

DSM STRATEGY 2018

Driving Profitable Growth

In Nutrition

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Member of the Managing Board

ROYAL DSM CAPITAL MARKETS DAY
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Safe harbor statement

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A more comprehensive discussion of the risk factors affecting DSM's business can be found in the company's latest Annual Report, which can be found on the company's corporate website, www.dsm.com

Agenda

1 Nutrition Strategy 2018

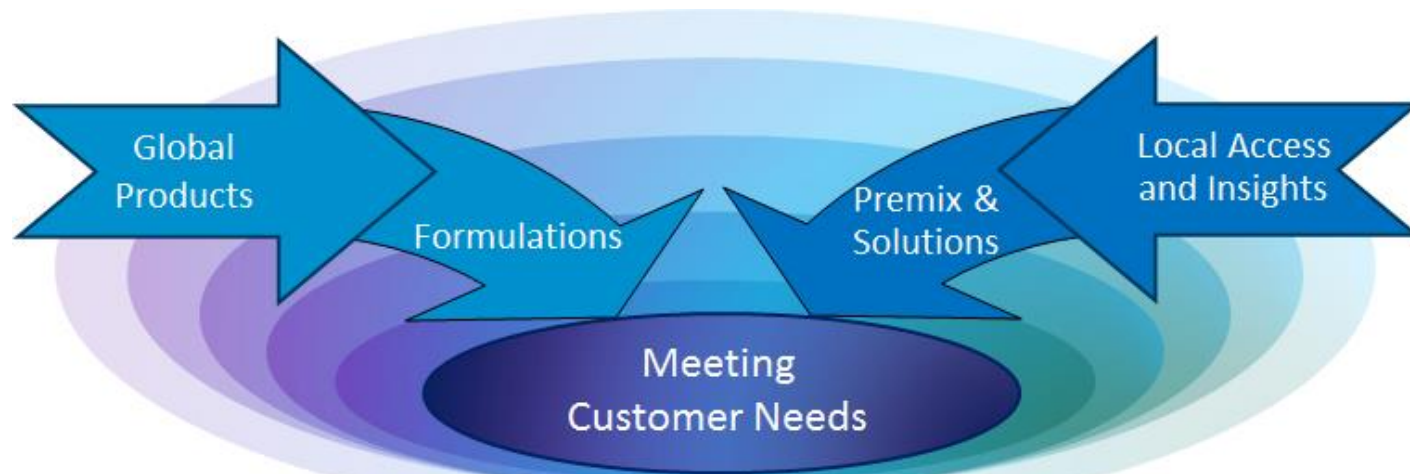
2 Growth Strategies:

- Animal Nutrition & Health
- Human Nutrition & Health
- Food Specialties

3 Wrap-up

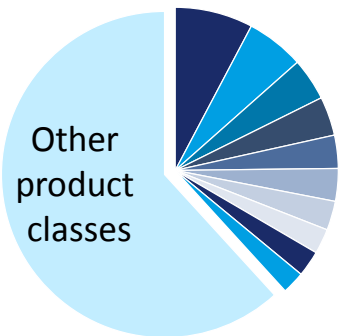
Global Products & Local Solutions

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



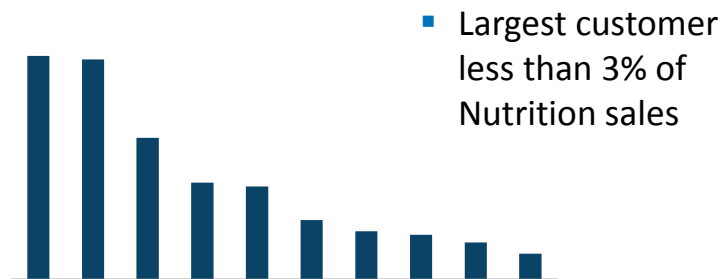
Nutrition portfolio is resilient with limited exposure to single product or customer

Top-10 represents <40% of Nutrition profit in 2015



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

Largest customers by sales in 2015



Nutrition Strategy 2018

- Profitable growth via:
 - 1 Expanding the core
 - 2 New products and solutions
 - 3 Growing in underpenetrated categories / regions
 - 4 Accessing new segments/
new business models
- Reducing costs and increasing productivity
- Driving cash generation
- Increasing capital efficiency



Aspirations 2018

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

Improved financial returns in Nutrition supported by **cost savings and operational excellence**

Savings in Support Functions

- Lower cost for support functions & functional excellence
- Leveraged organizational set-up & behavior change

~€60-75m¹
(2017)

Nutrition Improvement Program

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

€130-150m
(2018)

Sales Stimulation Program

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

Higher organic growth

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

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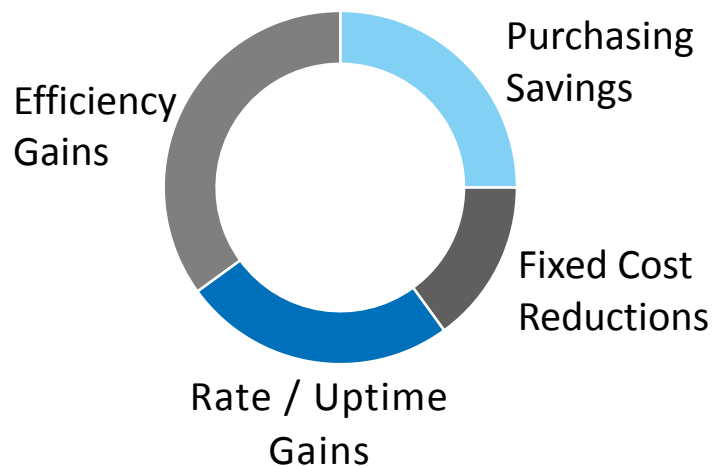
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Nutrition improvement program: €130-150m EBITDA contribution by 2018

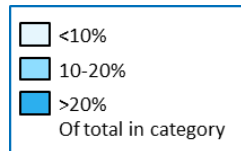
Cost improvements – €130-150m (vs. 2015)



- Purchasing savings related to direct raw materials, energy, and indirect spend
- Fixed cost reductions, including ~100 FTE
- Higher Rates and Uptime to enable growth
- Higher yields and energy efficiencies to lower unit cost

Rigorous effort undertaken to realize gains across all major manufacturing sites

	Fixed Cost	Yields	Energy	Rate	Total
Dalry	<10%	<10%	>20%	>20%	10-20%
Kingstree	<10%	>20%	<10%	>20%	>20%
Lalden	<10%	<10%	<10%	<10%	<10%
Sisseln	>20%	10-20%	>20%	<10%	>20%
Belvidere	10-20%	<10%	<10%	<10%	<10%
Vill. Neuf	<10%	<10%	<10%	<10%	<10%
Grenzach	<10%	<10%	<10%	>20%	<10%
All Other	10-20%	10-20%	<10%	<10%	10-20%



What

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

How

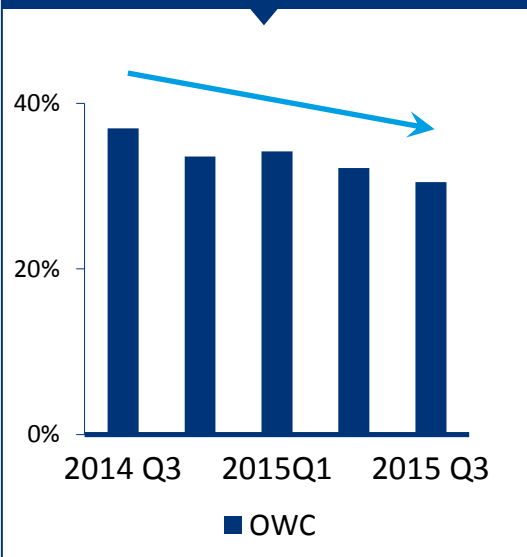
- Common approach across all major sites
- Well structured and resourced process
- More than 400 measure sheets
- One third are Lean or Six Sigma projects

Examples

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

Driving working capital reduction

Reduced Operating Working Capital %



Reduction of Inventories

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

Integrated Business Planning

- A** Designing and implementing end-to-end planning, aligning financial and physical planning
- B** Manage supply constraints and trade-offs from total business perspectives
- C** Replenishment strategies

Third profit-growth pillar for Nutrition is **sales stimulation & organic growth**

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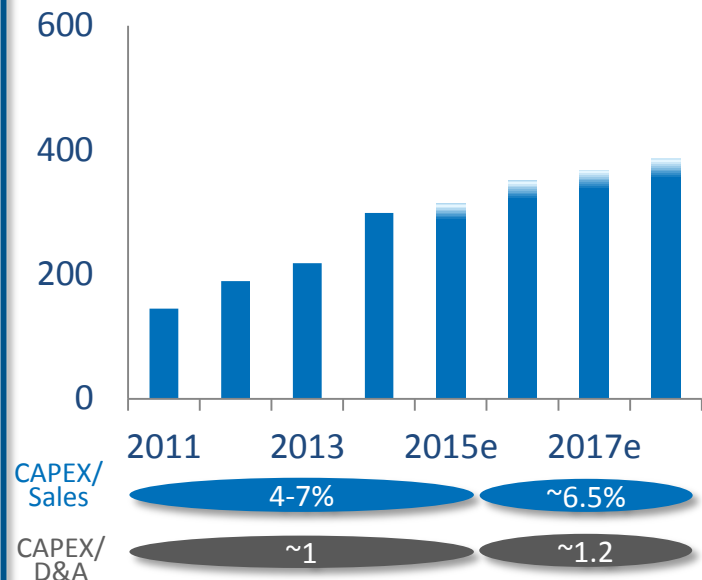
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Higher organic growth

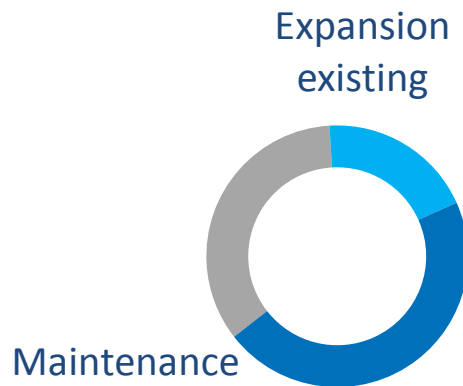
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Slide 11

Strategy 2018: Growth is supported by **disciplined investments** in new capacities, downstream market access and limited, bolt-on M&A

CAPEX Nutrition (€m) ~6.5% of sales



Investing for growth



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

New capacity

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

Agenda

1 Nutrition Strategy 2018

2 **Growth strategies:**

- Animal Nutrition & Health
- Human Nutrition & Health
- Food Specialties

3 Wrap-up

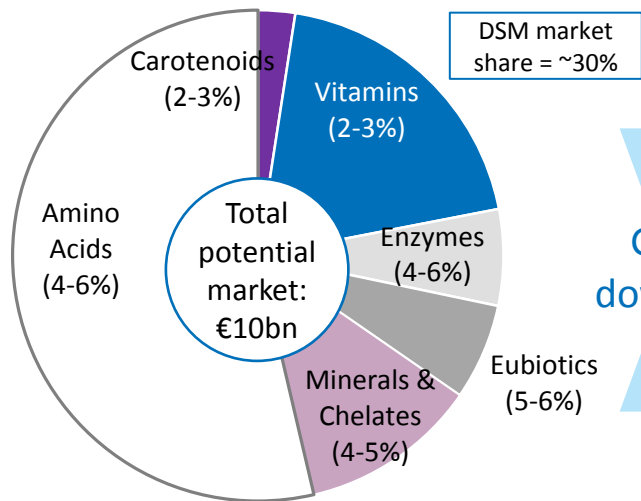
Animal Nutrition & Health



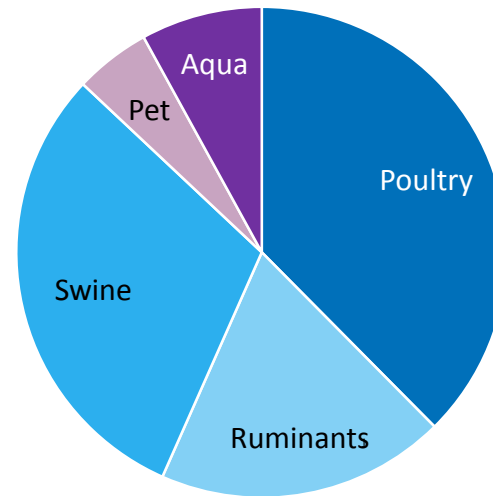
Our Animal Nutrition has a complete portfolio of targeted feed ingredients and has further growth opportunities beyond the historical core area of poultry

Animal Nutrition market by product (excl. premix)

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



Animal Nutrition application landscape¹



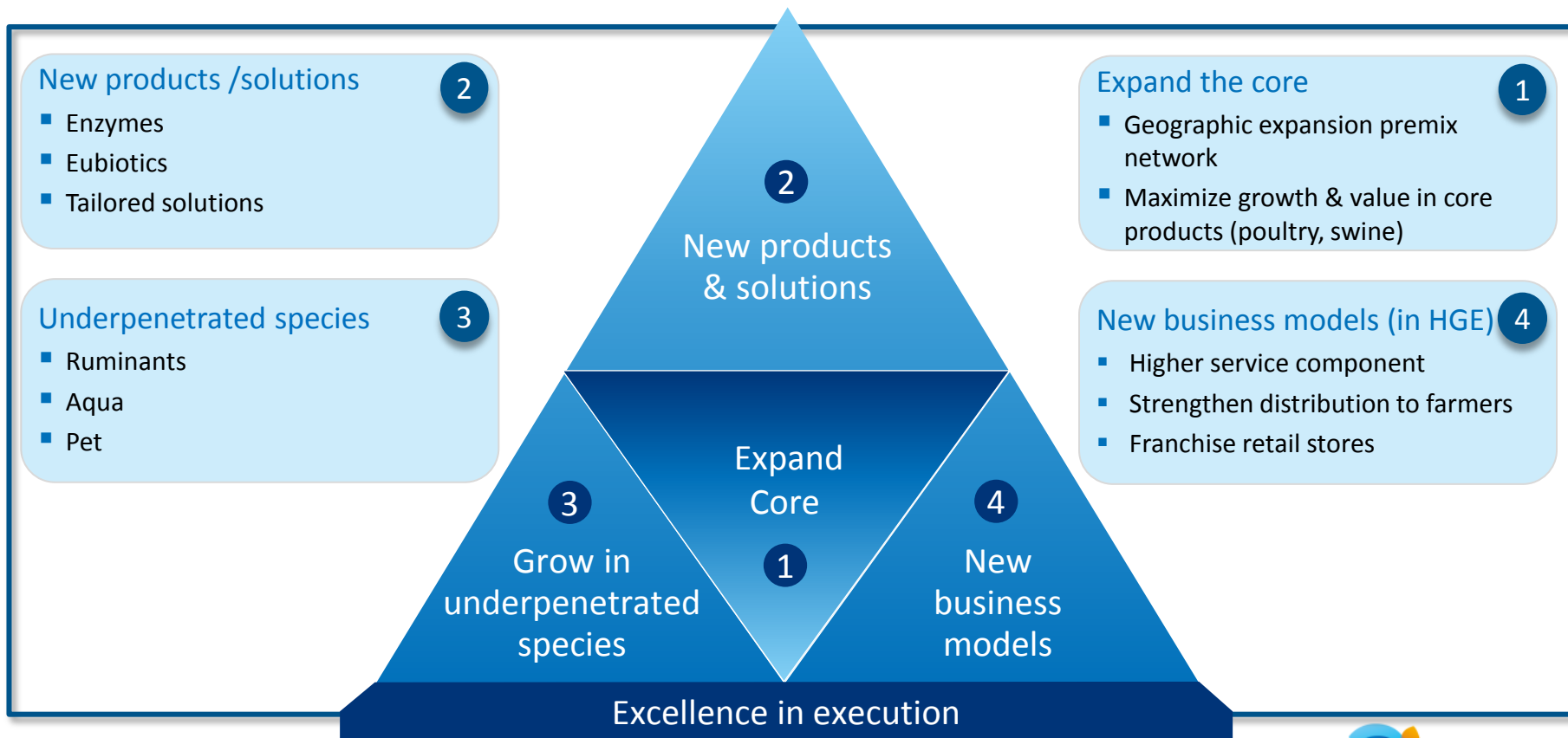
Growing downstream

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

Strategy 2010-2015 built a unique position in Animal Nutrition & Health

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

Strategy 2018: Profitable growth in Animal Nutrition & Health



Expanding the core: Further geographic expansion of unique premix network



New solutions: Feed enzymes and eubiotics solutions tailored to meet the specific, local needs of animal protein producers



Animal Nutrition Innovation and Science Center
near Beijing, China

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

Grow in underpenetrated species: Ruminants, Aqua and Pet



3-4%
CAGR growth
2016-2018

Ruminants

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



6-7%
CAGR growth
2016-2018

Aqua

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

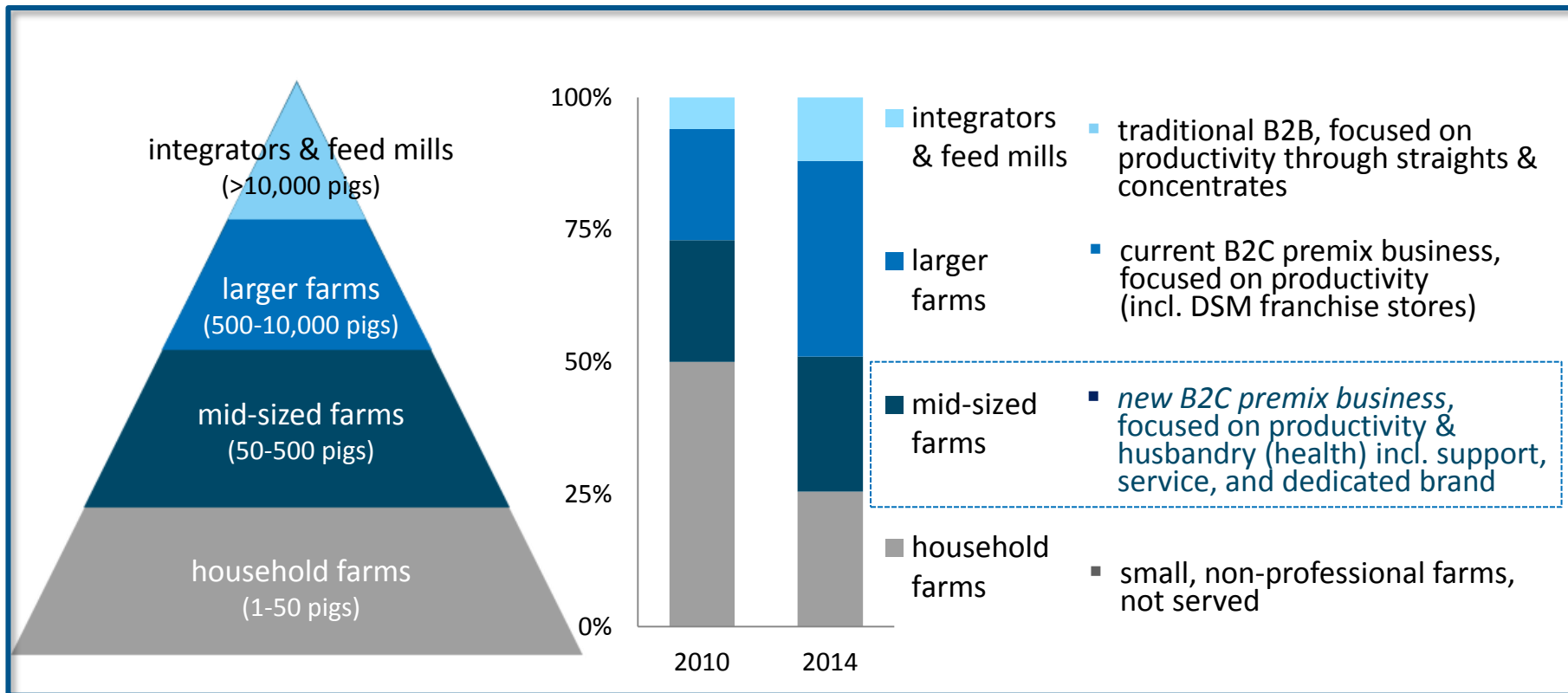


7-8%
CAGR growth
2016-2018

Pet

- Demand for high value, high quality pet food for which DSM has all ingredients
- Launch innovative pre-mixes and health driven solutions (PUFAs)

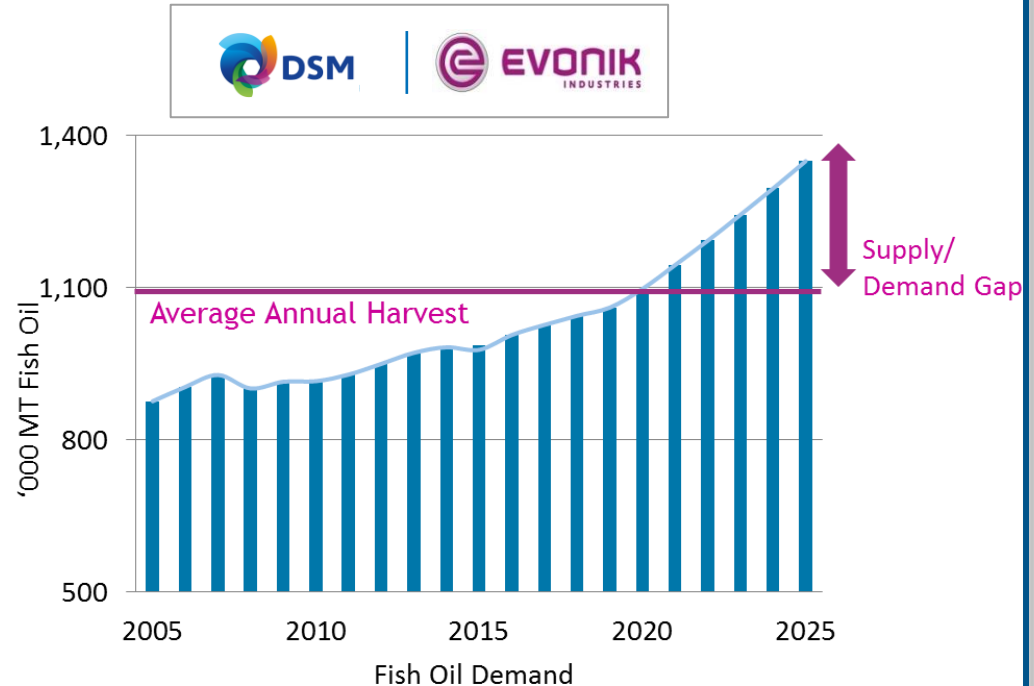
Drive growth via penetration of **new customer segments with new channels**: developing **dedicated new brand** of premix for mid-sized farms in China¹



¹ Scope on slide is swine industry China

Sustainable innovations: Setting the new industry standard for algae-based Omega-3 fatty acids for animal nutrition

- Fish oil supply / demand gap creates opportunity for algae-based Omega 3
- Alliance to develop high value solution
- Set an industry standard for aqua feed
- Market development along the chain from feed producers to retailers



Sustainable innovations driving tomorrow's growth: CleanCow

I will teach you about CleanCow, so you learn how to reduce the methane out put with 25% ☑



Newsweek

HOME POLITICS BUSINESS CULTURE TECHNOLOGY SCIENCE HEALTH THIS WEEK'S EDITION

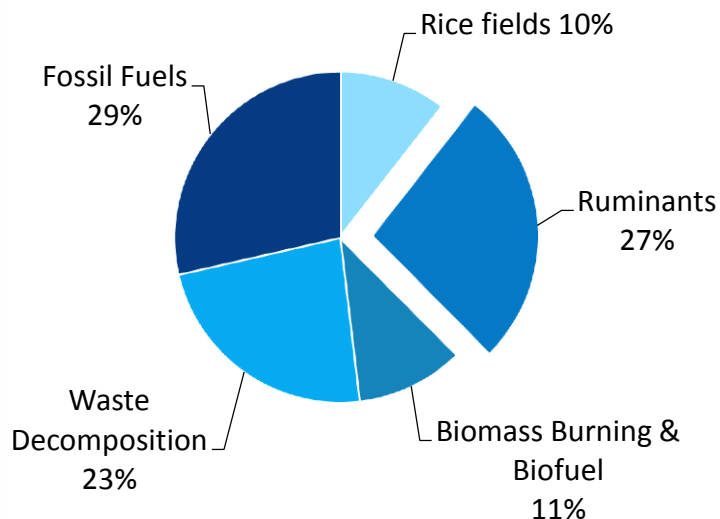
SCIENCE

Cleaner Cow Burps to Tackle Climate Change

By **Conor Gaffey** 8/3/15 at 7:36 PM

CleanCow tackling climate change and increasing productivity

Methane sources

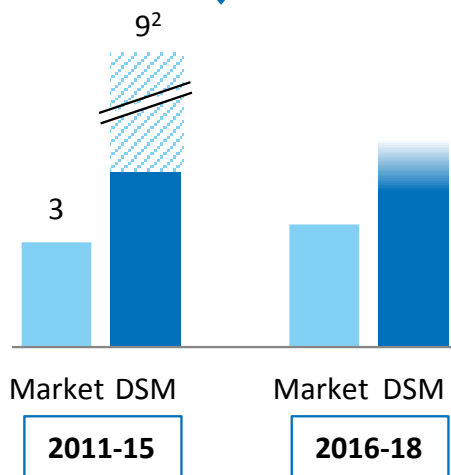


- Ruminants are significant source of methane
- CleanCow, a proprietary special feed ingredient
 - reduces methane emissions by 25-30%
 - increases performance (protein yield, weight gain, efficiency)
- Focused on markets with highly developed dairy production
- Potential: triple-digit sales (€ million)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

Growth 2016-2018 in animal nutrition: Continued outperformance

Animal Nutrition¹

Key actions driving profitable growth



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

¹ At steady prices, CAGR %

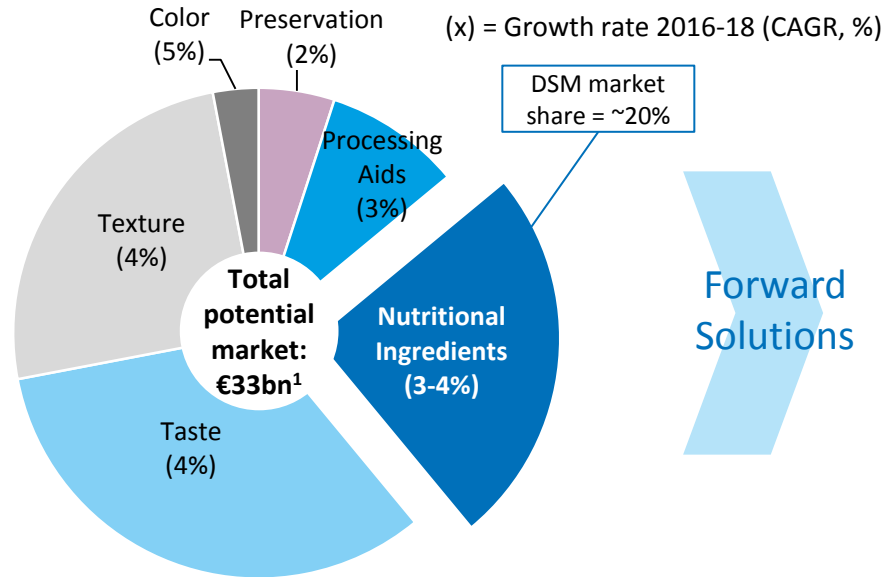
² Excluding Vitamin E price effect

Human Nutrition & Health



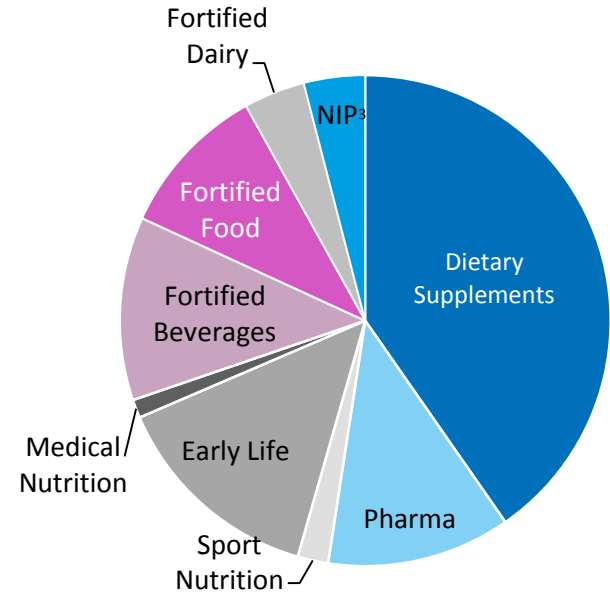
Our Human Nutrition is leading in nutritional ingredients and has ample opportunities to further expand in a diversified application landscape

Specialty Food Ingredients market and growth by product



Forward Solutions

Diversified application landscape²



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

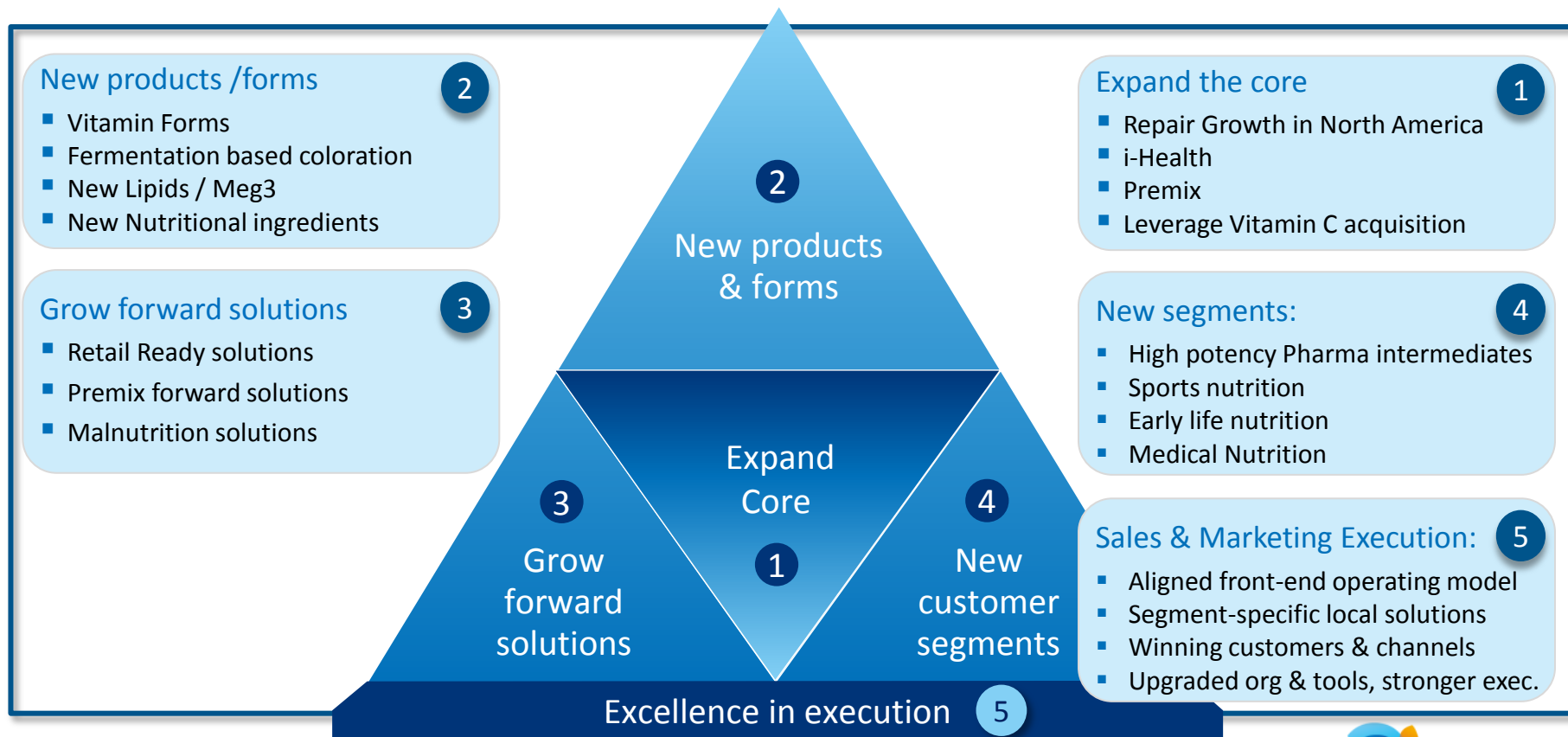
Strategy 2010-2015 built a strong core in Human Nutrition & Health

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

Addressing difficult markets in North America:

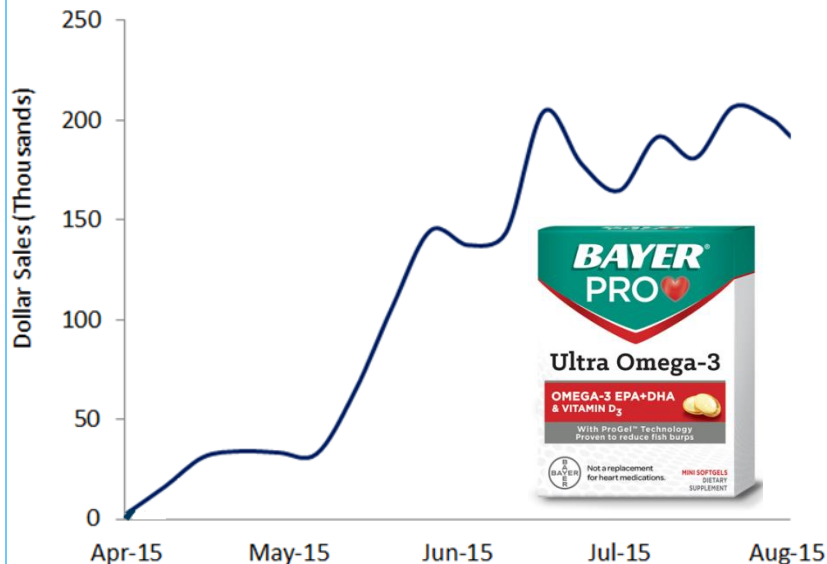
- ✗ Cost pressures & de-fortification in Food & Beverages
- ✗ Fish-oil based Omega-3 DS
- ✗ Dietary Supplements

Strategy 2018: Profitable growth in Human Nutrition & Health



Expand the core: “Repair Growth” in North America

Example: Bayer PRO¹ branded launch of Ultra Omega-3 is renewing the category



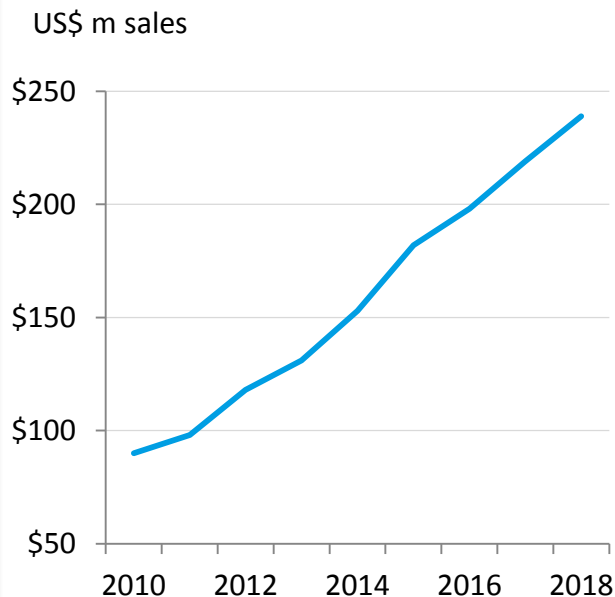
Example: Leveraging Vitamin C acquisition

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



¹ Source: Nielsen (Sept 2015)

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



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



Estroven AZO



New products / forms: Fermentation-based coloration

- Global trend towards non-artificial coloration
- DSM's fermentation competences can replace artificial dyes technology
- Create winning portfolio by adding natural red and blue to beta-carotene yellow



New products /forms: New Lipids/Meg3



Our new, super-concentrate MEG[®]-3 solutions are sustainably sourced, and can be supplied with precisely the EPA:DHA levels required to help you create the products of tomorrow



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

New product examples: Oatwell® Fruitflow™ Tolerase® G (GlutnGo™)



- *Oatwell*® helps lower cholesterol levels and control blood glucose



- *Fruitflow*™ the first natural, scientifically substantiated solution contributing to healthy blood flow



- *Tolerase*®G (GlutnGo™) helps digest gluten

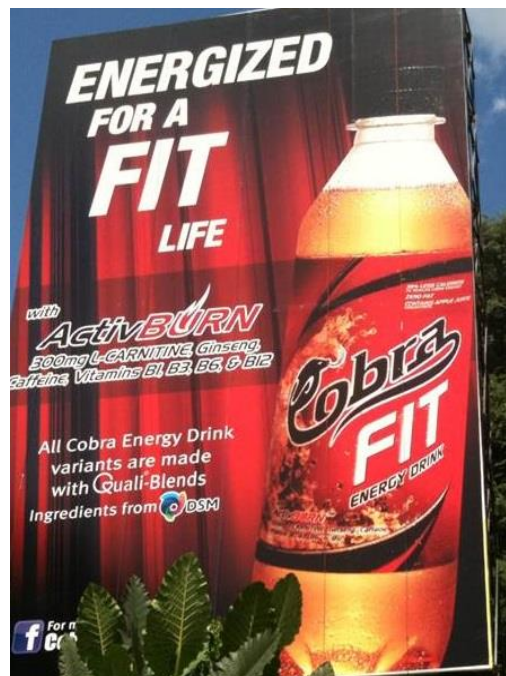


Grow forward solutions space: Retail-ready solutions

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



Grow forward solutions space: Forward solutions in Premix



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



Grow forward solutions space: Sustainable solutions targeting Malnutrition



- Micronutrient powders, easy to add to foods, reducing micronutrient deficiencies
- Complementary foods for pregnant and breastfeeding mothers and for older infants
- Africa Improved Foods JV, initially targeting Rwanda and Ethiopia

Examples of **new customer segments**: High-potency Pharma intermediates

- Actively pursue Drug Master Files for wide range of actives with limited investment
- Multiple examples
 - Biotin – multiple sclerosis
 - Omega 3 – triglycerides
 - High potency versions of Vitamin D3, folate, ...



Delivering on growth with **disciplined sales & marketing execution**

Simplification of Front End Operating Model

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

Focused Segment Teams Tailored Local Solutions

- From product to segment marketing
- Rebalancing of regional / global marketing
- Upgraded capabilities for development of local solutions / applications

Driving Delivery at Customers

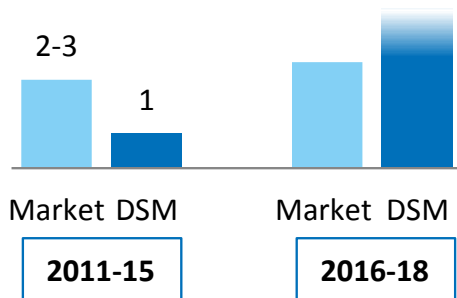
- Distribution partners for small customers
- Global/ regional champions and winning channels (e.g. e-commerce, MLM)
- Increasing win rate as business is becoming more project/ solutions driven

Upgraded Organization, Sophisticated Tools, Rigorous Execution

Growth 2016-2018 in Human Nutrition: Step-up to above market growth

Human Nutrition¹

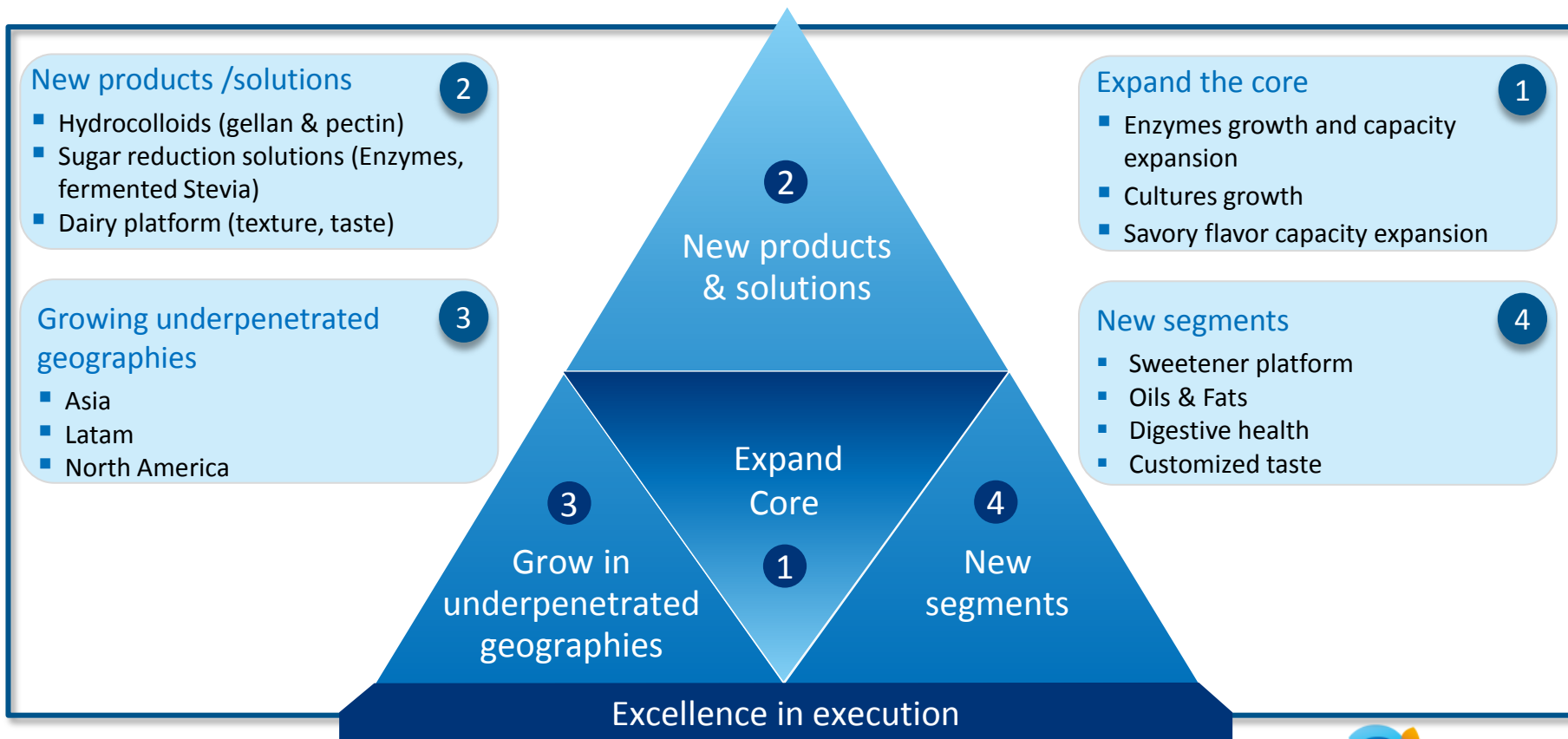
Key 2016-2018 actions driving profitable growth



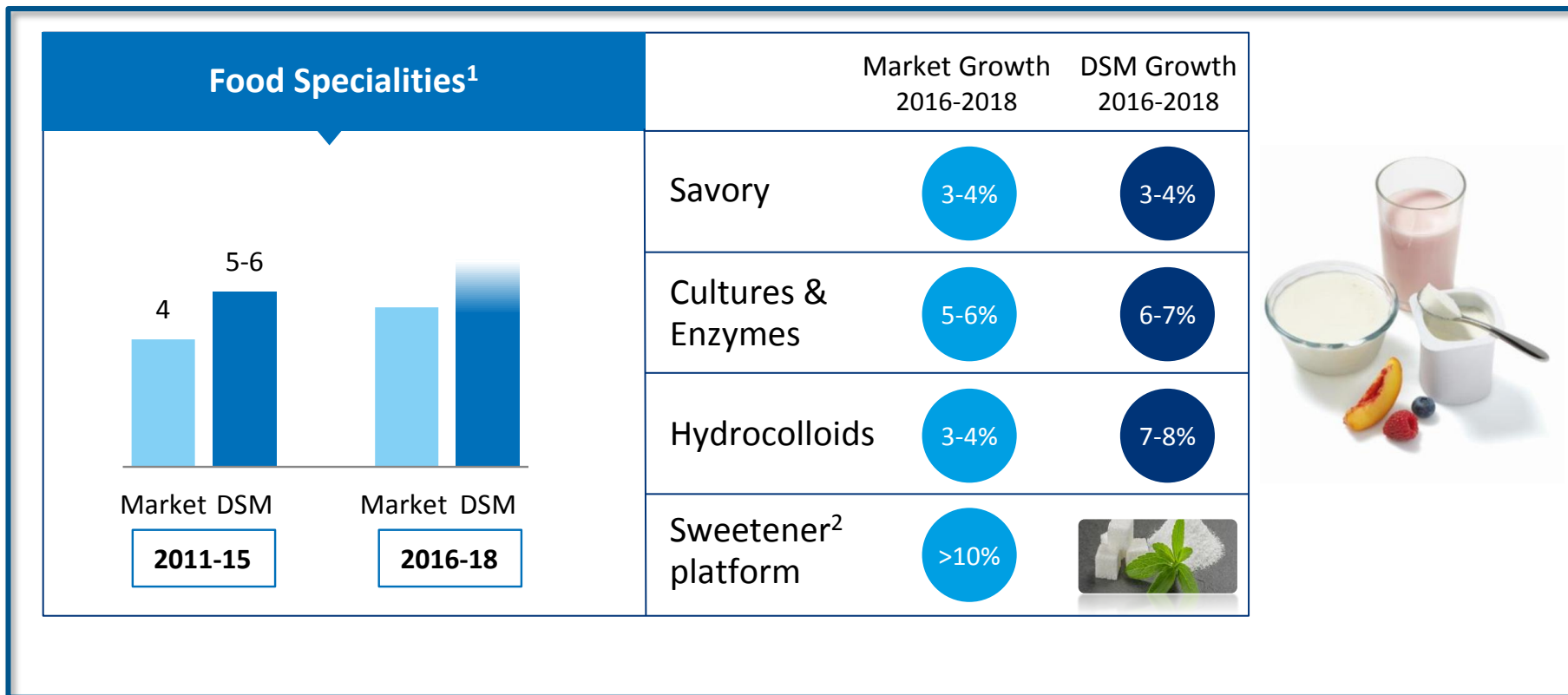
- Repair growth in North-America, returning Dietary Supplements (Vitamins, Omega-3) and F&B to growth
- Continued double-digit growth of i-Health business
- Accelerating forward solutions and premix globally
- Capture business in Pharma, Clinical, and Sports Nutrition
- Upgraded organization, new tools,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

¹ At steady prices, CAGR %

Strategy 2018: Specialty Food Ingredients to continue its growth path



All segments strongly contributing to growth aspirations of Nutrition



1 At steady prices, CAGR %

2 Growth of market for non-artificial high-intensity sweeteners (which includes Stevia)

Agenda

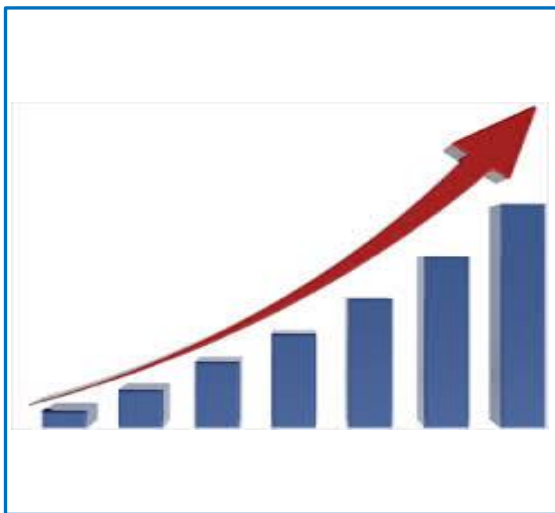
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3 **Wrap-up**

Driving Profitable Growth in Nutrition with Global Products & Local Solutions

Higher growth rates



Improved financial returns

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



BRIGHT SCIENCE. BRIGHTER LIVING.™