparel

High performance fabric solutions

Fabrics with Dyneema



Ultra lightweight

High durability

High comfort

Increased protection

Our path forward

- Strengthen product leadership
- Innovate into new markets

Anti Stab

Synthetic chains

Hybrid composites

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- Food Specialties
- Hydrocolloids
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- Animal Nutrition & Health | Introduction
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- Resins & Functional Materials
- Engineering Plastics
- Dyneema
- **Advanced Surfaces**

Same Sun. More Power.™

DSM Advanced Surfaces

Rob van Leen – Chief Innovation Officer

ROYAL DSM

HEALTH NUTRITION MATERIALS

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DSM Innovation Center | Accelerating and supporting innovation at DSM

DSM Innovation Center

Accelerators

Supporting Business Groups and EBAs in accelerating innovation and meeting innovation targets

Chief Technology Office

Excellence in Innovation

Intellectual Property

Venturing & Licensing

New Business Development

Creating new businesses for DSM, outside the current scope of the existing Business Groups

Emerging Business Area Biomedical

Emerging Business Area Bio-based Products & Services

Emerging Business Area Advanced Surfaces

Business Incubator

DSM in the photovoltaics market

Innovations to accelerate solar power adoption

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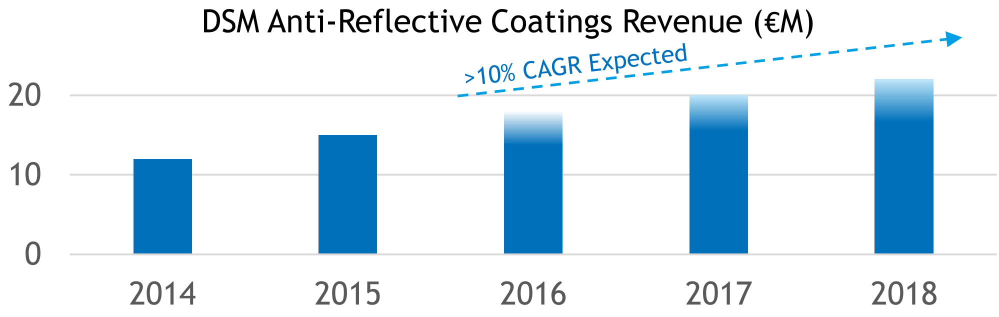
Advanced Surfaces in one view

Sales and expected growth 2016-18



Global presence

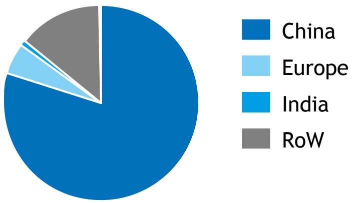
- One production site (Europe)
- Two R&D and Application Development centers (Europe, China)
- Four sales offices (Europe, China, US, India)

Products

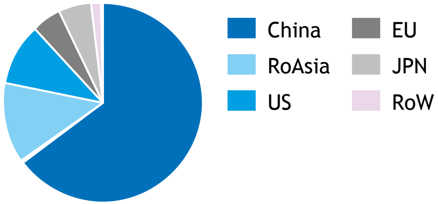
- Anti-reflective coating – global market leadership
- Backsheet – launched 1Q16
- Strong innovation pipeline

Markets by region | 2015

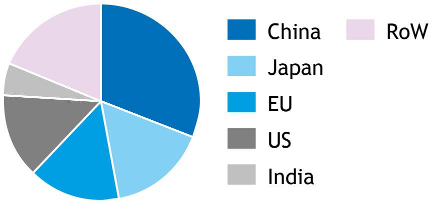
PV Glass Manufacturers (AR coating)



PV module Manufacturers (Backsheet)



PV system Installation (end-market)



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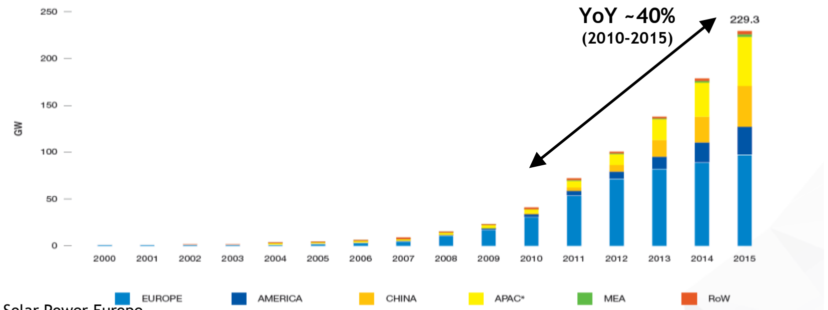
Meeting the needs of an attractive growth market

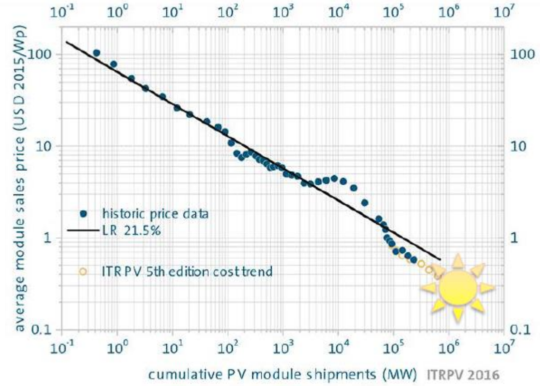
- Solar PV has emerged as a mainstream source for power generation
  - Driven by incentive schemes and increasing competitiveness
- In 2015, solar photovoltaic (‘PV’) accounted for 25% of new power capacity added globally
- Continued strong market growth expected
  - Enabled by further reduction of the price of solar power ($/kWh)
- DSM aims to commercialize a portfolio of innovations that lower the cost of solar energy by increasing its efficiency, durability and reliability

Growth of global PV capacity | 2000-2015

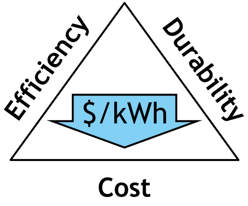


Source: Solar Power Europe

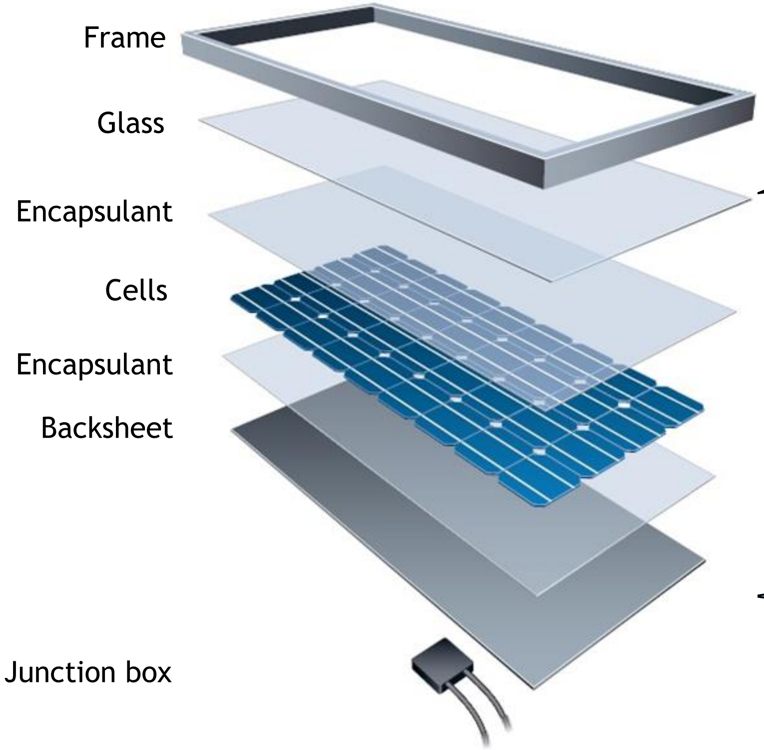
PV module price reduction



Drivers for cost reduction



DSM solutions are **lowering the cost of solar power**



DSM Anti-Reflective Coating

Lowering cost through enhanced PV glass light transmission, resulting in higher module power output

DSM Backsheet

Lowering cost through enhanced light management and improved barrier properties resulting in higher power output and reduced degradation during lifetime of the module

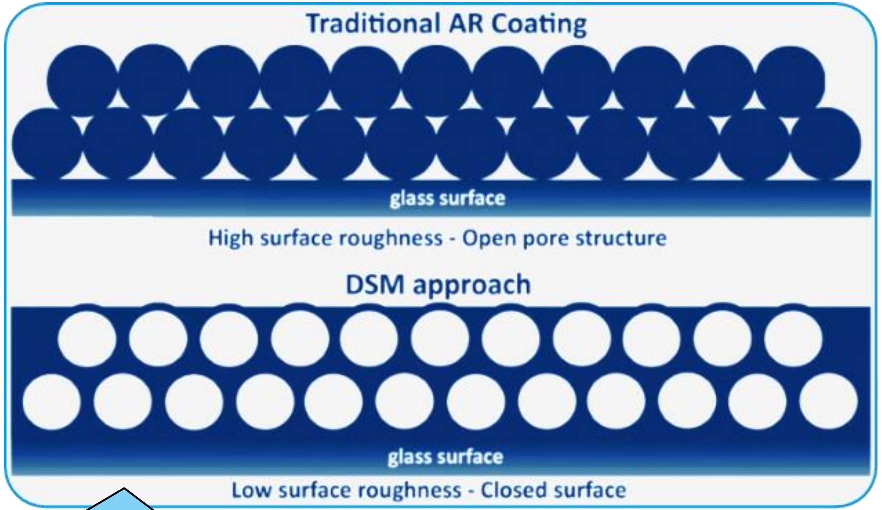
Spotlight on Anti-Reflective Coatings

Increasing the efficiency of solar photovoltaic panels

Anti-Reflective Coatings ('ARC') for photovoltaic solar glass

- Launched in 2011, DSM established a global market leadership within three years
- Applied to the front side of solar glass
- Coating minimizes reflection, especially at low angles of incidence
  - As more light is allowed to enter the panel, the power production is increased by ~4%
- DSM's highly durable, proprietary technology delivers:
  - Unparalleled transmission gain
  - Easy handling and durability even in extreme weather conditions

DSM's differentiating technology



A closed pore structure is established through a differentiating core-shell technology, provides unique optical, mechanical and durable properties

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Setting the stage for further expansion

Market entry	ARC customer base	Building relationships via ARC market pull	Building demo parks	Exploring retrofit options
ARC supply	**Glass coater**	**Module manufacturer**	**EPC/IPP**	**Power generation**

coating

glass

modules

system

- Next gen ARC
- Functional ARCs

  (e.g. anti-soiling, IR barrier)

- Module materials

  (e.g. backsheets, encapsulants)

- Retrofit solutions

  (e.g. Light trapping film)

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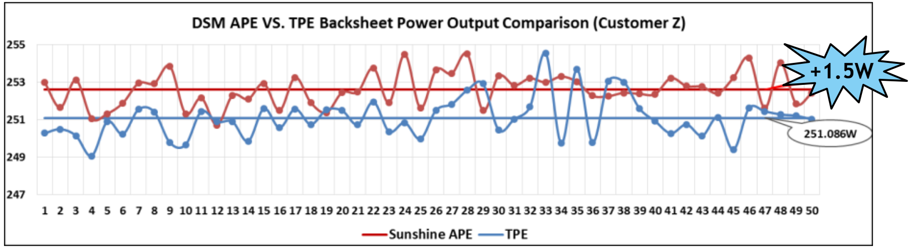
Spotlight on Advanced Backsheets

Advanced backsheet
increased value for module makers and system owners

- Backsheet materials protect PV modules against weather conditions and mechanical loads and provide safety through electrical insulation
- DSM is partnering with a Chinese backsheet company to exclusively market a new portfolio of innovative PV backsheet products based on a patented technology
- By partnering, considerable acceleration and risk reduction in PV business expansion has been realized
- The innovative backsheet technology offers a platform to meet the broadening scope of future customer needs in a cost competitive way

DSM's differentiating technology



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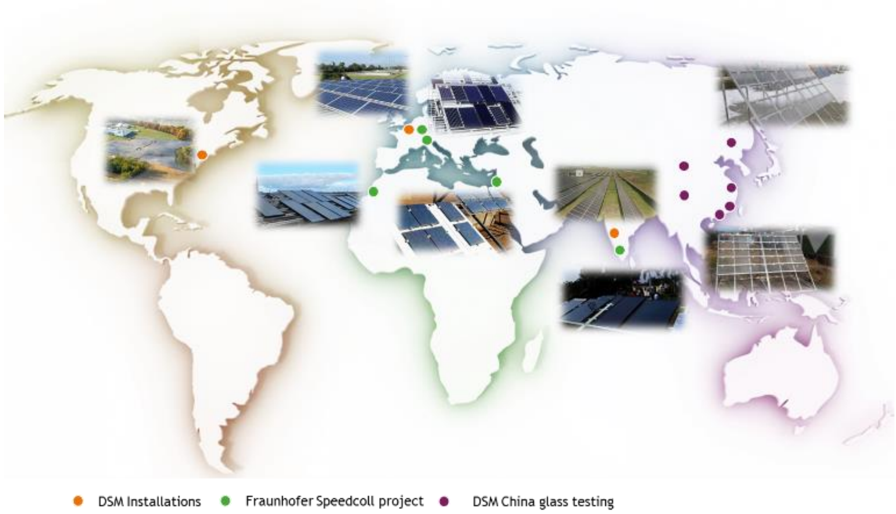
Our path forward

New innovations to deliver value to the solar PV industry

Fundamental capabilities to accelerate growth

Supporting today's market

- DSM established a leading ARC position recognized as high performance material supplier to the PV industry
- Fast growing global organization with expanding product portfolio
- R&D and Applications Development labs have been set-up in China and Europe
- Real-time field performance monitoring and outdoor test facilities have been installed globally



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Fundamental capabilities to accelerate growth

Open innovation is key to future growth

- **SunRISE Techbridge Challenge**
  Start-up competition to identify solar material innovators

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PARTNERSHIP / VENTURING INVESTMENT

GREENTOWN LABS
LAUNCH PROGRAM: STARTUP ACCELERATION

Fraunhofer USA
CENTER FOR SUSTAINABLE ENERGY SYSTEMS CSE
VALIDATION PROJECT

- Partnerships and development programs with leading R&D institutes in the PV industry

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Fraunhofer

SOLAR RESEARCH
SOLLIANCE

CPVT

ECN
Your energy. Our passion.

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DSM innovations for tomorrow's photovoltaic technologies

Anti-soiling coatings	→	Reducing PV plant operation costs/power loss
Electroconductive backsheets	→	Innovative cell interconnection concept integrated in the module backsheet
Advanced encapsulants	→	Enabling high efficiency modules
Light trapping film	→	Capturing light reflected from the ground or passing in between the cells

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