

Value growth in Human Nutrition & Health

Rick Greubel
President Human Nutrition & Health

US Field Trip
September 4, 2014

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

Human Nutrition and Health (HNN): who we are

Dietary Supplements

- Drivers are multivitamins, Omega-3's, vitamin D & E and multi-level marketing products
- Strategic position in Vitamin C enhanced with pending acquisition
- i-Health - leading consumer brands demonstrating healthy growth

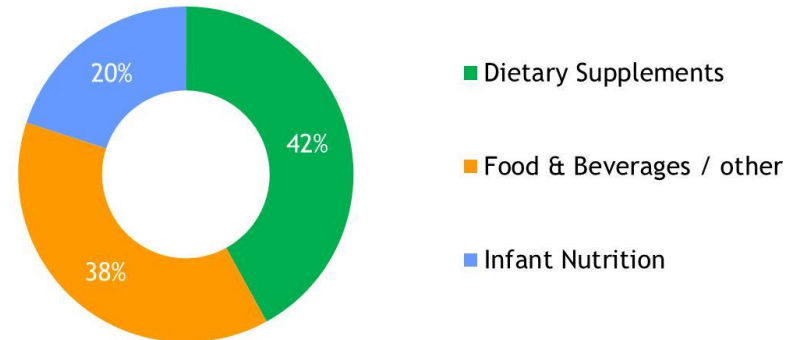
Food & Beverage

- Premix nutritional solutions, Omega-3's and natural colors and ingredients

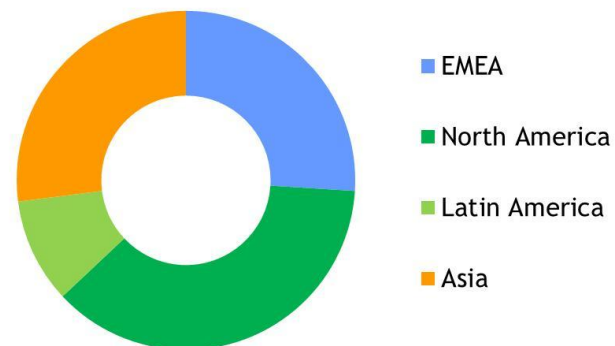
Infant Nutrition

- Life's DHA/ARA and premix growth in Asia and LATAM

HNN sales 2013 by end market



HNN sales 2013 by region



Fundamental drivers for long term growth of micronutrients

Global aging

- Rising cost of healthcare
- Preventive health and wellness via nutrition

Health claims

- Regulators and skeptical consumers
- Quality science key to build and protect consumer brands

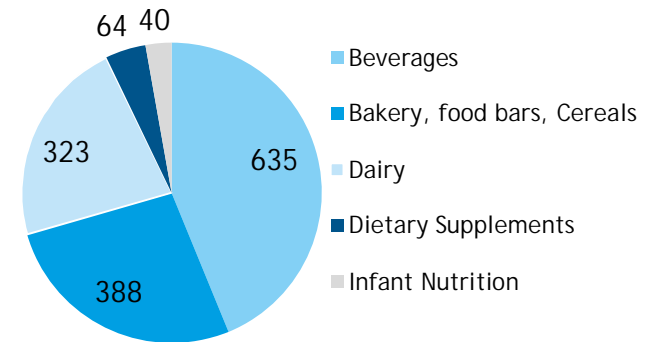
Transparency

- Consumers seek to know & understand
- Quality & Quality image is key to integrity of brands and companies

Urbanization

- Consumption of processed foods

World market size 2013
(in € billions, retail sales)



Source: Euromonitor 2013, DSM estimates

HNH sales growth driven by multiple factors

- In forward integrated solutions through premix
 - Fully customized
 - Focus on complete solutions
- High growth economies
 - Staple foods applications for base of pyramid
 - Growth in Asia and LATAM DS driven by preventative care & aging population
 - Acquisitions/venturing provide portfolio synergy opportunities
 - Strategic position in Chinese Vitamin C
- Innovation sales outpaces overall growth
 - New differentiated forms
 - Focus on new natural ingredients
 - Eye, heart & bone health increasing importance
 - B2C marketing



Current business conditions in HNH

Food & Beverages markets

- Western Food & Beverages markets showed - in general- sluggish growth
- DSM's global and regional 'A-label' customers are addressing these conditions by launching new products, promotional campaigns and by speeding-up innovations
- Demand for premixes remains healthy
- Emerging economies will also drive good growth rates for F&B, tapping into the increased need for good and save quality processed food & beverages



Infant Nutrition

- After-effects of false botulism scare, affecting China and South East Asian markets
- New China regulation negatively impacted some of our customers
- Chinese INF market has settled with market growth in mid single digit range, lower than the past few years growth level
- Despite near-term challenges in the market, the fundamentals of the infant nutrition market remain sound

Current business conditions in HNH

US Omega-3 Dietary Supplements

- The US fish-oil based Omega-3 market was impacted by increased fish oil costs, leading to sharp increases of retail prices. This was combined with multiple negative media events
- DSM has taken the lead in an Omega-3 Dietary Supplements industry coalition to drive growth in the category
- Dietary supplement markets outside the US have not been impacted and continue to show good growth

Multivitamins

- US Vitamins markets have weakened as reaction to negative publications in H2 2013
- Recent scientific publications and media has been positive
- Vitamin D & E bucking the trend supported by aggressive DSM advocacy and communications initiatives
- Continued strong growth in DSM B2B business i-health
- DSM is taking the lead in a multivitamins industry coalition similar to the efforts in Omega-3 markets



US retail volumes*

Ingredient	Jan - Aug, 2014 (YTD) vs. 2013	August '14 vs August '13
Vitamin A	-6%	-7%
Vitamin C	-2%	+6%
Vitamin D	+5%	+7%
Vitamin E	+5%	+8%
Multivitamins	-2%	+1.5%
Omega-3	-11%	-3%

* Source: IRI (August 2014)

Vitamins: bringing balance to the public landscape



- Promote the body of credible **SCIENCE** while aggressively challenging the coverage of questionable science
- Create a **CONNECTION** to the products for **PEOPLE**
- Demonstrate the **VALUE** of the category to **SOCIETY**
- Galvanize credible and **ENGAGING VOICES** to educate and gain **TRUST** with consumers and the media on the essentiality of vitamins and minerals



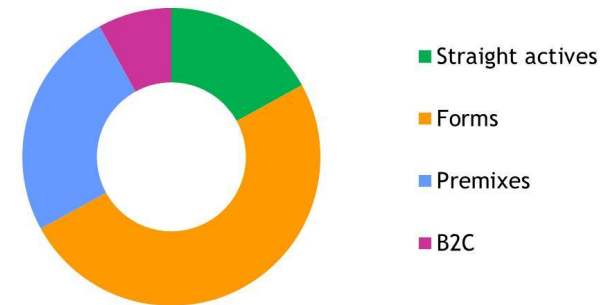
DSM's differentiation along multiple dimensions

HNH sales growth driven by business model and innovation

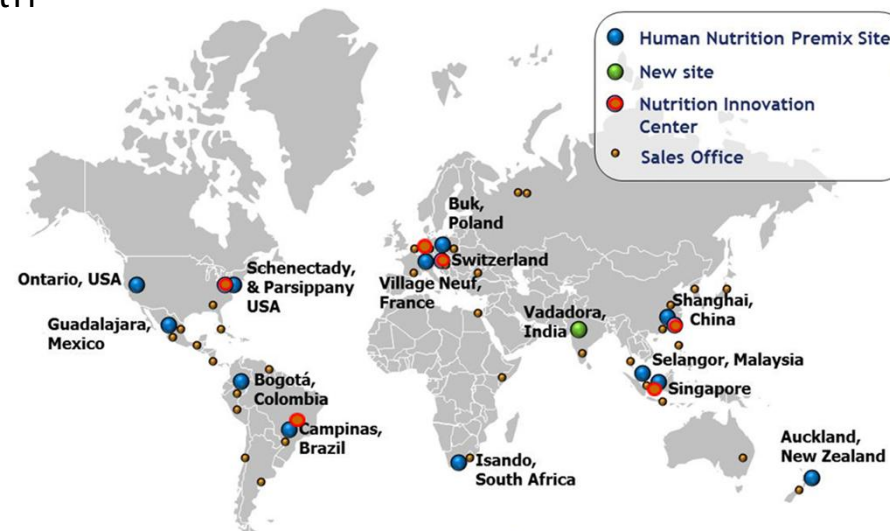
Growth supported by multiple factors

- Focus on premix solutions
- High growth economies
- Acquisitions provide portfolio synergy opportunities
- Innovation sales outpaces overall growth
 - New differentiated forms
 - Focus on new natural ingredients

2013 HNH sales by differentiated segment



HNH Premix footprint

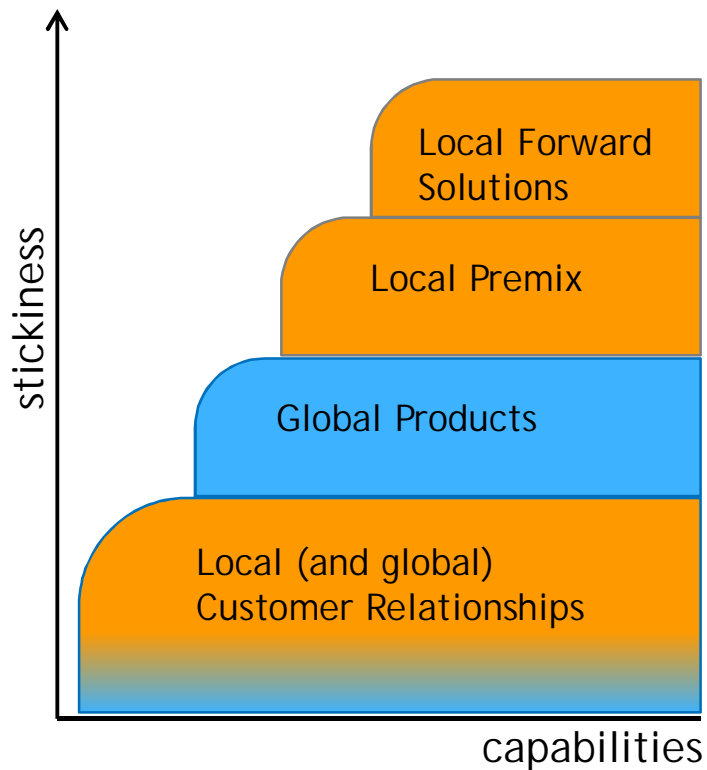


Business model unique in industry

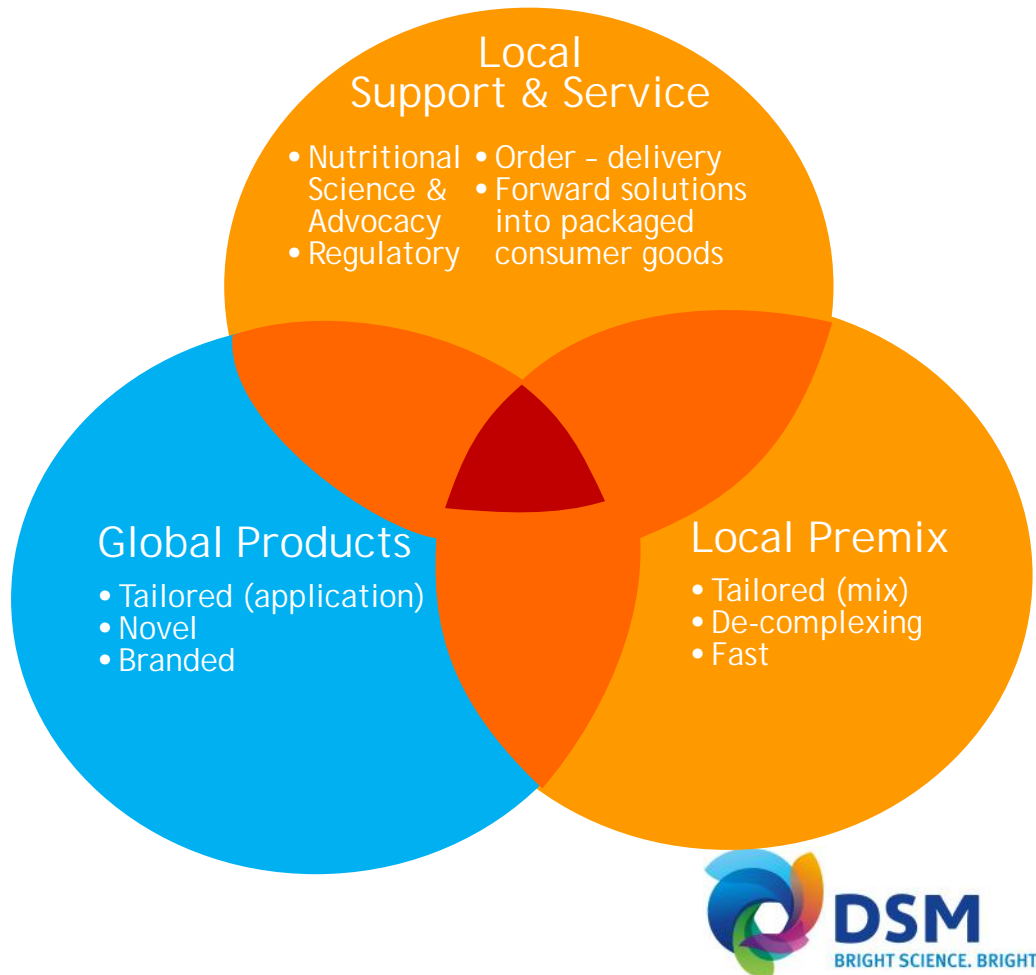


Customer solutions - adding layers of stickiness

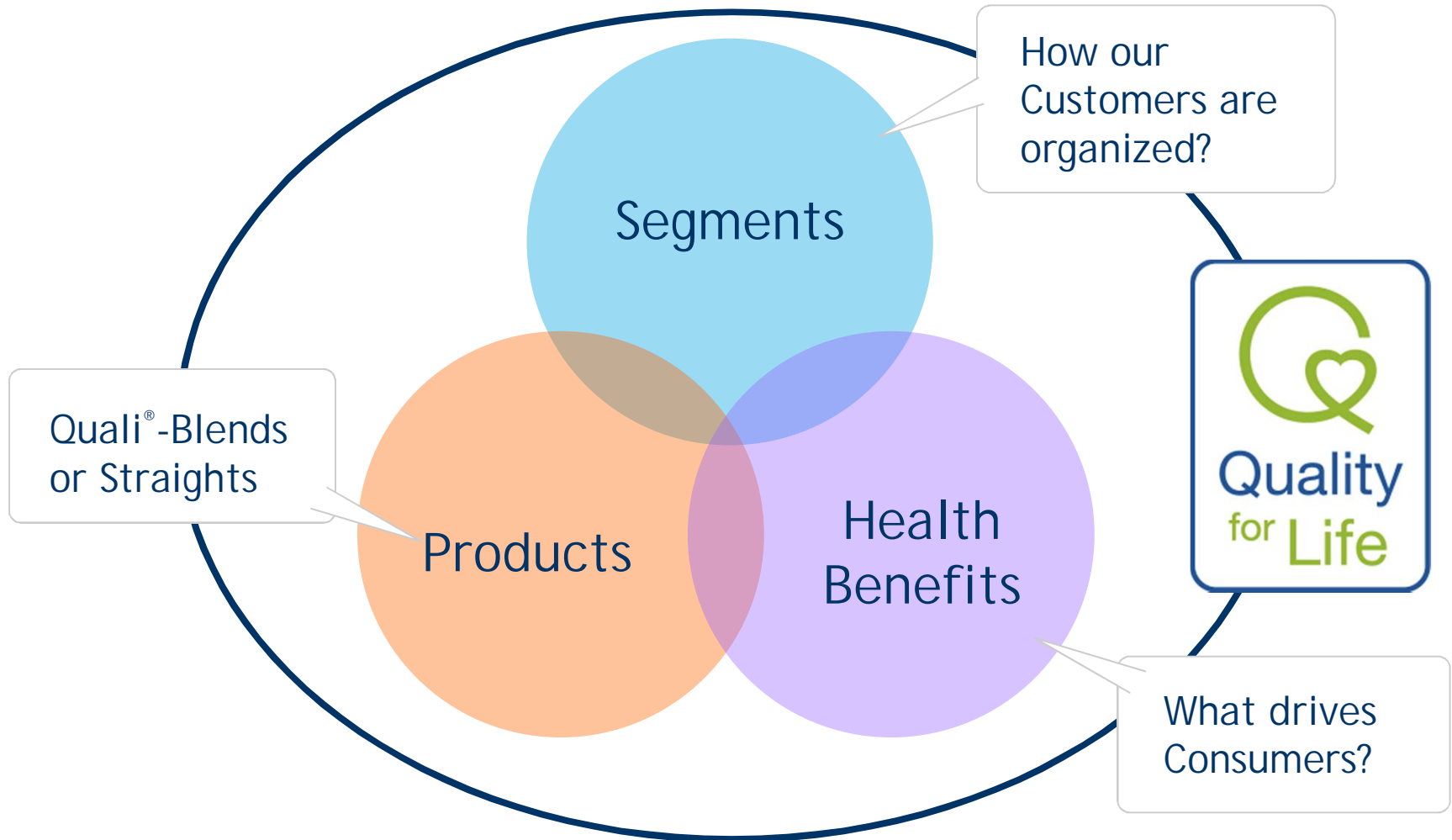
Adding layers of stickiness



Customer solutions



Our integrated marketing approach



Health benefit platforms drive growth

Defy your age

Empower your mind

Energize your mind

Essentials for kids and teens

Essentials for life

Essentials for men

vitafusion MultiVites
Complete Multivitamin Gummy
HAIR, SKI & NAILS SUPPORT
70 Essential Daily Formulas

BAUSCH+LOMB PreserVision
Eye Vitamin & Mineral Supplement
AREDS SOFT GELS
DOCTOR #1 RECOMMENDED BRAND
The ONLY Clinically Proven Formula* in a soft gel
120 soft gels 2 per day

GNC WOMEN'S ULTRA MEGA Diabetic Support
Dietary Supplement
VITAPAK® PROGRAM & NUTRITION PLAN
• Multivitamin enhanced with key ingredients to support normal blood sugar utilization*
• Premium ingredients that support glucose metabolism, circulatory health & optimal eye health*
• Supports heart health & a healthy anti-inflammatory response with resveratrol & triple strength fish oil*
30 PACKS
resvida promote healthy aging

Essentials for women

Flex your joints

Optimize your immunity

Upgrade your vision

your bones

DSM
BRIGHT SCIENCE. BRIGHTER LIVING.

Health benefit platforms drive growth



Premixes business model is core growth driver

Completely Custom

- Our premixes are always one-of-a-kind, developed using a comprehensive selection of vitamins, minerals, amino acids, nucleotides, nutraceuticals and other functional ingredients to target your product needs

Solution Focused

- Going beyond blending, we offer advanced R&D resources, expanded access to ingredients and consumer insights to help uncover insights and streamline product development

Proven Expertise & Leadership

- Developed more than *85,000+ custom nutrient premix formula's for the food, beverage and pharmaceutical markets
- Shaping, advocating and leading the industry by building sound scientific evidence for the role of micronutrients in health and nutrition



Any Nutrient

We offer the deepest portfolio of proprietary nutritional ingredients with added ability to source over 1,400 functional ingredients

- Source only the highest quality raw materials worldwide
- Strong position and relationship with global and niche suppliers in the vitamin, mineral, amino acid, nucleotide, nutraceutical and botanical markets
- Vendor qualification process is second-to-none
- Proven experience to source the right market form, customized for your product
- Extensive market knowledge in the nutrient industry



Any Application

In any supermarket around the world, you will find top-selling products fortified by Fortitech Premixes including:

- Infant Food/ Formula
- Cereals
- Sports Drinks
- Nutrition Bars
- Supplements
- Beverages
- Diet Products
- Snack Foods
- Yogurt
- Peanut Butter
- Stick Packs
- Ice Cream



- Waters
- Flour
- Confections
- Baked Goods
- Margarines/ Spreads
- Medical Foods
- Noodles
- Dairy Products
- Sachets
- Rice
- Beverage Shots



Any Target

We are a strategic partner and valued consultant at every phase of the product development cycle, offering insight through experience and value through efficiencies

- Expertise to meet specific criteria for fortification while addressing key issues of flavor, texture, bioavailability, cost, shelf-life, marketability and more
- Develop specific premixes to help differentiate your product on store shelves and connect with consumers
- Our innovation centers and R&D resources offer the ability to streamline your product development time to get your product to market faster without compromising quality
- Reduce testing, purchasing, inventory, labor, and equipment costs
- Design innovative premixes to target specific health conditions, lifestyles, specific consumer groups or age demographics.



Anywhere in the World

The only business with a growing global footprint with state-of-the-art facilities dedicated to custom nutrient premixes

- Twelve state-of-the-art facilities on four continents means distribution to any country in the world
- All business units deliver manufacturing, R&D, laboratory and administrative capabilities
- Six strategically located nutrition innovation centers designed to bring insights and streamline the product development process



Examples of forward solutions



US: Power caps

Brazil: Macroblends & Canning

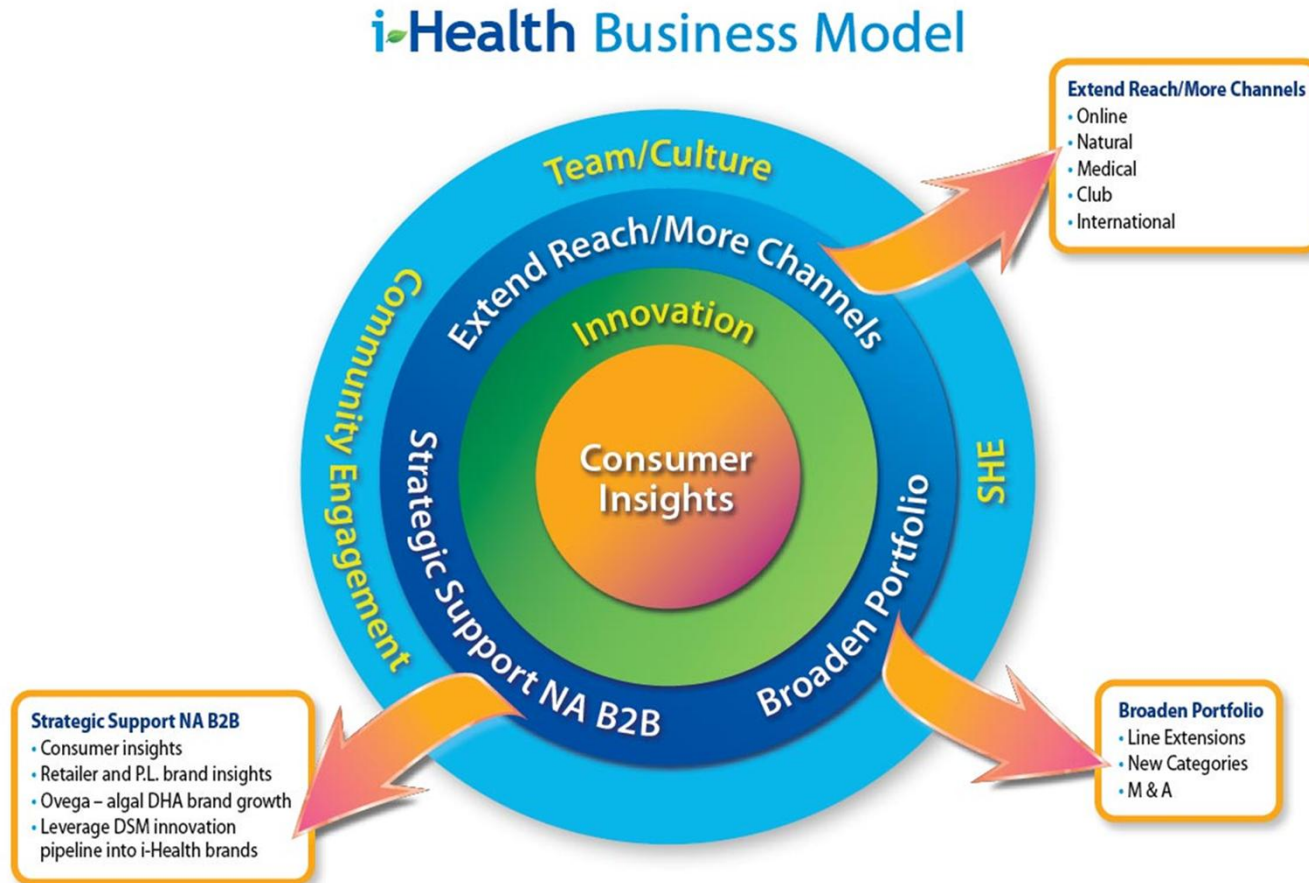


New Zealand:
Nutritionals & dairy
powder blends

South Africa: Tablets



Combining innovation and business model= growth



Successful Brands = Pillars of Growth

#1 Probiotic in US. Offers a full line of Digestive, Kids and Health & Wellness Products



- U.S. \$ Share 14.5%
- Recent sales growth >10%
- U.S. Brand Rank #1

Leader in Menopause Category with a full range of products that offer multiple symptom benefits



- U.S. \$ Share 55.5%
- Recent sales growth >10%
- U.S. Brand Rank #1 & #2

Leader in Women's Health with a full line of Pain Relief, Diagnostic and Preventative products



- U.S. \$ Share 35.8%
- Recent sales growth >10%
- U.S. Brand Rank #1

Source: Nielsen data

Unique nutrition franchise set for driving growth

- Broadest range of active nutritional ingredients
- Fully leveraged across the value chain
- Global premix network, moving into complete solutions
- Innovation partner of choice for the dietary supplement, food & beverage and infant nutrition segments
- Regional innovation centers providing differentiation and customer solutions
- Leading industry coalitions to address challenges and create category growth with consumers





BRIGHT SCIENCE. BRIGHTER LIVING.™

DSM Food Specialties

Gregory Kesel, President DSM Food Specialties Americas

US Field Trip

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DSM Food Specialties

- Leading positions in food enzymes, yeast extracts, cultures and food preservation products
- Over 1500 employees worldwide

- Manufacturing locations in Europe, North America, Asia, Australia
- Local production and blending
- R&D Centre's in Netherlands, US, China
- Local application facilities



The food industry is core to DSM



Positioned in a very attractive segment

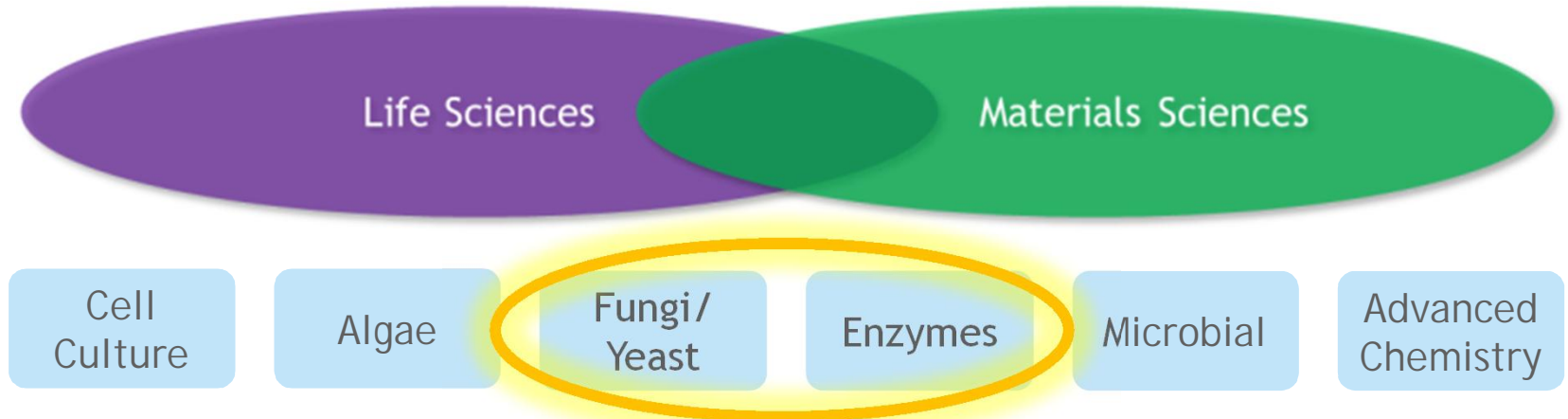
- Specialized end markets
- Knowledge intensive
- Application driven
- Differentiation and innovation in food led by ingredients suppliers
- High entry barriers in bio-ingredients market

Megatrends drive growth at DSM Food Specialties

- Increasing raw material prices
- Need for increased sustainability of solutions
- Substitution of chemicals
- Higher energy cost
- Urbanization in high growth regions
- Increased food prices and growing demand



DSM Food Specialties has a broad technology range



In house bio-processes

- Fermentation processes
 - Anti-infectives
 - Several vitamins
 - Enzymes for Food, Feed
 - Enzymes for Pharma
 - Cultures
- Biocatalysis
 - Vitamins
 - Semi-synthetic antibiotics
 - APIs and building blocks
- Biopharmaceuticals

Bio-based market positions

- Enzymes
- Cultures
- Yeast extracts
- Pharma
- Biologics

Development

- Advanced bioenergy
- Bio chemicals
- Renewable raw materials for polymers

DSM Food Specialties offer unique solutions

Key segments for DSM

- Dairy, Baking, Beverages, Oil-degumming, Soups and Sauces

Improve products

- Enhance taste
- Improve look, texture and quality
- Prolong shelf-life
- Healthier products

Facilitate production

- Speed up reaction
- Require less raw materials
- Reduce waste and energy consumption
- Save cost in a sustainable way



Enzymes are specific and predictable proteins

Sustainable solutions with low energy use

- Enzymes exist in nature (building blocks for life), or can be synthesized
- Proteins, natural biocatalysts for all biological reactions
- Speed up chemical reactions (up to millions of times faster).
- Small amounts are able to convert enormous amounts of matter
- Active at mild conditions in contrast to many chemical processes



An enzyme is a large protein
(schematic picture)

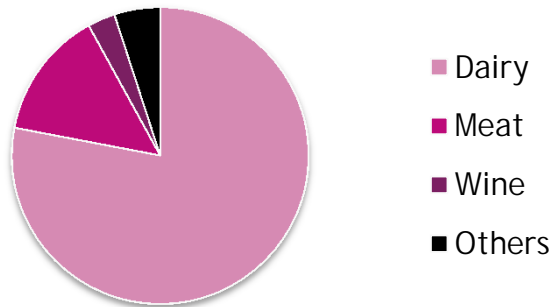
Cultures are live bacteria used in food

- Use of cultures has a very long history
- To initiate fermentation processes needed for production of fermented dairy and meat products
- Cultures substantially contribute to making food products tastier, healthier, safer and more convenient
- Have significant impact on the quality of end product
- Key success factors
 - ✓ Mastering sophisticated manufacturing requirements
 - ✓ In-depth understanding microbial technology
 - ✓ Economies of scale
 - ✓ Customer application insights



Fast growing market in enzymes and cultures

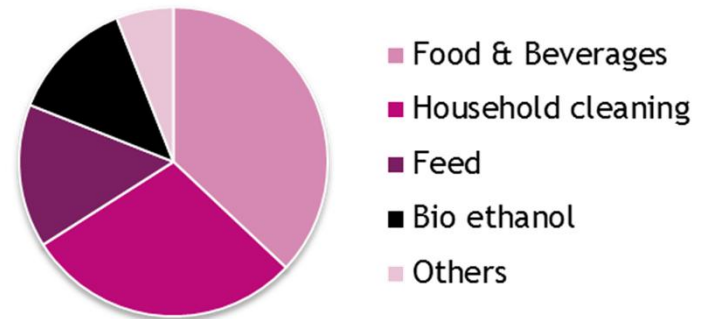
2013 Global Cultures market € 1.0bn, CAGR 6%



Market drivers

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

2013 Global Enzymes market € 2.7bn, CAGR ~5%

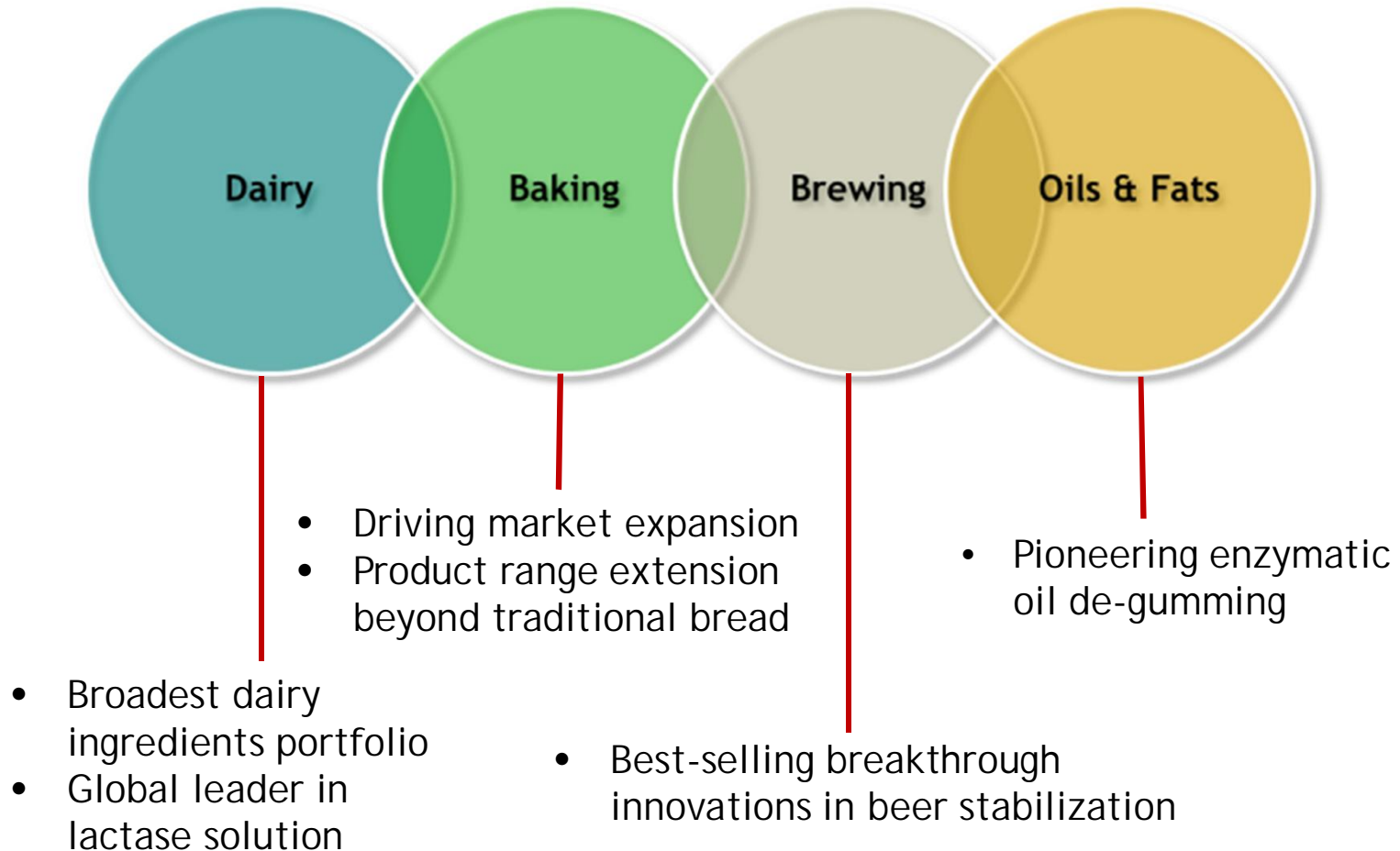


Market drivers

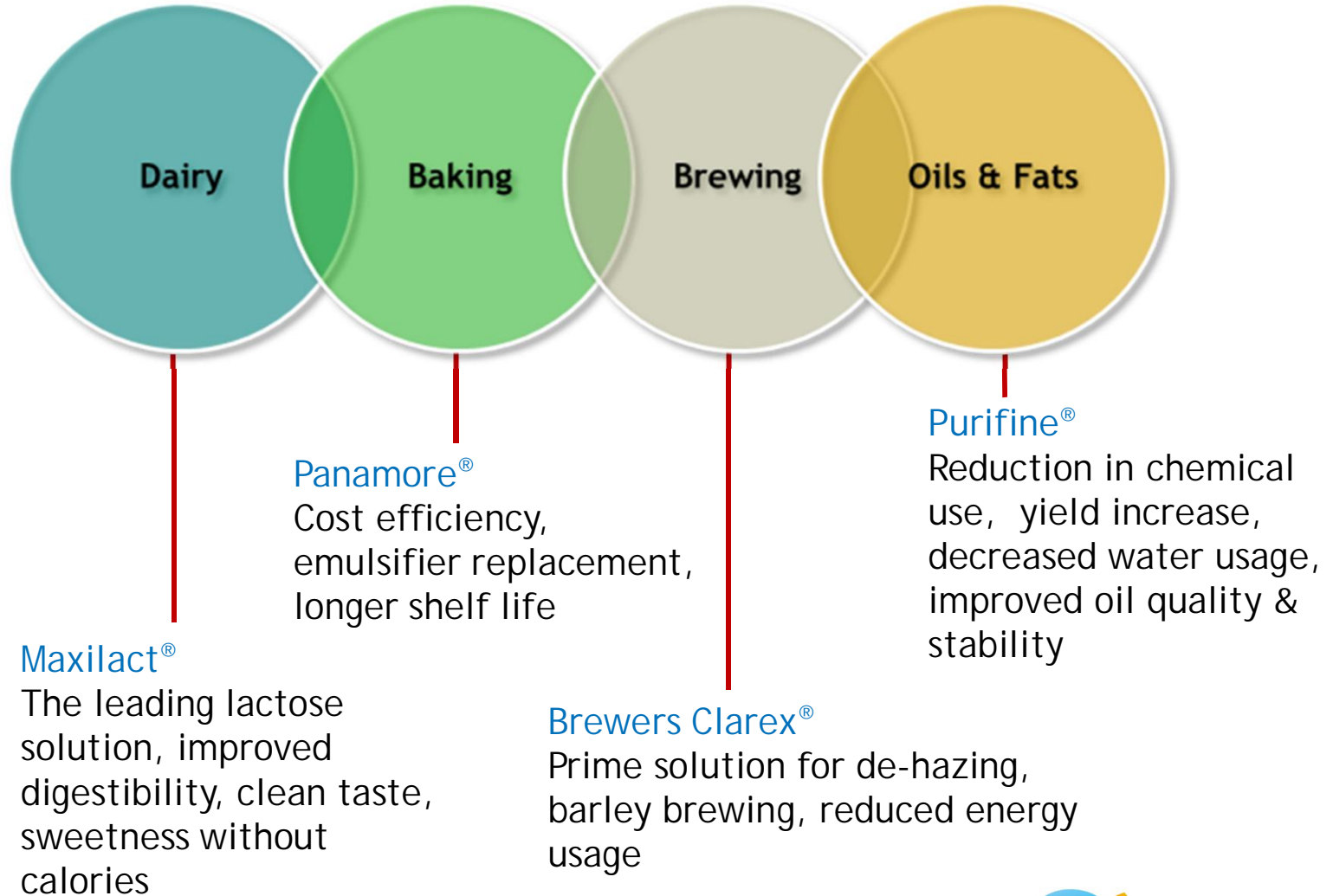
- Need for natural sustainable solutions
- Increasing raw material prices
- Increasing demand for processed food
- Demand for cellulosic ethanol

Europe/North America are leading markets, fastest growth in High Growth Economies

Broad enzyme portfolio



... with the best selling products in its segment



Majority of industry revenue covered by patents

Knowledge intensity anchored with IP and long term experience

Very intensive patent activities on

- Molecules,
 - Manufacturing processes,
 - Applications
-
- Typically >10% of revenues invested in R&D

Total industry: ~40 000 published patents related to Food & Beverage enzymes

Vast majority of DSM products and technologies are covered by IP

- In recent years, number of patent filings has increased strongly
- Strong position in application patents
- Recent acquisitions have extended IP position further



Innovation at DFS

Over 400 of our scientist are committed each day to find new science-based innovations, building on more than a hundred years' experience in enzyme and fermentation technology

Consumer needs

- Taste
- Convenience
- Health & Vitality
- Food Safety
- Natural
- Sustainability



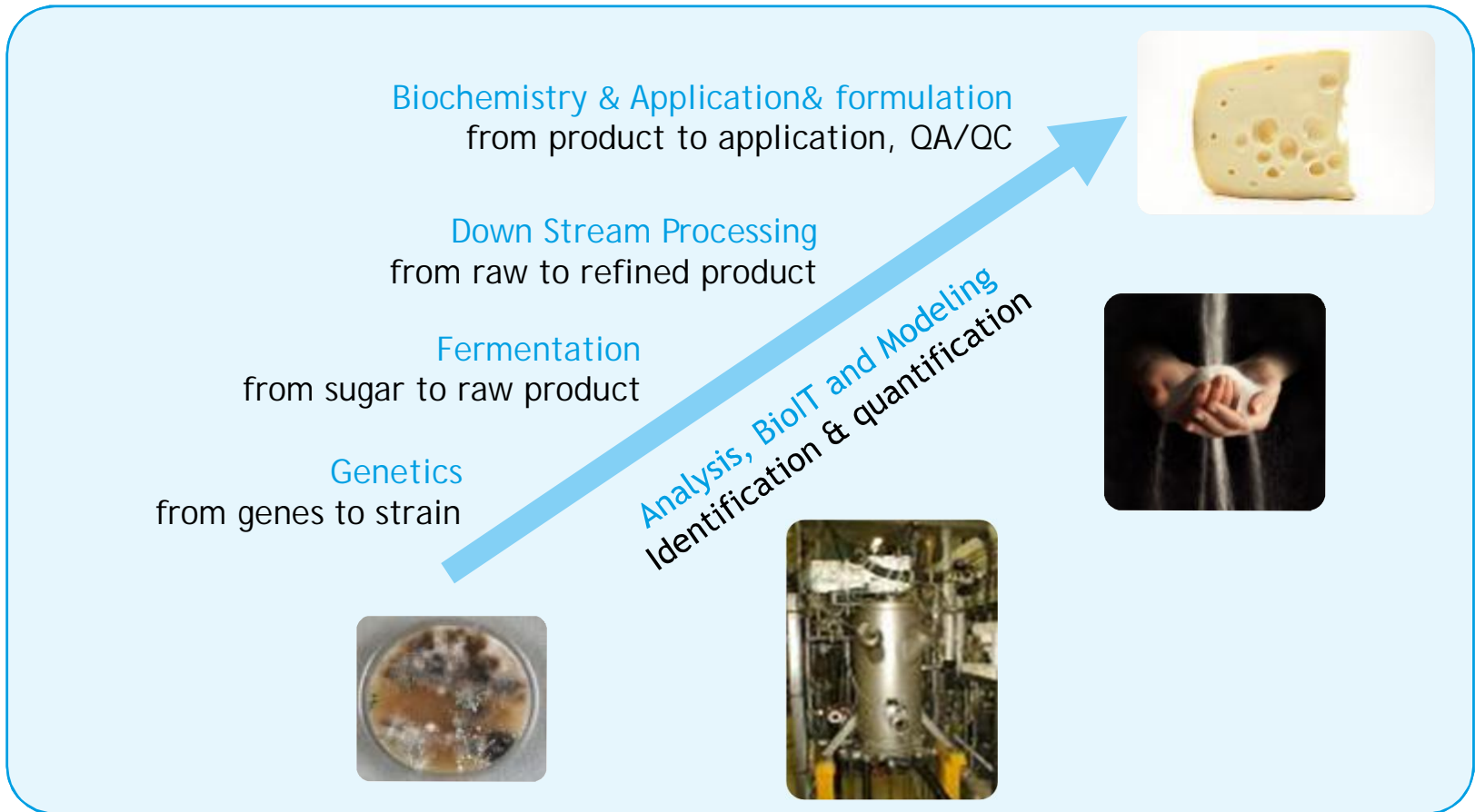
Innovation program

- Bio-based solutions for prolonged shelf life
- Bio-based solutions for natural taste enhancement
- New enzymes for sustainable process improvement & conversion of bio-based raw materials



Full capabilities throughout the development

Biotechnology expertise combined in DSM biotech Center

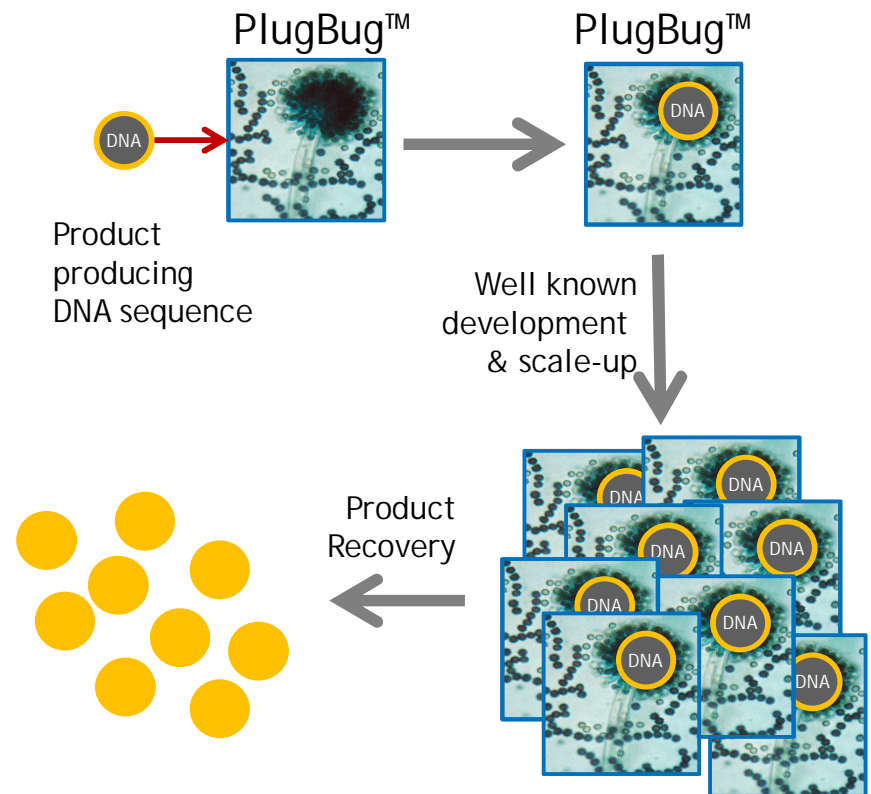


Outstanding abilities to scale up new products

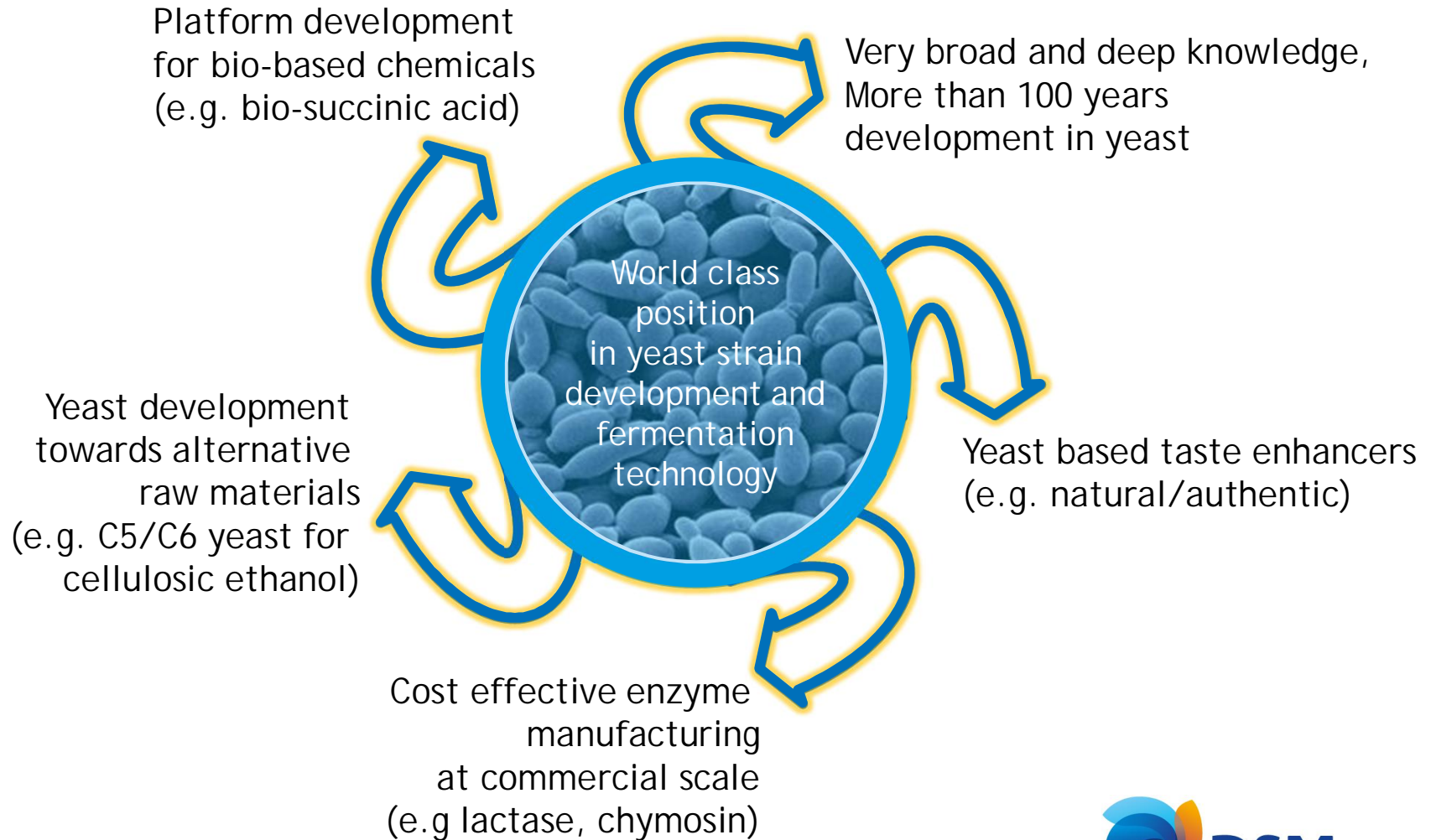
Controlled development and scale up

- Through own proprietary versatile expression system (PlugBug™)
- Maximizing research & production efficiency by limiting the number of well known production micro-organisms
- Full IP positions on genome sequence (e.g. *Aspergillus niger*)

DSM's proprietary PlugBug™ Concept



Unmatched position in yeast/fermentation technology



How we help our customers

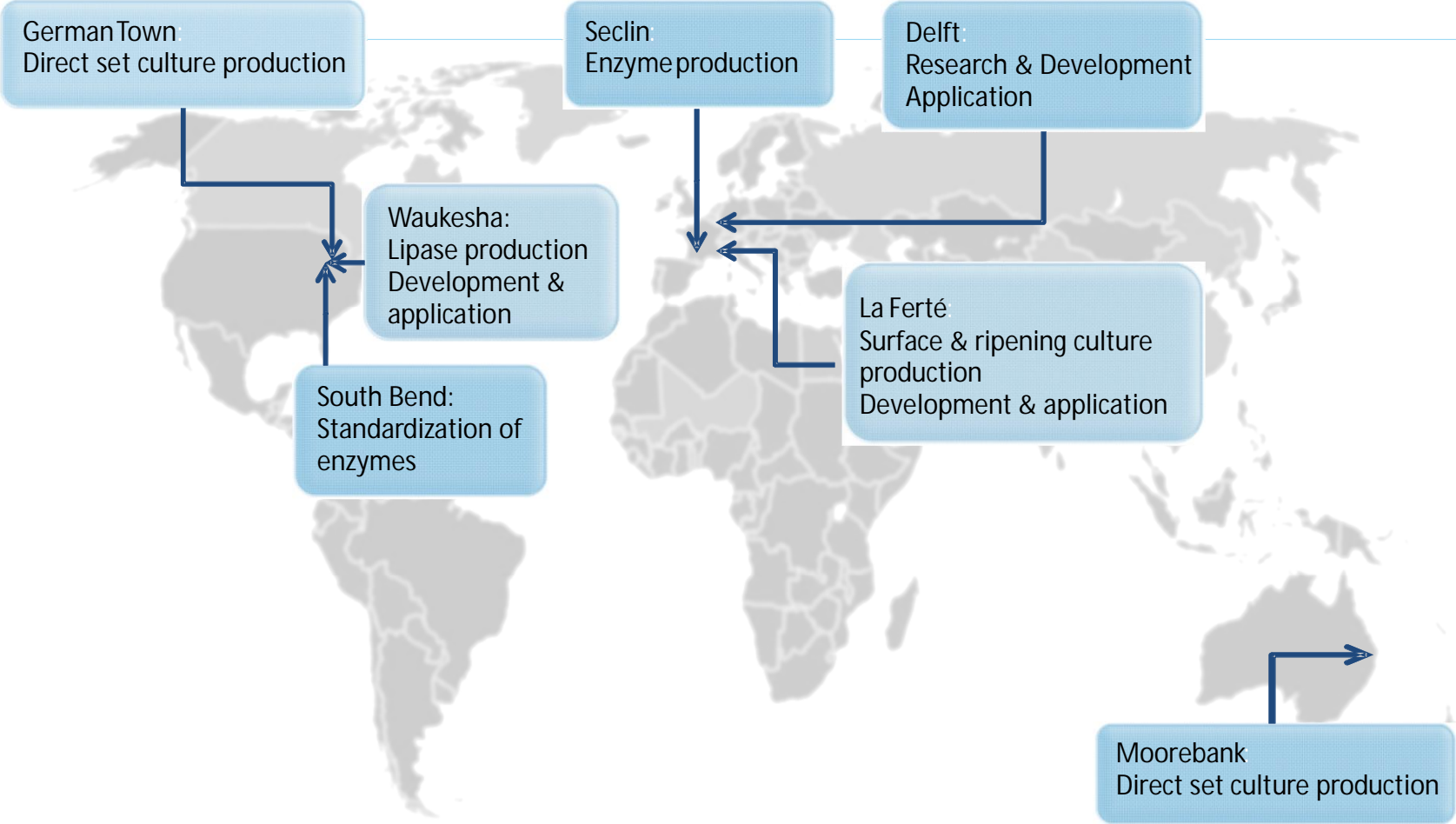


Application specialists at work

- Dedicated application specialists and sensory experts
- Regional application labs China, the Netherlands, USA
- Food Innovation Center
- Laboratory, kitchen & sensory analysis facilities
- Pilot plant applications



Our global production assets



Our innovative solutions





Maxilact®

The freedom to enjoy dairy

Lactose free is one of the fastest growing segments in dairy, driven by increasing awareness of lactose intolerance and health & wellness trend.

Maxilact® breaks down lactose in dairy products, making them suitable for lactose intolerant consumers.

DSM was the first company to commercialize lactase and has been innovating ever since to meet today's and tomorrow's lactase needs.

Maxiren®

In the mozzarella production there are a range of factors in process efficiency, production quality and application functionality and look and feel that are crucial to address for cheese producers.

Maxiren XDS plays on three key factors :

- extend product shelf-life
- Maintain functionality
- Reduce losses for shredding partners

Squeezing the best out of fruit juice & more



- Increased extraction yield
- Citrus juicy bits pulp retention
- Protein plus & Probiotic plus juices
- Improved filtration
- De-pectinization
- Prevent haze formation in concentrates
- Color retention (browning prevention)
- Color extraction
- Antioxidant extraction
- Viscosity reduction
- Waste valorisation
- More sustainable production process
- Sugar inversion : prevention of crystalization
- Lower caloric juices

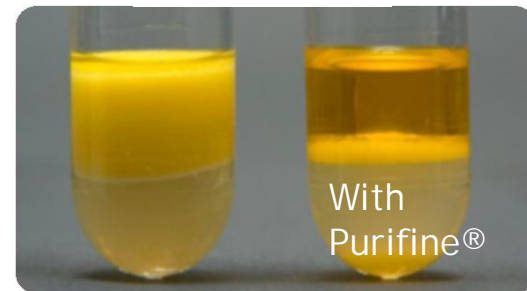
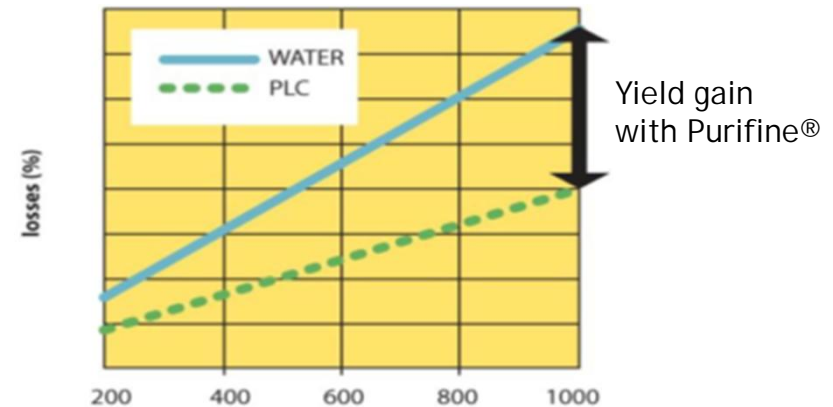
Enzymatic oil de-gumming increases yield

High performance enzymatic food solution

- Treatment of crop based oil (palm, soyabean, rapeseed etc.) into mainly eatable oils and biodiesel
- Alternative is chemical de-gumming
- Enzymatic process gives higher yield (3-4%) through better separation and inclusion of the gums (phospholipids) in the oil

Increased yields with Purifine®

Forecast de-gumming losses



Brewers Clarex[®]





PreventASe[®]

Nothing but your snacks
We make it happen

Acrylamide is formed during high temperature food processing

PreventASe[®] is suitable in a wide variety of food applications where acrylamide levels could give rise to concerns (such as baked goods, snacks and biscuits)

Multirome[®]

Do more with less
We make it happen

Rich complex taste
No yeasty aroma

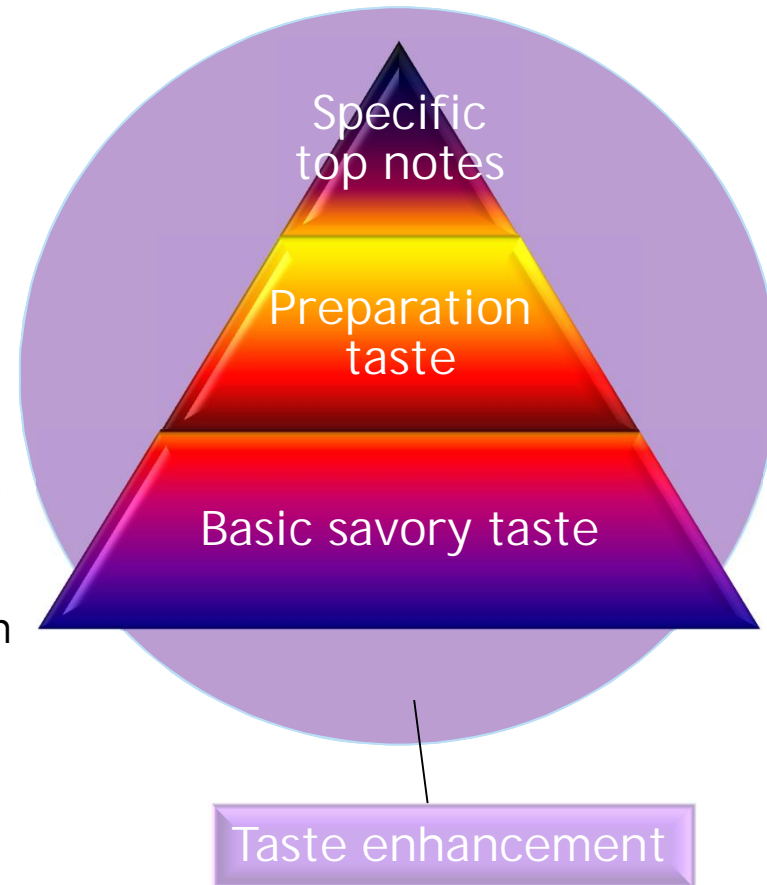
Umami impact and
lingering effect

Low cost in use - 1/3
of basic YE

Sustainable - 81%
lower carbon
footprint than basic
YE

DSM's Savory profile

- Leading supplier of yeast extract based taste components to the culinary industry
- Complete culinary market
 - Soups, ready to eat meals, sauces and snacks
- Natural solutions for every taste direction
 - Standard Yeast Extracts, Process Flavors & High nucleotide Yeast Extracts
- Building taste: unique block-by-block approach
- Salt reduction

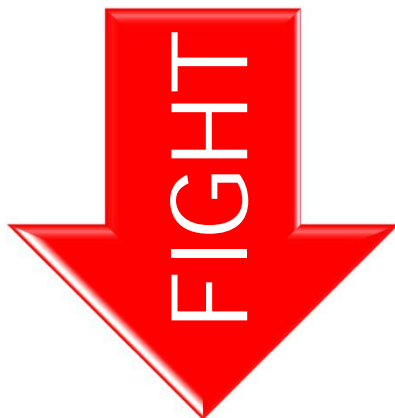


DSM's food & crop protection profile

- Innovative food preservation and packaging solutions that provide improved protection



color
taste
flavor



bacteria
molds
yeasts



Delvo[®]Cid +



Delvo[®]Cid+ is a natural preservation solution preventing yeast and mold growth in food and beverages.

Improved taste, shelf life, safety with a natural ingredient.

Zivion™ M



The answer to dry bubble disease
In the palm of your hand

Zivion™ M is a unique bio-fungicide that prevents dry bubble disease in mushroom production.

It helps farmers increase yields and maximize profitability in a highly competitive industry.

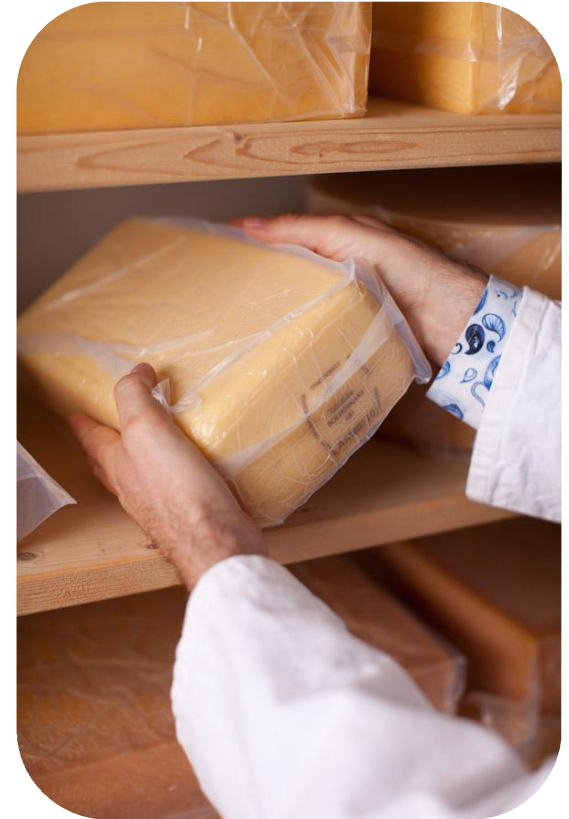
Package™ natural cheese ripening

Market challenge

- Coating
 - ✓ Moisture loss
 - ✓ Rind /crust forming
- Film ripening
 - ✓ Flat taste

Naturally ripened with Package™

- Yield - Reduced moisture loss & no cutting loss
- Sustainability - reduced carbon foot print
- No dry outer layer
- No quality deviation from natural ripened cheese with coating



DSM's fermentative Stevia

Health



Stevia, non-artificial, high intensity sweetener - answer to consumer demand for a non-artificially derived sweet taste without the calories

Sustainability



DSM helps the food industry with better tasting stevia extracts that are affordable and sustainable

Quality



A consistent supply of steviol glycosides at large quantities with a fully controlled supply chain

The next big innovation to come

Advantages of making Stevia by fermentation

- Fermentative stevia is the same product as plant-extracted stevia only higher purity and better taste.
- DSM produces it using its fermentation expertise thus solving today's constraints for stevia

Constraints	Stevia today	DSM 's fermentative Stevia
Cost	Higher cost in use	Lower cost in use
Supply Chain	Complex & difficult to quality control, long forecasting cycles	Consistent, scalable and simplified BtB supply chain from DSM
Taste	Cannot isolate best molecules in high quantities	Production of best tasting molecules (Reb A, Reb-D)

Wrap up

- Megatrends support need for tailored biotech solutions that are offered by DSM's Food Specialties business
- The markets are fast growing and has high entry barriers
- DSM Food Specialties has a strong position in the food market through:
 - very strong track record
 - broad combination of solutions for our customer needs
 - IP position and unique technologies
 - application insights and customer intimacy
 - strong innovation pipeline
- DSM Food Specialties expects further profitable growth through continued market penetration, innovation and geographical expansion

DSM Food Specialties movie



BRIGHT SCIENCE. BRIGHTER LIVING.™

Nutritional Lipids

Gertjan de Koning, VP Nutritional Lipids

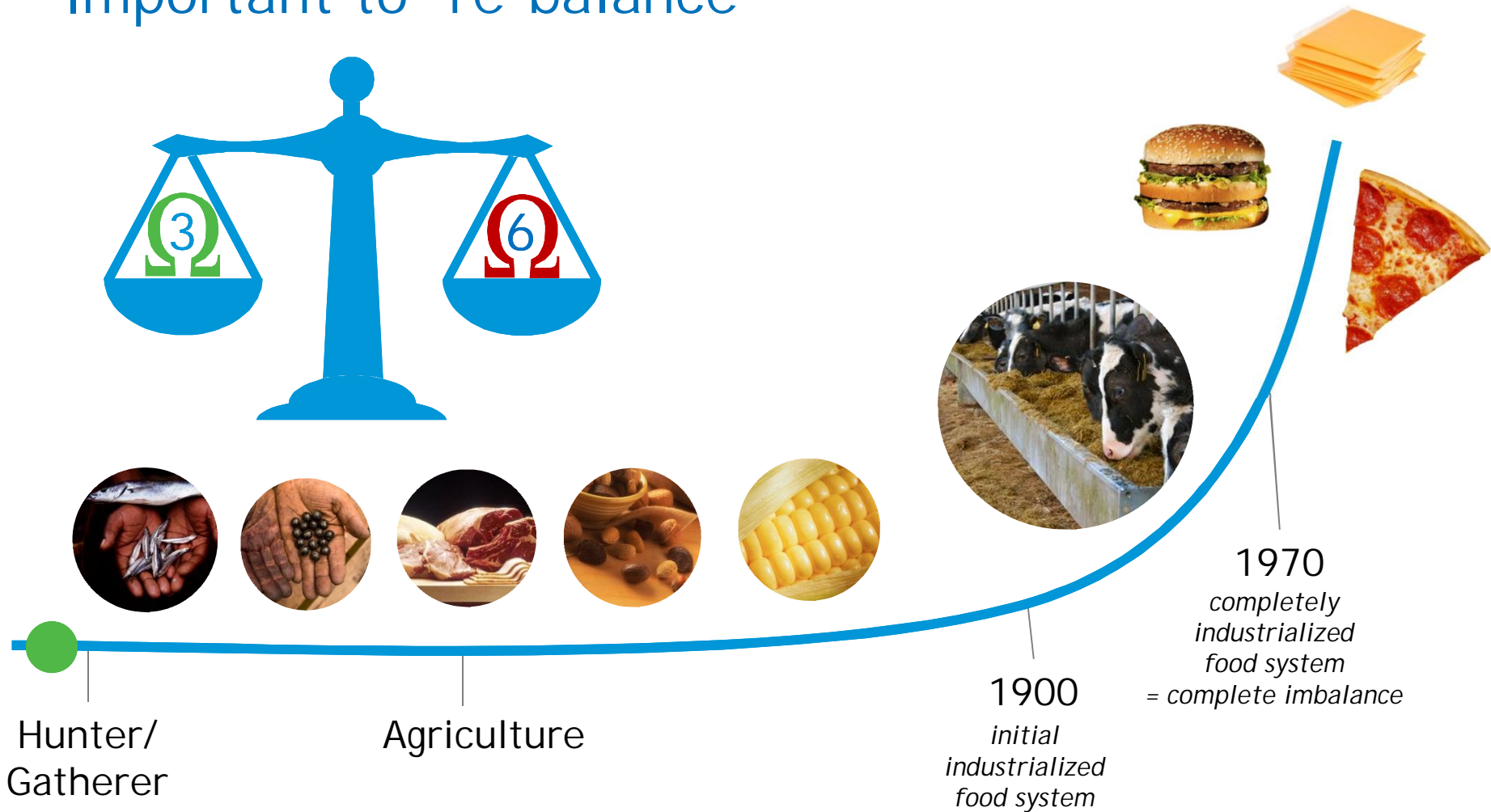
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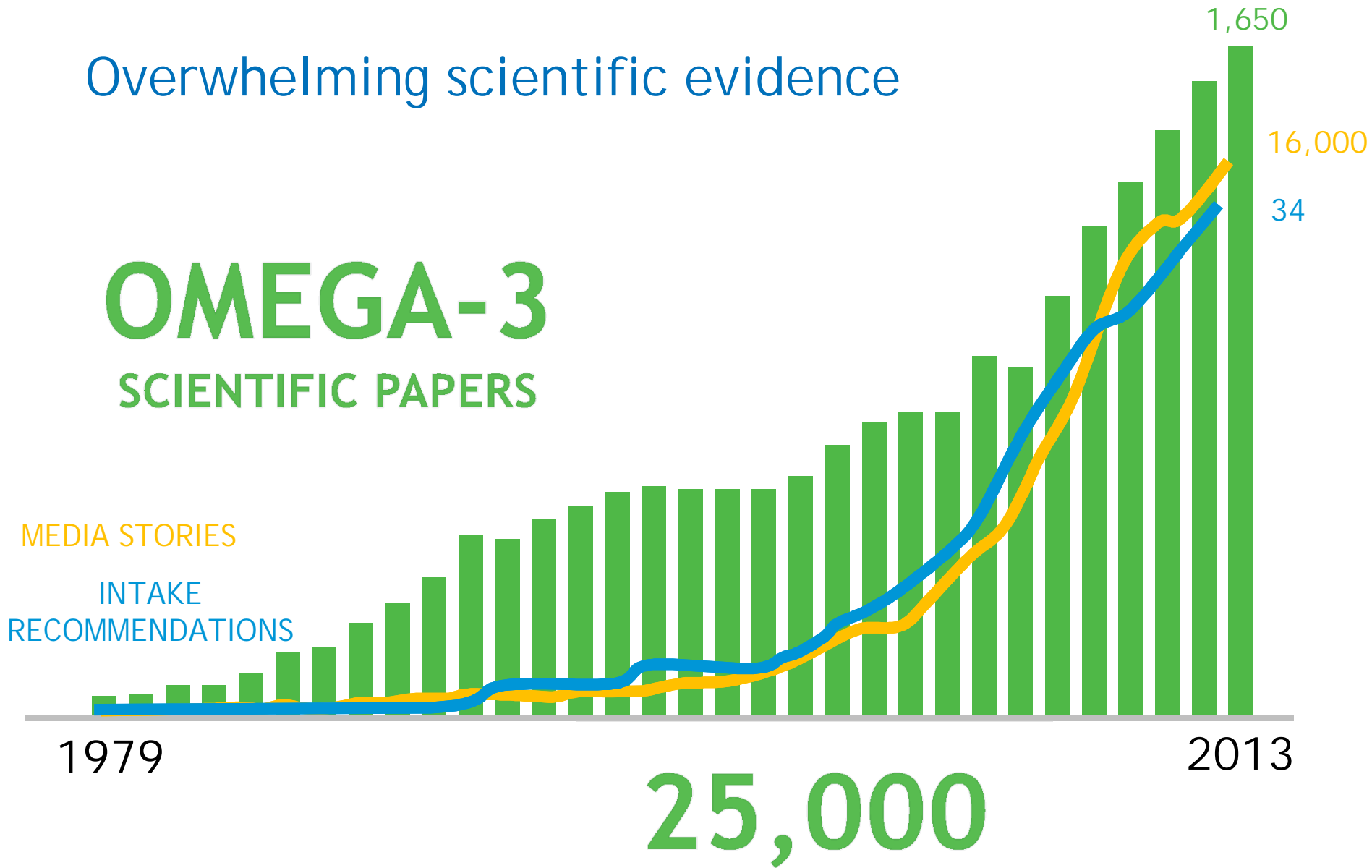
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Important to 're-balance'

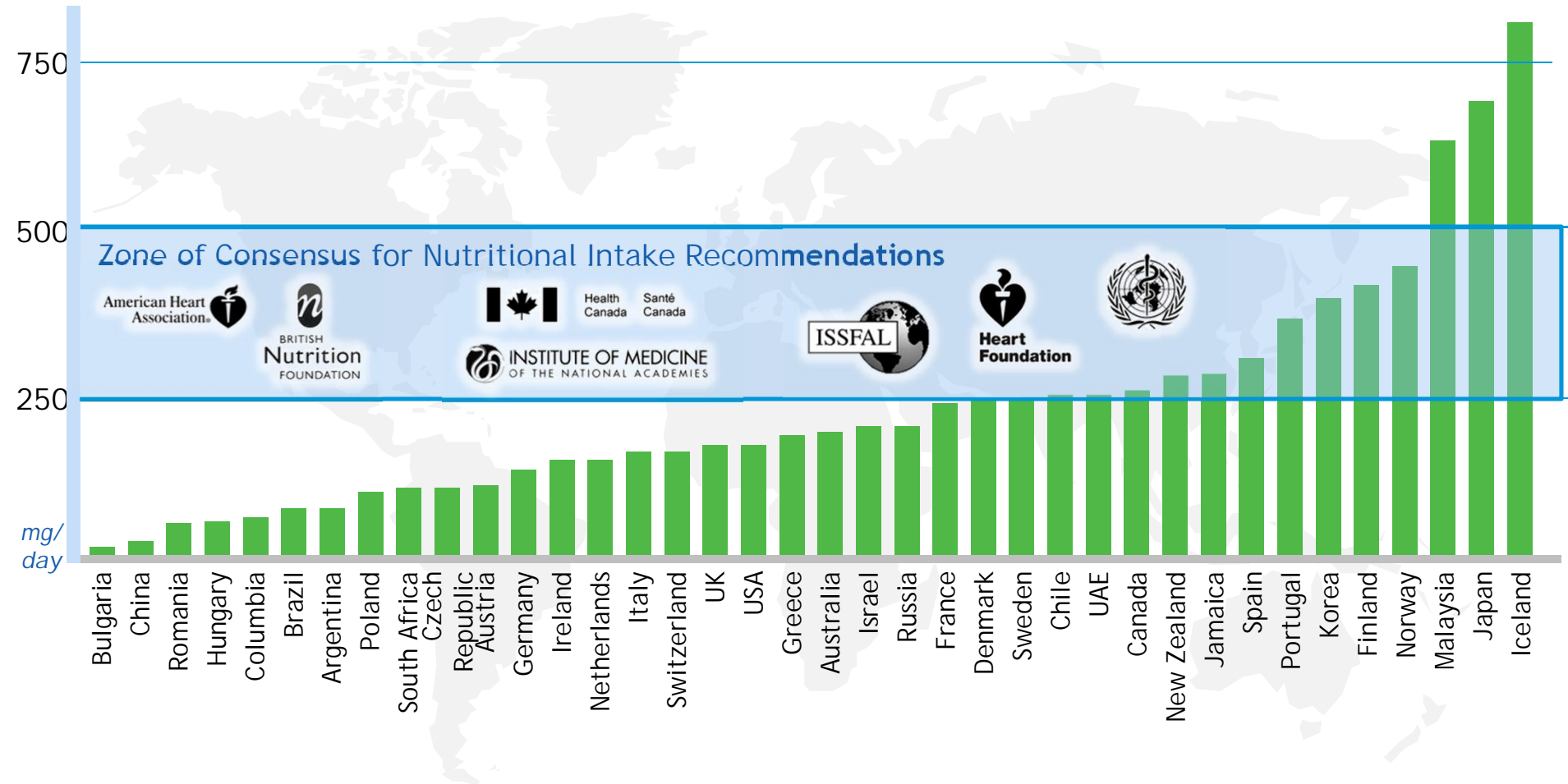


Overwhelming scientific evidence

OMEGA-3 SCIENTIFIC PAPERS



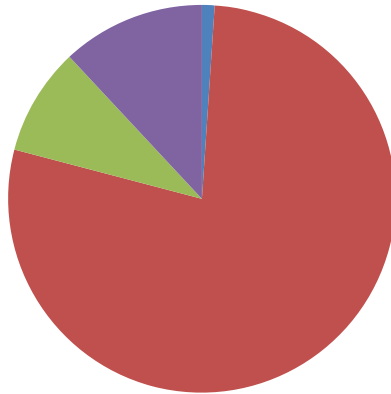
Estimated average daily intake Omega-3



Global Omega-3 Market

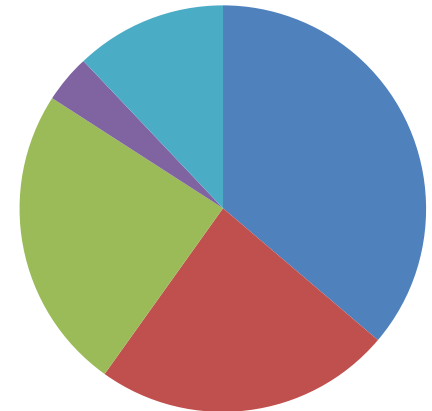
2013 Global Omega-3 Ingredient Revenues by Source

- Flax Oil
- Fish Oil
- Other Marine Oils (including Krill, Mussel, Squid)
- Algal Oil



2013 Global Omega-3 Ingredient Revenues by Application

- Dietary Supplements Standard
- Dietary Supplements Concentrates
- Active Pharmaceutical Ingredient
- Food & Beverage
- Infant Formula & Growing-Up Milks



DSM world leader in Nutritional Lipids

- Combination of Martek (leader in algae-based and infant formula segment) and ONC (leader in fish-oil based and dietary supplements segment) created a strong leader in nutritional lipids
- Strong synergies with the 'existing' DSM activities:
 - From US-centered to truly global reach: from maturing US-market to emerging growth markets
 - Synergistic health benefits with other DSM nutritional ingredients
 - Access to global Food & Beverage infrastructure and customer base
 - Excellent fit with DSM's trusted



MEG-3[®]

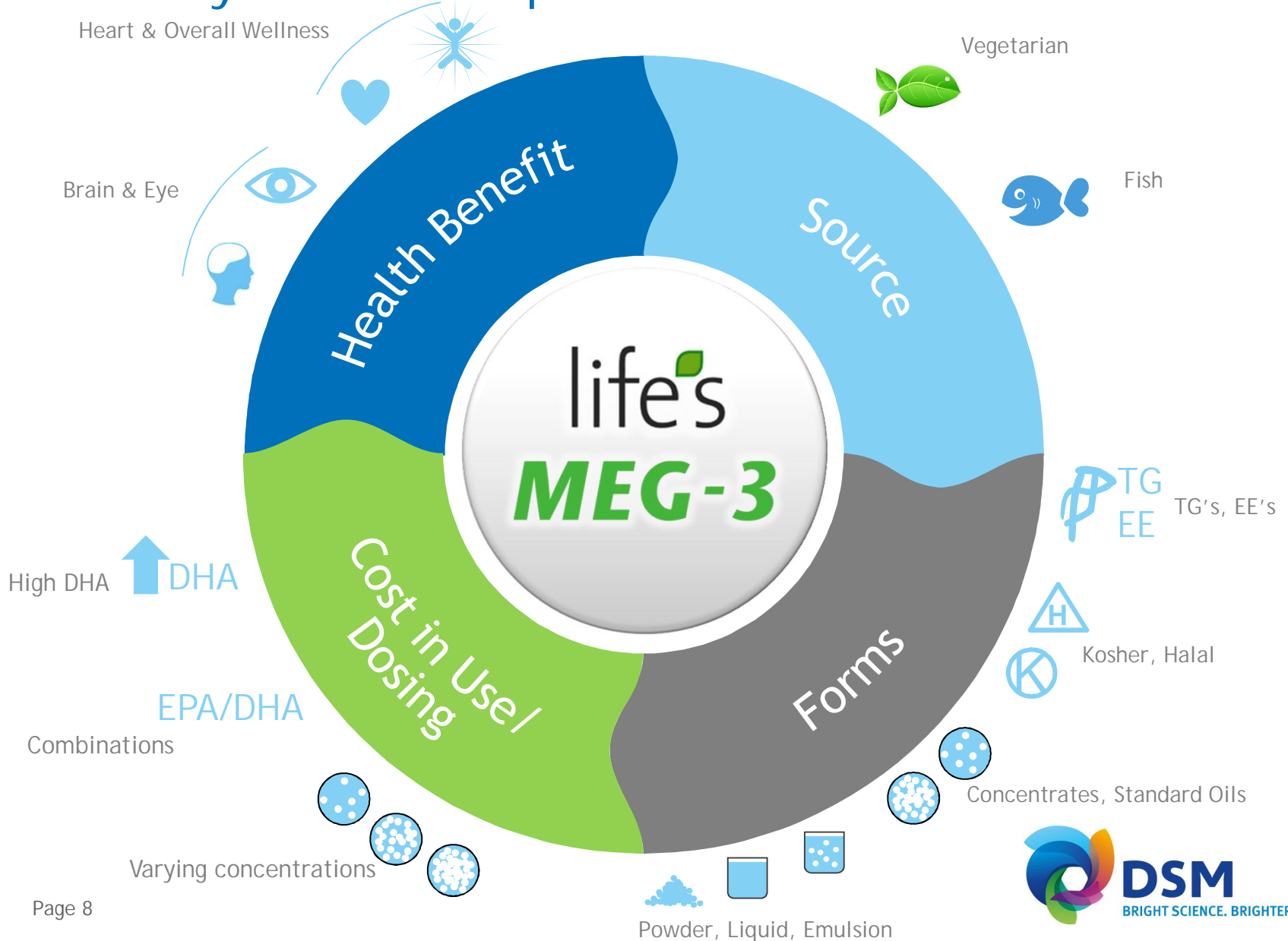


TRUSTED FISH SOURCE.



VEGETARIAN, ALGAL SOURCE.

Our Playbook: Complete Customer Solutions

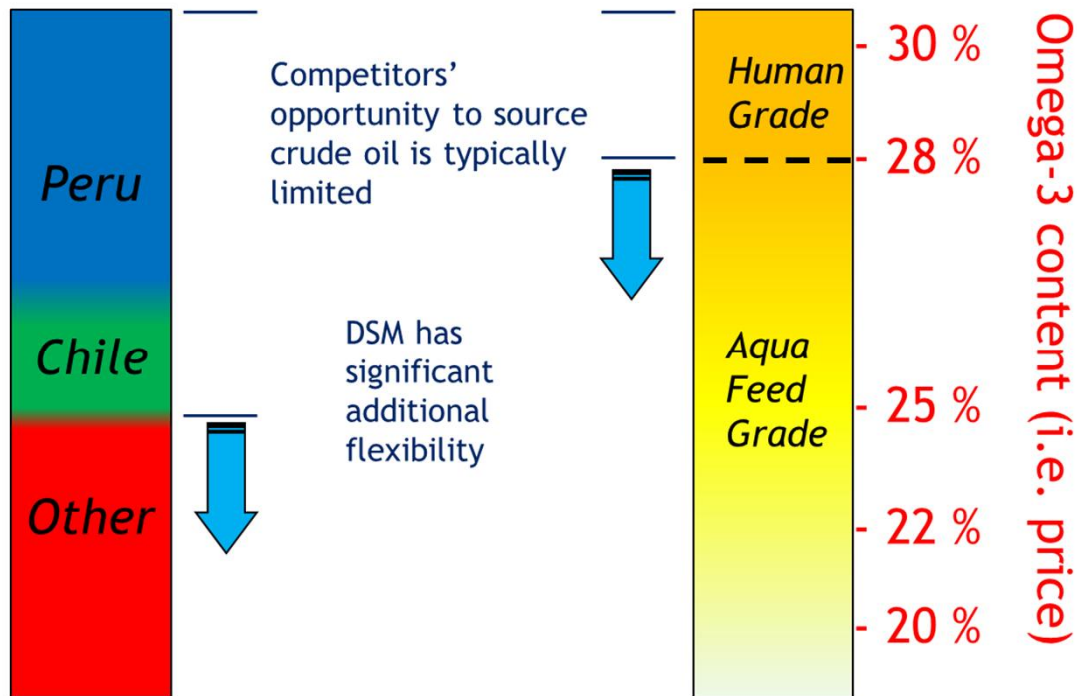




BILLION

Differentiation through sourcing

- DSM can source crude fish oil that is aqua feed grade
- DSM can source crude fish oil from other regions than Peru/Chile



Differentiation through production technology

Pres
Parsipr

DSM to Invest \$30 Million in Omega-3 Production Facility in Nova Scotia

0 Comments

Print

August 26, 2014
Posted in [News](#), [Industry News](#), [DSM, Canada, Omega-3s](#), [Investment](#)

[Aanbevelen](#) 4 personen raden dit aan. Registreren om te zien wat je vrienden aanbevelen.

MULGRAVE, Nova Scotia—**DSM Nutritional Products** will invest at least USD \$30 million in new capital to upgrade and expand its **omega-3** production facilities in Nova Scotia.

Future for the Omega-3 Market

DSM Nutritional Products
Communications
Contact: Aparna Pankh
Phone: 973-257-8657
Fax: 973-247-8592
www.dsm.com/human-nutrition



DSM Confident in a Healthy Future for the Omega-3 Market

DSM's decision to invest \$30 million in its omega-3 production facility in Nova Scotia demonstrates market leadership and confidence in the long-term potential of this market, as well as commitment to the community.



Differentiation through product innovation



Dare to Differentiate
Omega-3 concentrate, from algae

life's[™]
OMEGA

*life's*OMEGA[™] 60
Introducing high potency algal DHA and EPA

DSM.com/Omega-3 Visit Booth 23024

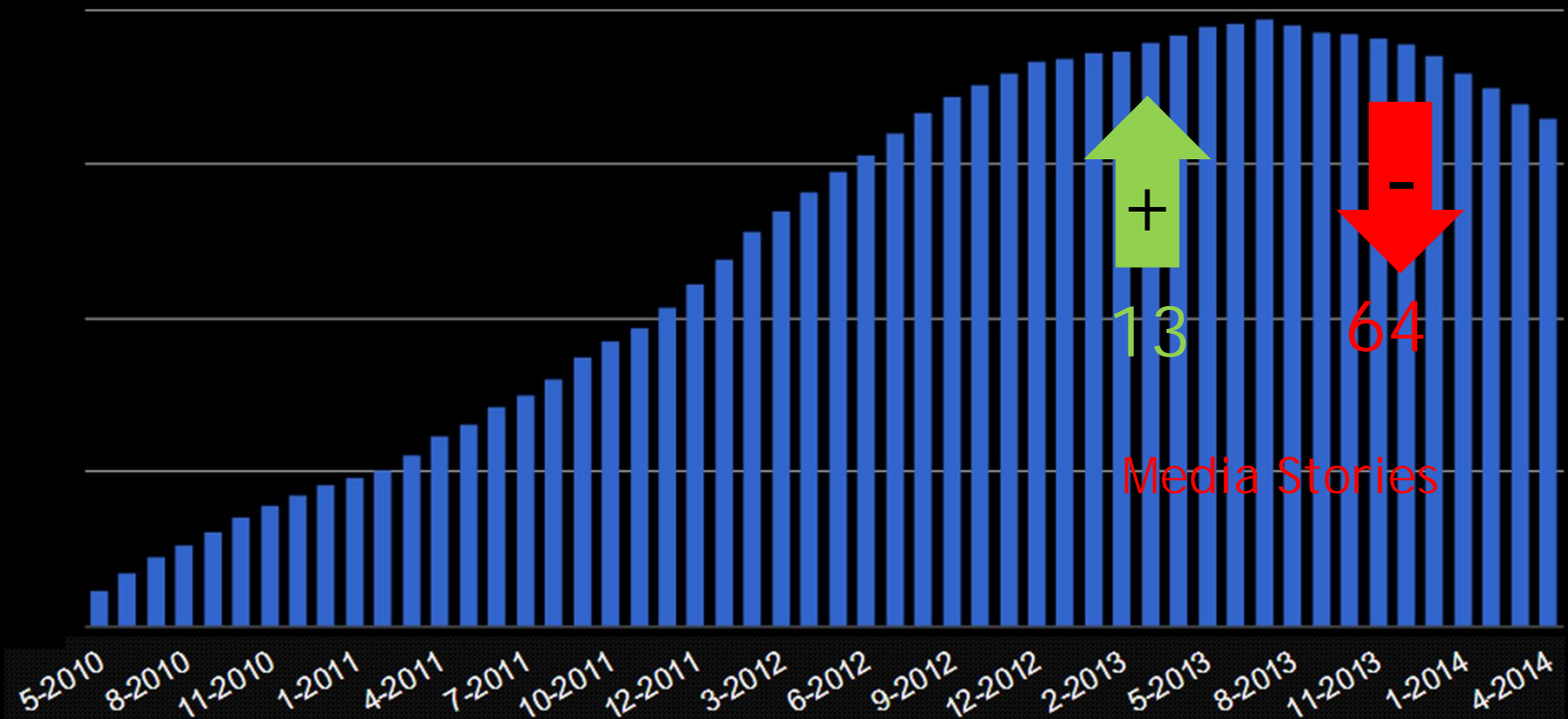
DSM
BRIGHT SCIENCE. BRIGHTER LIVING.

The advertisement features a central graphic of a school of fish on the left, which transitions into a large green leaf on the right. The leaf's stem and veins are visible, and its shape is reminiscent of a fish's body. The background is a light blue gradient. At the bottom, there is a green wavy banner containing the product name and tagline. The DSM logo is present in the bottom right corner of the ad.

Years of strong market growth reversed as of 2013

- The US fish oil based Omega 3 market was impacted by increased fish oil costs, leading to sharp increases of retail prices.
- This, combined with multiple negative media events lead to a volume decline of 10% in 2013.

US XAOC Retail Sales (Trailing Twelve Months)



So what can we do about the decline?

We are not the first industry to face this situation, others have successfully reversed declines due to negative media attention



DSM initiated an industry coalition

- Call for action started February supported by convincing DSM commitment
- Teamed up with industry association GOED as 'neutral' party
- Now over 30 members and growing, with well-functioning structure
- Working with specialists agencies coordinated by industry team
- Selected target group and campaign theme based on consumer research
- Campaign designed and roll-out in full swing



Digital campaign

- Completed in June
 - Touched 20 million consumers
 - Important insights on what messages resonate
- ↓
- Multi-media execution starts mid September and runs for 6 weeks in test market
 - National roll-out using learnings from test market



AWARENESS

PREFERENCE



Outdoor

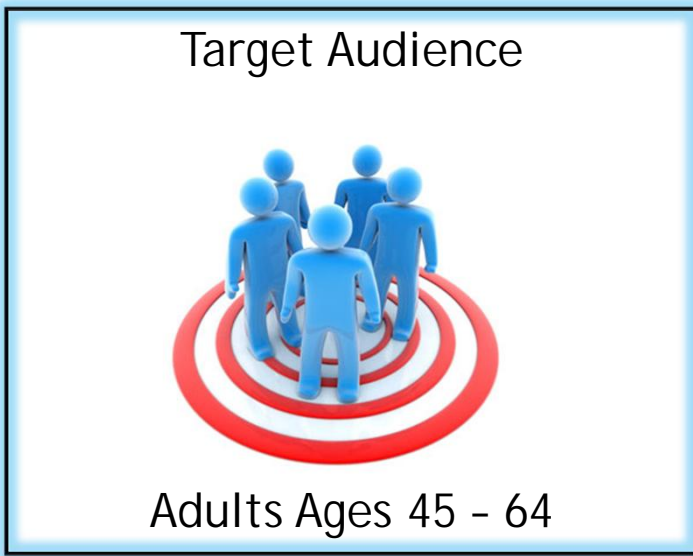
Digital

Sponsorships / PR

Print



Television



Adults Ages 45 - 64



Website



POS



Walmart TV



Facebook

SALES

ENGAGEMENT



BRIGHT SCIENCE. BRIGHTER LIVING.™

Global Infant Nutrition

Ethan Leonard, VP Infant Nutrition

US Field Trip
September 4, 2014

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

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.

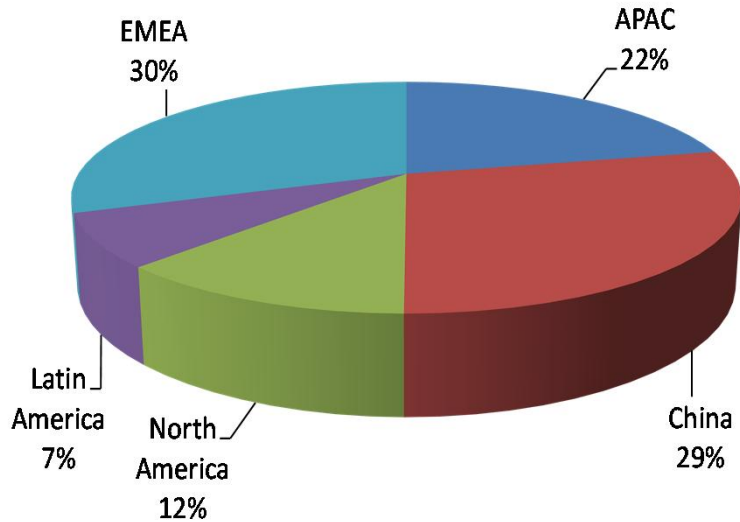
<http://www.dsm.com/corporate/sustainability/managing-sustainability/position-papers.html#>

Infant Nutrition (INF) Industry Fundamentals

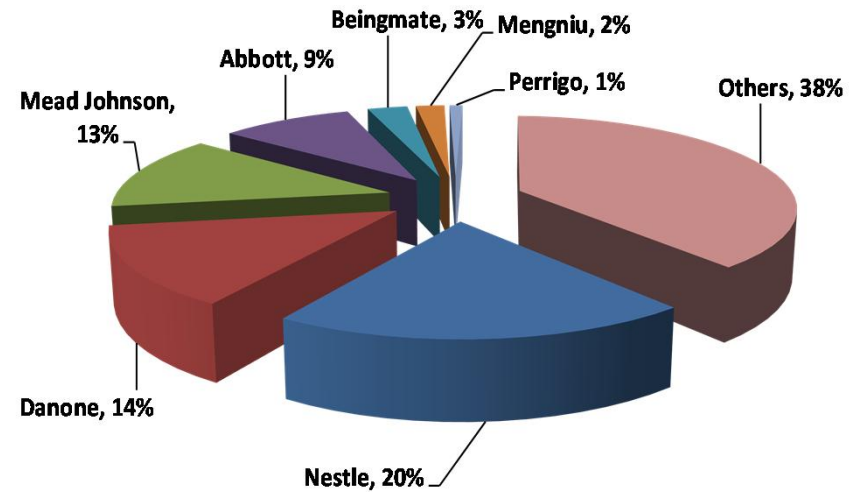
- For today's discussion, INF refers to infant formula products for babies aged 0 -12 months
 - Growing demand for INF line extensions in toddler/children's products
- Growth drivers of the INF market
 - Global economic prosperity
 - Population trends
- The industry has grown ~5% CAGR in recent years
 - Focus on China and emerging markets for growth
- Premium and super-premium products, containing optional ingredients, have outperformed standard products
 - These are key segments for DHA/ARA and other optional ingredients
- Quality and regulatory standards continue to become more stringent and impactful

Global Infant Nutrition Market

INF Volume by Region



INF Manufacturers by Volume



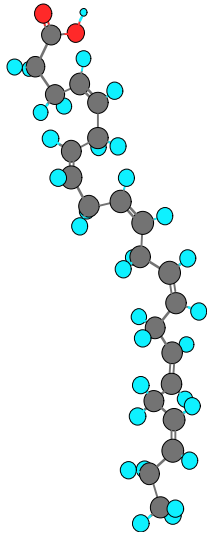
- Top 15 countries >70% of global volume
- US and China ~40% of global volume

- Top 20 companies >75% of global volume
- Top 4 companies ~50% of global volume

Source: Euromonitor, 2014
0-12 month infant formulas

DHA and ARA Primer

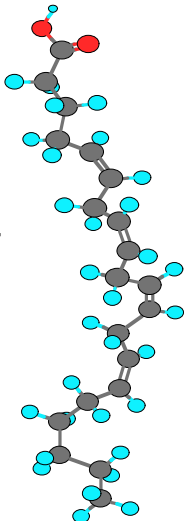
DHA



Docosahexaenoic Acid (DHA) 22:6 n3

- Important component of all cell membranes
 - Abundant in neural, retinal and cardiovascular conducting tissue
- Important in infant development and maintains cardiovascular, visual and neural function throughout the lifespan
- Crosses the placenta as a key nutrient for the fetus preferentially compared to other fatty acids
- Always found in human milk

ARA



Arachidonic Acid (ARA) 20:4 n6

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

Clinical Rationale for DHA/ARA in INF

- DHA/ARA, naturally found in breast milk, are found in great concentrations in the brain and eyes
- Infants have a limited capacity to synthesize DHA and ARA. Supplementation achieves tissue levels that are necessary to support health and development and thus complements breastfeeding
- Early research success led to comprehensive clinical trials which demonstrated improved cognitive and visual development
- Studies continue to support the importance of DHA/ARA in infant health and development
- DHA and ARA must be provided together to achieve optimal benefits

Commercial History of DHA/ARA in INF

- The core nutritional content of infant formula is highly regulated
 - Infants and young children have specific nutritional needs, which vary depending on their age and phase of development. As infants are a particularly vulnerable group, it is essential that foods for infants are governed by strictest standards and that these standards are subject to regular evidence-based review
 - The addition of optional ingredients which provide a definitive clinical benefit are important differentials; DHA/ARA being good examples
 - Consumer demand for the developmental benefits of DHA/ARA supports their continued addition to an increasing percentage of infant formulas globally
- DSM was the early champion of the clinical benefits of DHA/ARA
 - DSM initiated and supported much of the early research in this area, and continues to be active in both pre-clinical and clinical research focused on DHA and/or ARA benefits
 - DSM developed and maintains a significant global patent portfolio which covers the production and composition of both *life'sDHA* and *life'sARA*
 - DSM's IP, combined with over 20 years of excellent quality and service, has positioned DSM as the market-leader for DHA/ARA for use in infant formula
- DHA/ARA supplemented infant formulas are now highly penetrated in many key markets, but incremental growth opportunities remain
 - Growth will be driven by population trends, socioeconomic development, further premiumization of the segment, and greater penetration into developing INF markets



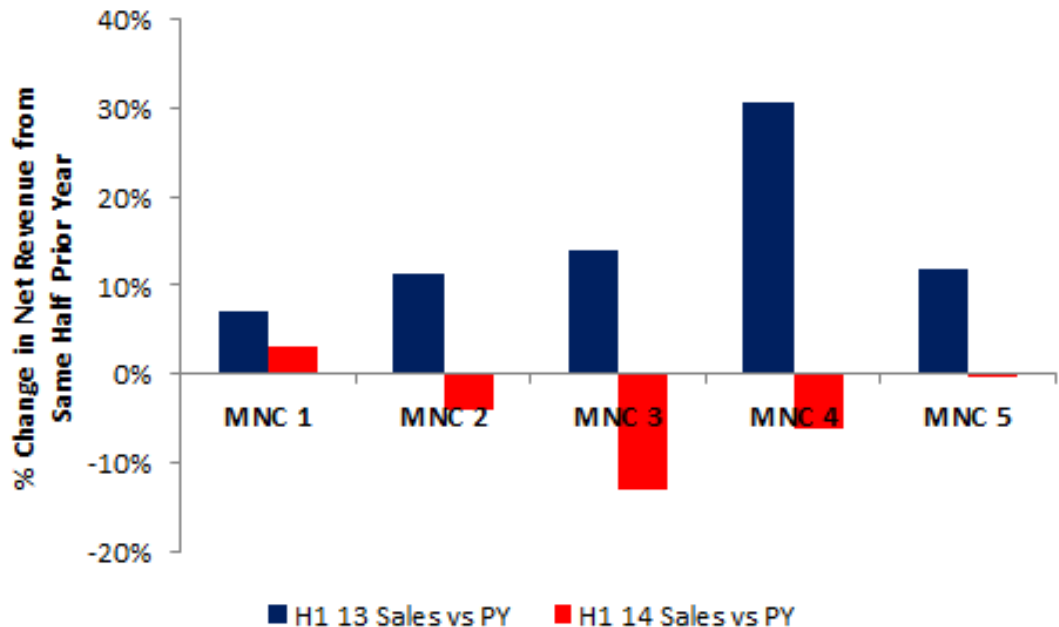
Robust Microbial DHA & ARA Patent Portfolio

- DSM's has an extensive microbial ARA and DHA patent portfolio.
 - This includes patents directed to, among other things, ARA and DHA oil composition as well as processes for making those oils
 - The existing portfolio will provide a competitive advantage to DSM's INF business through 2023-2030
 - DSM continues research and development in the field of microbial oils, and files new patents accordingly

Recent Events Impacting DSM INF Business

- Highly publicized infant formula recalls in 2013 due to the botulism scare have adversely impacted some customers supplying to the Chinese and APAC INF markets
- Implementation of new China regulations/audits may have caused short-term disruption to multinationals; some small INF companies have not yet had import licenses renewed
- Growth expectations for the Chinese INF market have been reduced to a lower level than in the past few years. This has led to industry-wide destocking.

Key DHA/ARA customer global sales growth from public filings. Sales for customers infant segment, pediatric nutrition segment or nutrition segment as available.



Why Customers Choose and Stay with DSM for Infant Nutrition Ingredients

- Global leadership
- Safety & Quality
- Traceability
- Portfolio Breadth
- Global Service & Support
 - Technical, Quality & Product Formulation
 - Marketing and PR
 - Public Affairs & Regulatory Expertise
 - Innovation and New Product Development
- Security of Supply
- Sustainability

Customers know that DSM is a partner and solution provider, not just a supplier



Global Leadership with life'sDHA & life'sARA



- High quality, consistent, vegetarian sources of DHA & ARA
- Safety - made in the U.S. in FDA inspected cGMP facilities
 - >110 million babies raised on life'sDHA and/or life'sARA with no adverse events
- Sustainable source of DHA and ARA
- Over 20 years of proven supply and service history as the market leader

Full Portfolio for Infant Nutrition

Nutritional Lipids



Custom Nutrient Premixes

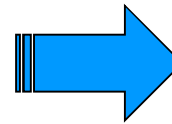


Vitamins

Wide range of Fat-soluble and Water-soluble Vitamins in various forms



Carotenoids



Uniquely positioned in three main steps of the value chain: the production of **pure active ingredients**, their incorporation into **sophisticated forms**, and the provision of **tailored premixes**

Innovative & Science-based Solutions

Growth & Development

Vitamins and minerals support energy metabolism, while nucleotides support the growth and repair of body tissue.

- Vitamins
- Minerals
- DHA & ARA
- Nucleotides
- Choline
- Taurine

Brain Development

Vitamins, minerals, trace elements and long-chain polyunsaturated fatty acids (LC-PUFAs) are essential for neurological development.

- Vitamins
- Minerals
- DHA & ARA
- Lutein
- Choline
- Taurine

Immunity

To combat infection, we supply a range of micronutrients that support the body's immune response.

- Vitamins
- Minerals
- DHA & ARA
- Nucleotides
- Oat beta-glucan

Healthy Bones

Calcium and vitamins B6, C, D and K help to build and maintain adequate bone mass during early childhood.

- Vitamins
- Minerals

Eye Health

Carotenoids, which are present in breast milk, help to protect the retina from oxidative damage. Lutein, DHA and ARA are essential for maintaining eye health.

- Vitamins
- Minerals
- DHA & ARA
- Lutein

Wrap-Up

- The INF industry will continue to be led by a small number of multinational manufacturers
 - Companies with which DSM has substantial and long-standing relationships
- Life'sDHA and/or Life'sARA are currently used by over 100 INF companies
 - DSM is the primary global supplier for most major multinationals
 - Many customers are in multi-year license and supply agreements
 - Products from these companies can be found in over 85 countries
- Despite some near-term challenges in the market, especially the destocking in Asia, the fundamentals of the infant nutrition market remain sound
 - Urbanization, a growing middle class, birth rates and the continued success of premium products support market optimism

DSM is well-positioned to continue as a leading supplier
and partner to the INF industry



BRIGHT SCIENCE. BRIGHTER LIVING.™

DSM Engineering Plastics

Richard Pieters, President DSM Engineering Plastics Americas

US Field Trip

September 4, 2014

Safe harbor statement

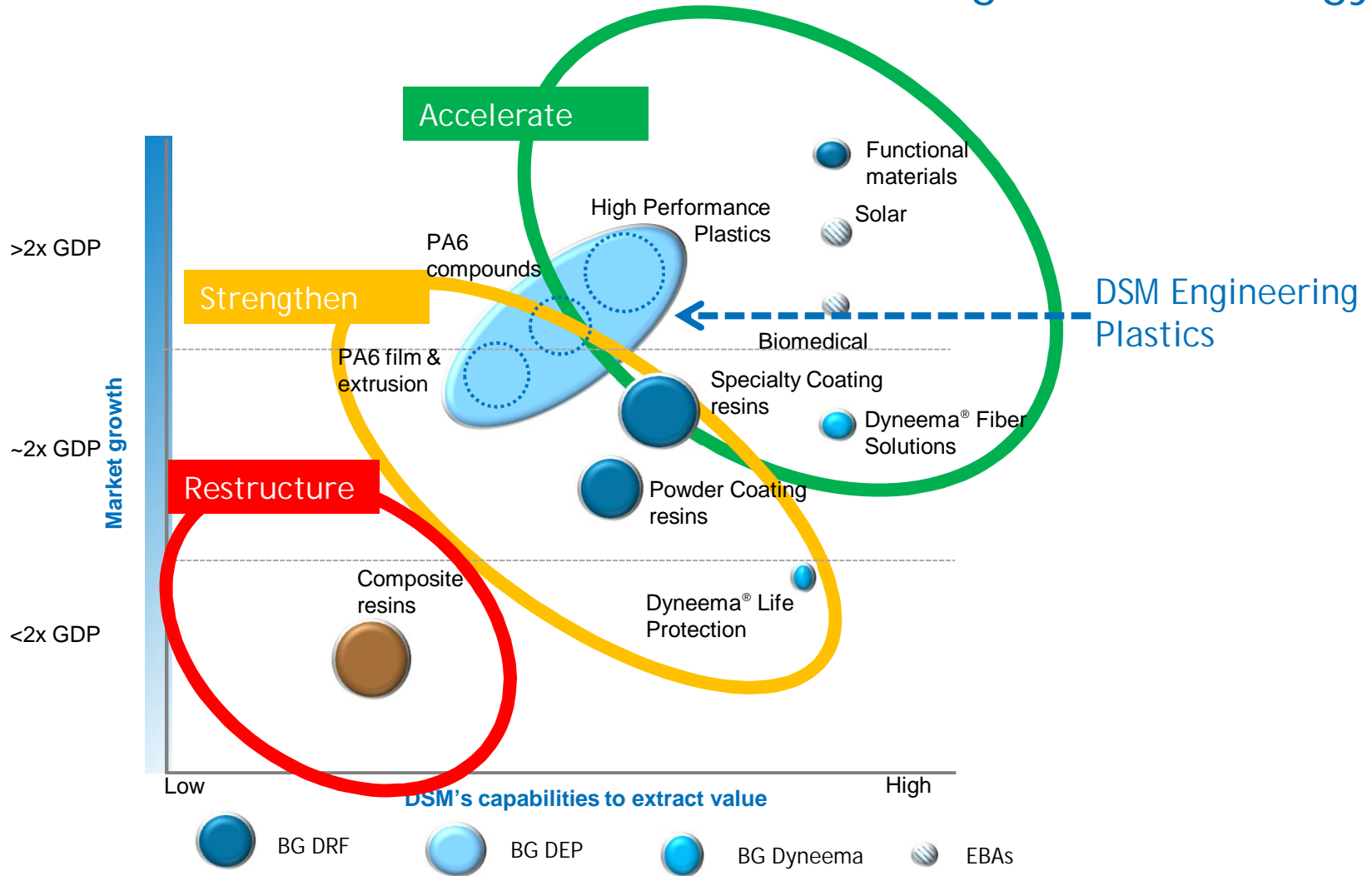
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Agenda

- DSM Strategy
- Who are we?
- Growth
- Automotive
- Electronics
- Polymers for Flexible Packaging
- Investments

Performance Materials: differentiated growth strategy



Who are we?

- *DSM Engineering Plastics (DEP) Americas* has 350 employees with 3 manufacturing operations and 1 HQ / Commercial Operations / R&T Centre in the Detroit Area
- Part of *Global Engineering Thermoplastics Business Group* with footprints in Europe, Asia and the Americas, strong focus on Semi Crystalline products
- *Value creator over supply chains* starting at OEMs and extending till molders. Add value at every step of the chain
- Proud supplier to serve *worlds most prestigious companies* on the globe
- Ambitious; expanding in new markets with *new (bio) polymers and compounds* determined to be the *supplier of choice*
- Totally committed to *sustainability & innovation* with new products, in-depth application know-how and R&D investments

Leading supplier of Engineering Thermoplastics



Growth DEP Americas

- Innovation pull new applications in all segments
- Growth: beyond typical 2 times GDP growth
- Automotive - DEP outpaced market by penetrating applications
- Electronics sales in Asia (excluded in numbers) - specification done in North America
- The investment in a new Polyamide 6 polymer plant in the US will support strong position in Food packaging and balanced portfolio



Significant organic growth accelerated by investments

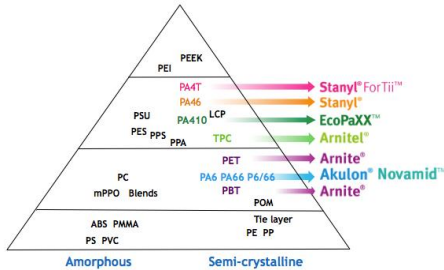
Business Dimensions & Growth



Markets

1. Automotive
2. Electronic
3. Film and Extrusion
4. Electrical
5. General Industries

Understand Industry and Segment drivers



Products

1. Akulon/Novamid PA6 (co) polymers
2. Akulon/ Novamid PA6 Compounds
3. Stanyl, Stanyl ForTii PA4.6
4. Arnitel, Arnite PET/PBT/TPC
5. EcoPaXX PA4.10

Translate drivers to opportunities for our products



Regions

1. DEPEU
2. DEPAP
3. DEPAM

Business is executed in the regions

Automotive – Global trends support DSM



Growing demand of vehicles especially in high growth economies; upgrade of fleets



Climate change, emission reduction and efficient use of energy is key to OEMs



Demand for more functionalities and safety features increase the electrification and weight of cars

Overview of key drivers

Market definition:
Powertrain & Air/Turbo Management, Interior,
Exterior, Auto E&E, Chassis & Brake System

Key drivers for market growth

Key drivers for market growth

- Light Vehicle Growth

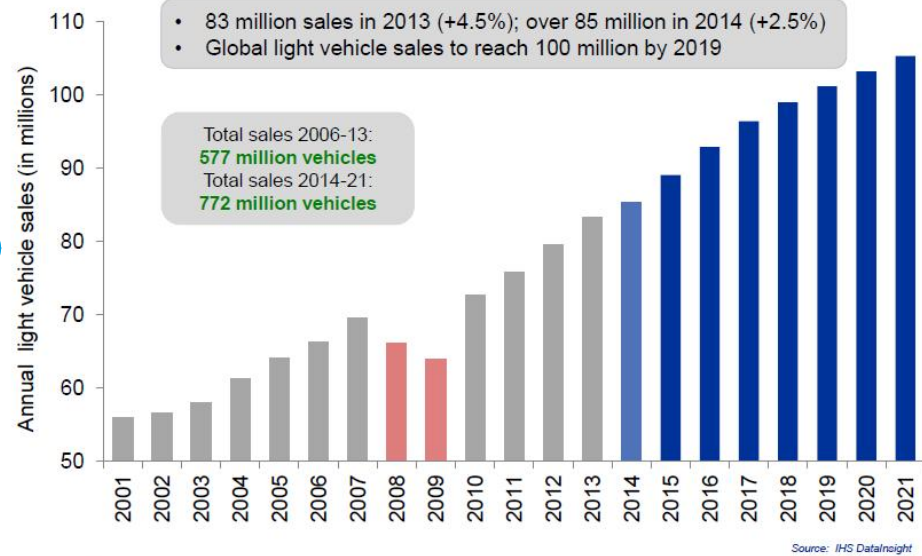
Specific growth drivers for DEP

- Emission Reduction and Fuel Consumption Legislation
- Safety Legislation
- Consumer quest for more Comfort
- Improved Eco Footprints

Substitution trends

- Metal-to-plastic conversion
- Interpolymer conversion (downsizing: PA6 to HPM; LCA: biobased plastics)

Global light vehicle sales forecast Outlook remains optimistic for auto industry



© 2014 IHS

Strong growth opportunity for DEP



Main differentiators in automotive



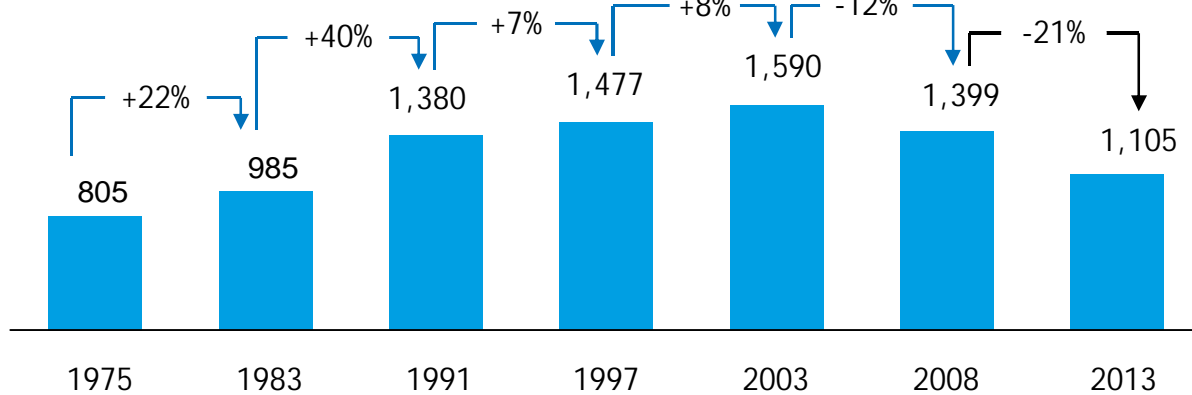
Long historical relationships at engineering, purchasing and managerial levels at many locations of the top-5 Tier-1s

Proven track record over 15 years, approved in 350 commercial parts worldwide

Global grades, global specs, local supply and agile global network

Cars*: lighter, more powerful and safer

Weight development (kg¹)

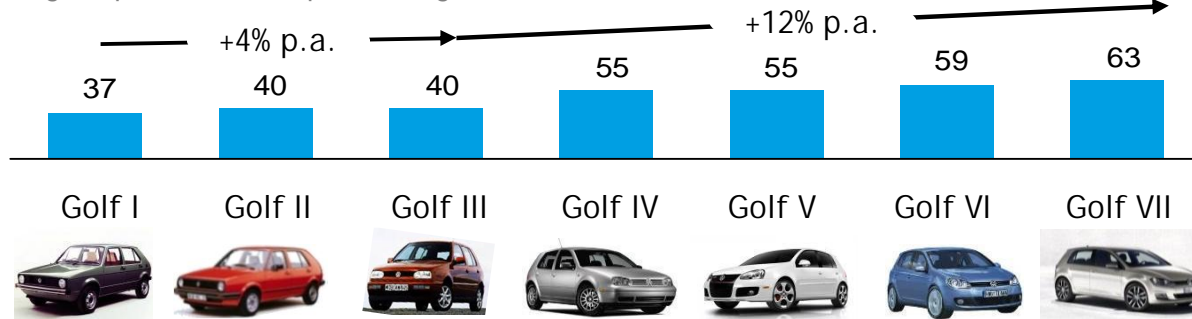


Cars became fatter due to additional features and increase of safety standards

Cars became smaller due to light-weighting driven by fuel economy

Cars became more powerful due to increase of use of turbo's

Engine power development (kg¹)



1 Maximum curb weight

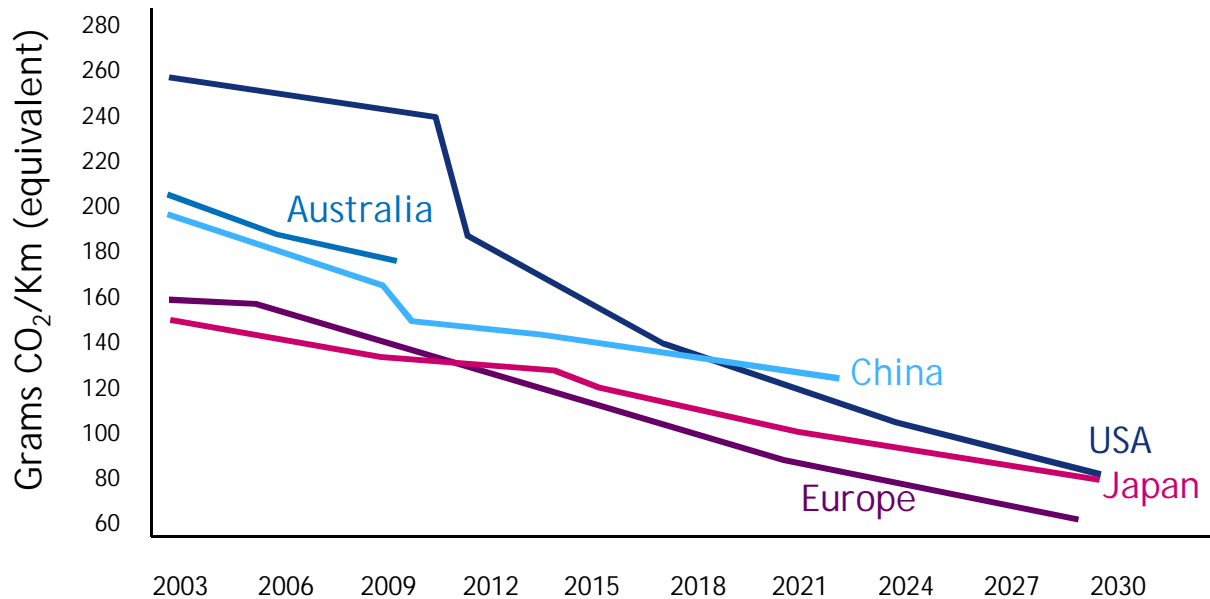
2 Engine power of the smallest model

SOURCE: VW

* Medium Compact Example

Tightening of CO₂ regulation

CO₂ requirement in different regions



Source: Argon National Lab

More stringent in future:

2020: CO₂ to 95 g/km in Europe

2025: New WLTP test standard

Will boost metal-to-plastic conversion further

Major driver for weight reduction, leading to technology shifts and inter-material substitution

Differentiation driven by application know-how

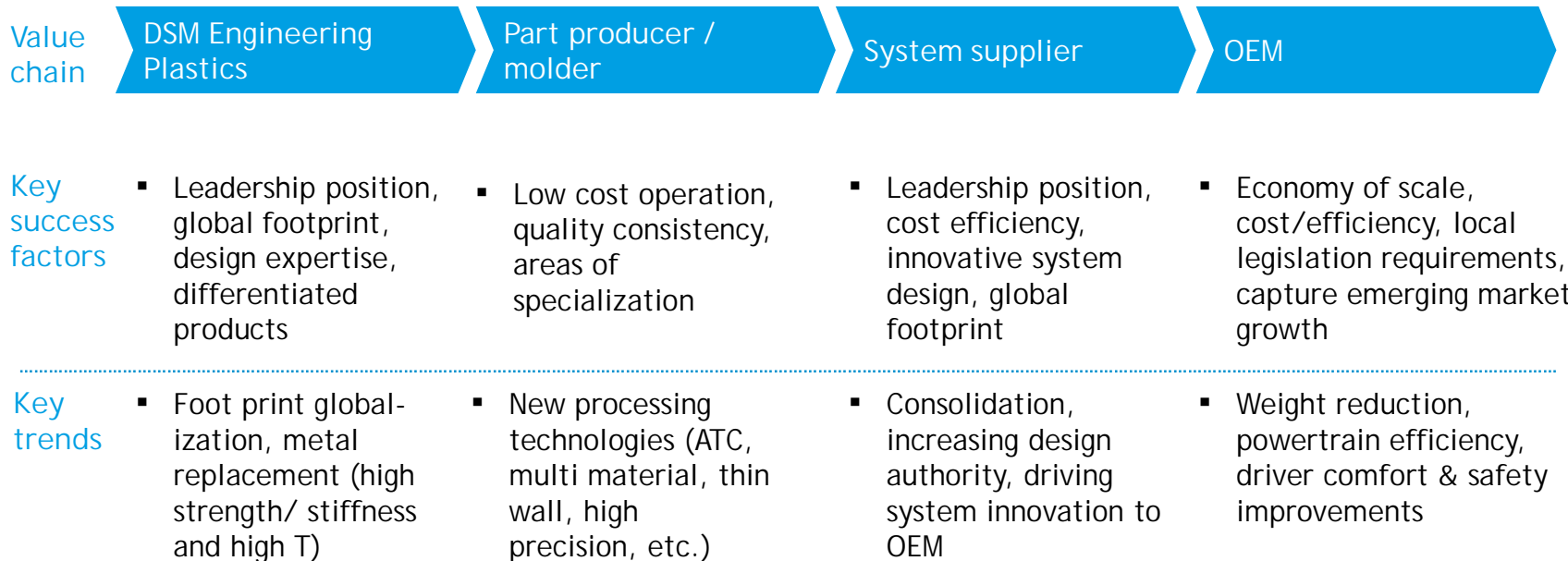
With OEMs and Tier 1-system suppliers

Industry Definition

Automotive Industry includes Passenger Car and Light Trucks, produced globally

Development time and cycle time

Developments typically done with OEM or Tier 1 and require 2-4 years, after which ongoing sales to Tiers 1, 2, 3 for 3-8 years, with next generation specification likely for incumbent suppliers



Example Safety Systems: 10% CAGR growth

Market definition:

Housing of the airbag for frontal airbags (driver side, passenger side and knee airbags)

Key drivers for market growth (x% CAGR)

Key drivers for market growth

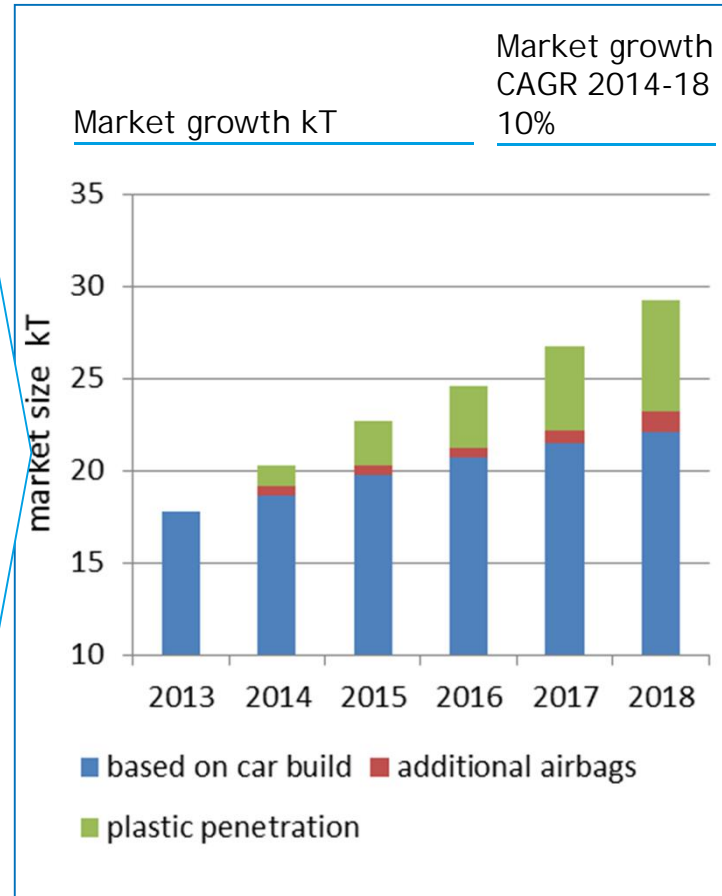
- Growth car production (4%)
- Increased use of airbags
- Additional airbags (knee airbag, side curtain airbag) (1%)

Specific growth drivers for DEP

- Metal replacement (5%)
- Material supplier consolidation (favoring strong established global players)

Substitution trends

- Metal to plastic
- Higher Heat resistant plastics
- Higher Impact/Stiffness mat
- Lighter Materials



Driven by increase of safety standards and metal to plastic substitution

Established leadership: Akulon PA6 Airbag housing



Airbag in Akulon PA6, reducing weight with 20-50% (metal replacement)



Safety systems need to be predictable, reliable and 100% dependable

Extreme proven track record, used in over 120 million vehicles
Reduces weight, cost and CO₂ emission

Electronics - Global trends



Connectivity with faster data transfer and cloud computing



Quest for greater functionality and performance - miniaturization



Reduction of the environmental impact on e-waste - less hazardous circumstances

New developments providing growth opportunities

Key drivers for market growth

Key drivers for market growth

- + Cloud computing
- + Increased focus on sustainability
- + Increased mobility
- + Broader penetration of solid state lighting
- + Design, Ease of use, Thinnovation
- + Massive increase of Smartphone
- High data rates, content explosion
- Decrease of desktop demand

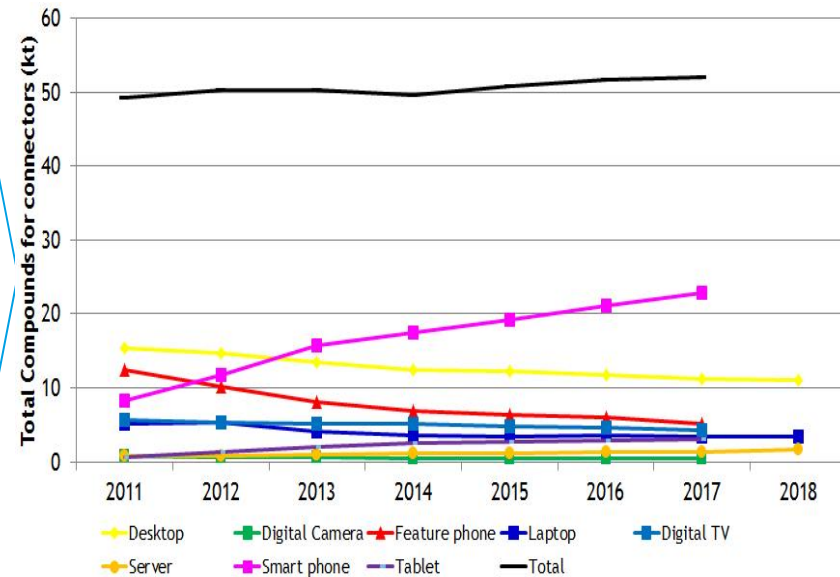
Specific growth drivers for DEP

- + Miniaturization
- + Thinnovation
- + More data transfer
- + More sustainability
- Higher data rates
- Smaller and less connectors/application

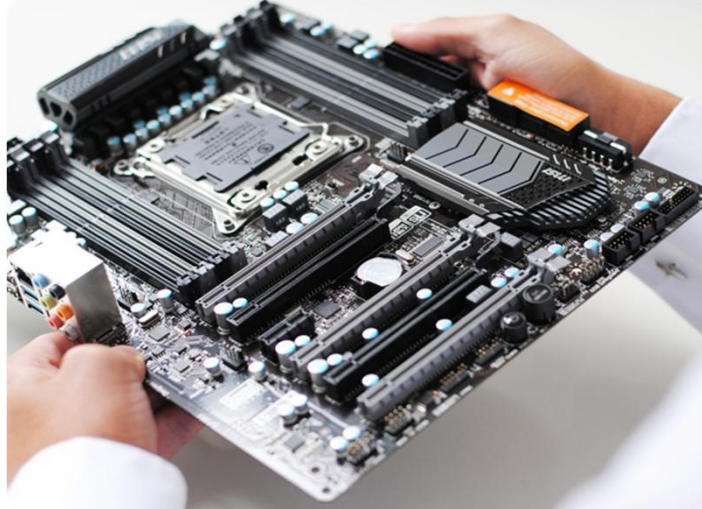
Substitution trends

- + Interpolymer conversion (more data transfer: PA66/PBT to HPM; halogen-free)
- PA replacement by Polyesters due to higher speed

Overall plastic demand is increasing due to mobile and server applications;
Desktop market is shrinking



Main differentiators for DSM in electronics



Strong application and CAE design support to speed up time to market for our customers

Proven track record over 20 years at all connector manufacturers, ODMs as system providers and OEMs across the world

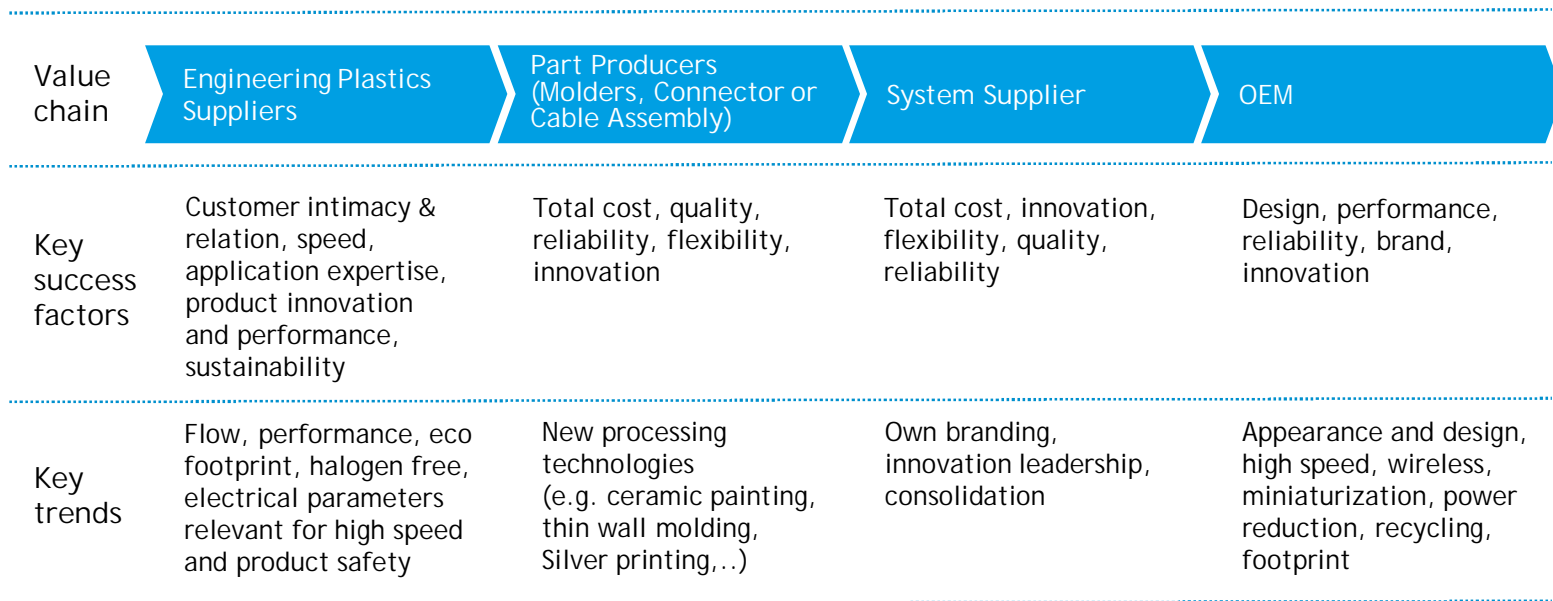
Demonstrated capability to solve failure issues in the validation phase via design, tooling or material advice in every region of interest

Strong reputation as innovation leader, enabling improved designs for our customers

Electronics is an industry with fast cycle times

Development time and cycle time

Driven by OEM, ODMs and Tier 1s, cycles are 6-12 months, product live times differ by segment, less than a year for a smartphone, up to 10 years and above for a server or washing machine.



Fast upcoming technology: Cloud Computing



Servers driven by cloud computing

Global - Electronics - PMC Servers

Key drivers for market growth (x% CAGR)

Key drivers for market growth

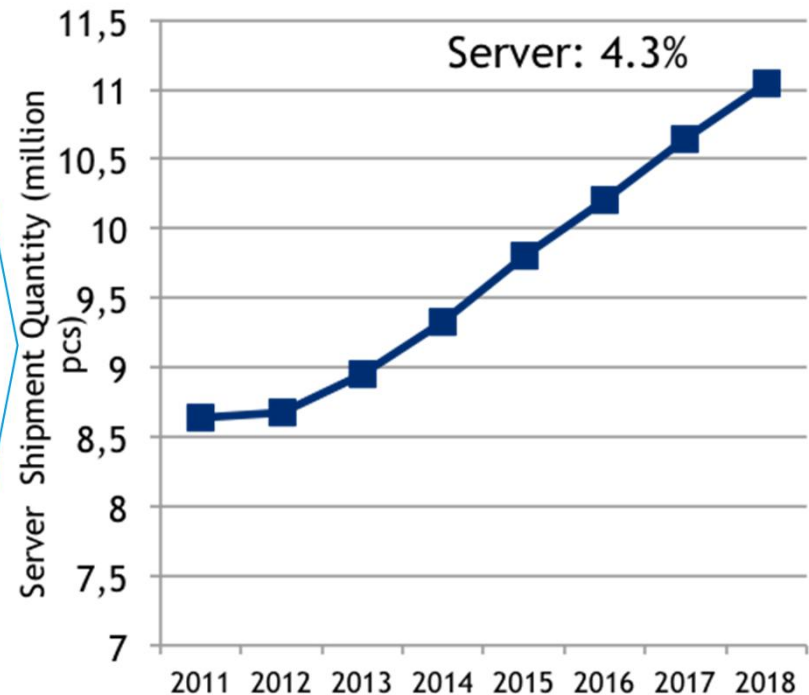
- Growth of Cloud computing (20%)
- Strong growth of data content by facebook, google, Amazon, SAP, Microsoft, Youtube,.. (>100%/y)
- Growth server production (4.3%)

Specific growth drivers for DEP

- Explosive growth of server memory
- Worldwide server farms consumer 30b watts energy
- 88-92% of this energy is lost in standby
- Power reduction drives advanced designs with high flow, low warpage & reflow

Substitution trends

- Interpolymer (LCP to HTPA), halogen containing to halogen free, low flow to high flow



Server farms consume more power than most cities

Worldwide, server farms use about 30 billion watts of electricity per year

Yearly electricity demand equals the output of 30 nuclear plants

Data centers in the United States account for one-quarter to one-third of that load

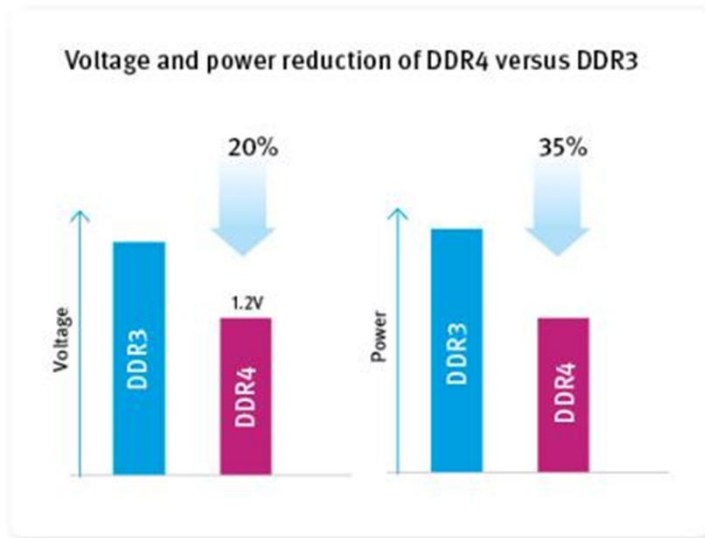
Only 6-12% of this electricity is used for computation, the rest is used to keep servers idling

In Silicon Valley, many data centers appear on the state government's Toxic Air Contaminant Inventory

Reducing power consumption is clear need in developing of the next generation servers

Proven solutions for next generation DDR4 housing

Stanyl®ForTii™ and Stanyl®



Stanyl®ForTii™ for next generation DDR-DIM sockets in computer random access memory modules



Stanyl®ForTii™ and Stanyl® are the only halogen free, high temperature polyamides that supports customers in meeting stringent requirements of reflow soldering

Trends support business opportunities DEP

Overall trends in electronics

- Market trends
 - Cloud Computing
 - Increased mobility
 - Connected Home and Cars
 - High data rates, content explosion
 - Digital Health
 - Green Design
- Technological trends
 - Further Integration and Miniaturization
 - Further roll out of lead free
 - Low temp soldering
 - Optical vs Cu interconnects
 - Vapor phase soldering
 - Power/Energy reduction
 - Wireless
 - 3D ICs

Impact on Existing Segments

Connectors

- Low warpage, high flow & mechanics
- Less plastics, halogen free, ϵ_r , $\tan \delta$
- Less desktops, more servers & mobile
- Reflow soldering, standardization

Wires and Cables

- PVC alternatives halogen free
- Wireless & integration replaces cables
- Power reduction reduces cable weight

Lighting

- Growth of (O)LEDs
- Ongoing cost pressure
- Big changes in supply chain landscape

Impact on Potential New Segments

- Growth of Antennas
- Replacement of PC/ABS in Enclosures
- Material solutions for wearables
- Plastics substrates for flexible displays

Global trends in flexible food packaging



Global population growth and lifestyle change lead to increased consumption of processed and prepared food

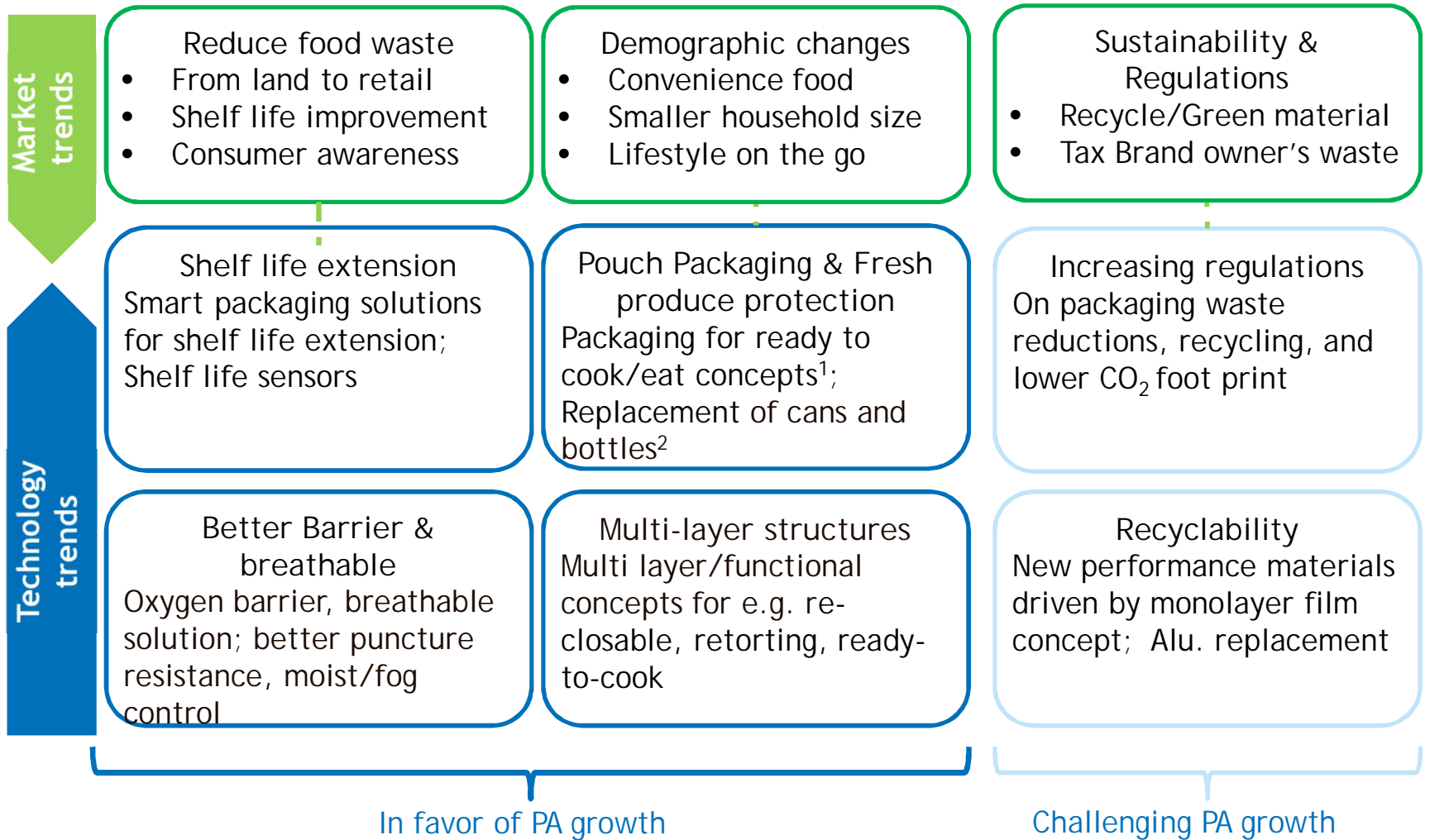


Industry looks for smart packaging which contribute to reduced food waste by extending the shelf life



Need to reduce environmental impact of packaging via recycling and bio-based solutions

Better barrier & breathable properties and multi-layer



1 these are mainly the fresh concepts
 2 is in favor of PA, the pouch growth

Longer shelf life with oxygen barrier (Akulon®/Novamid™)



The oxygen barrier film for food packaging slows down the oxidation process and helps to prevent microbial infection

Cut foot waste with multi-layer film (Akulon®/Novamid™)



The barrier film is puncture resistant which prevents the package from damage

Higher value & lower eco-impact with Arnitel[®] Eco



Arnitel Eco in panliner

"Thanks to environmentally friendly Arnitel Eco our panliners not only help to improve food quality and yield, they also prevent food from baking or burning to the pot or pan, thus saving cooking and clean-up time, and leaving no food residue or waste."

Michael Schmal
President M&Q Packaging Corporation

A bio-based material with up to 50% reduction in carbon footprint

From one extreme to the other with Arnitel® Eco



A bio-based material with excellent performance from -40°C to $+205^{\circ}\text{C}$, therefore equally ideal for shock freezing and for the oven

Buying power large retailers forces value chain cost-innovation

Industry Definition

Flexible food packaging includes films and pouches for consumer food packaging. 80% is used for food packaging and 20% for industrial/medical packaging

Development time and cycle time

Developments are mainly initiated by retailers & brand owners. Converters/film producers are their main innovation/development partners. All raw material suppliers initiated programs to understand the packaging needs across the whole value chain

Value chain	DEP	Converter/ film producer	Brand owners	Retailers
Key success factors	<ul style="list-style-type: none"> Leadership position in food packaging, strong R&D capabilities. High service level. Understanding value chain needs 	<ul style="list-style-type: none"> Low cost operation, quality consistency, constant drive for innovation to protect margins; strong partnerships with BO and retailers 	<ul style="list-style-type: none"> Drive for innovation, cost efficiency, in depth consumer & retailer understanding, strong brand names supported by A&P 	<ul style="list-style-type: none"> Cost, efficiency, volume driven sales, high turn-over speed /shelf, strong retailer brand name, loyalty, promotions
Key trends	<ul style="list-style-type: none"> Demand for innovative high performance food packaging, cost down, more sustainable 	<ul style="list-style-type: none"> New processing technologies Consolidation, direct innovation partnerships with BO and retailers 	<ul style="list-style-type: none"> More need for faster innovation, sustainability, unpredictable legal implications for food packaging (waste reduction, food & plastic) 	<ul style="list-style-type: none"> Strong growth of Private label, growing demand for convenience/fresh food, complex handling, strong growth of online retailing

Move towards newer generation products needed to protect margins



Market trends and innovation opportunities

Trends in flexible food packaging

Current Trends

- Easy Open
- Fresh Taste with less Food Waste
- Reduce Packaging

Innovation Now & For the Future

- Single Serve
- Microwaveable
- Cook-In
- Longer Shelf Life
- Reduce Food Waste
- Reduce Packaging



Sealed Air NA
Grip & Tear



Sadia BR
Cook-in Pouch



Mom's Cereals
Resealable
Stand-up Pouch



Bemis NA
Microwaveable Pouch



Bemis SA
Retort Pouch

Customer collaborative innovations within DSM

DSM Nutritional Products, DSM Resins & Functional Materials and DSM Engineering Plastics work with Bemis on “next generation” Food Packaging, like the BR retort soup pouch

- Bemis brings total film manufacturing capability
- DSM brings food knowledge, film additives and film knowledge including printing inks, breathable or barrier polymers, oxygen scavenger technology



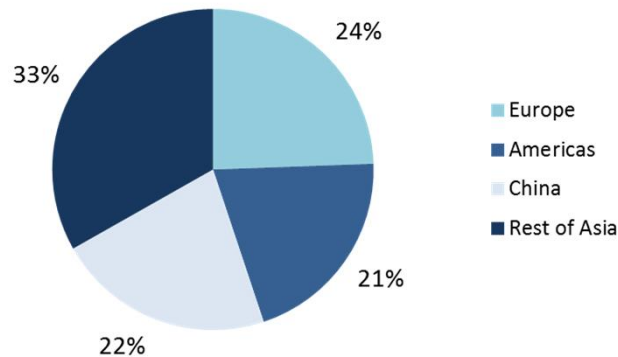
DSM Nutritional Products and DSM Engineering Plastics work with Viskase on “next generation” hot dog casing packages

- Viskase wants to replace cellulosic casings due to cost & availability
- DSM brings fermented food knowledge & flavor additives, film additives and film knowledge with breathable &/or barrier polymers



USALon; enabling global leadership

Demand PA (volume)



2014 Supply

- Netherlands
- China
- Taiwan

2016 Supply:

- Netherlands
- China
- Taiwan
- USA (USALon)

DSM to capitalize on appetizing food packaging market

By Heather Callendo
Published: July 29th, 2014



Richard Pieters, president of DSM engineering plastics Americas, told *PlasticsToday* that the Dutch-based company sees a bright future for the North American food packaging industry.

"It's driven by consumer preference, with plenty of growth forecasted in the next coming years," he said. "Food packaging is a highly innovative industry and we want to be a part of that."



The company announced that it will invest in a new polymerization plant in North America to manufacture Akulon polyamide 6 polymer for film grades used in flexible food packaging and other segments. With construction scheduled to start in Q4 2014 and completion targeted for mid-2016, site locations for the plant are currently being evaluated. Pieters said he anticipates the company to announce the location in the new few months.

Being able to add locally produced Akulon polyamide 6 grades for film to the company's North American portfolio puts the company in a good position for the North American food packaging industry, Pieters said. This new plant is DSM's first polymerization plant for high viscosity grades in North America for Akulon polyamide 6, besides its existing infrastructure in Europe and Asia.

"DSM is very committed to food packaging and this large investment is happening right in North America," he said. "We are growing so much here, that the management board gave us the ability to build the factory, which is a big compliment to the team here."

Another growth area for food packaging is creating solutions to reduce food waste. In North America, about 40 percent of the food loss occurs at retail and consumer levels and DSM believes this is where better packaging can make a difference. Flexible films based on Akulon polyamide 6, with its reportedly strong barrier against oxygen and aromas and mechanical strength and durability, could help to reduce food lost or wasted during its journey from farm to fork.

While the plant will serve North America, Pieters said it could potentially be used to export product to South America as well.

"Shale gas is making it very attractive for growth in North America," he said. "We want to be close to our customers and the cost position in North America is quite favorable."

- Akulon PA6 High Viscous are critical building blocks for packaging
- Worldscale plant - shortlist locations
- Global products for extrusion; capability to supply regionally;
- Complimentary with Novamid Acquisition 2010 / Arnitel
- Start Q4 2014 - shipments Q3 2016

Wrap-up

- DSM Engineering Plastics is a high growth company in diverse and attractive markets
- Strong presence in industries with good growth potential due to megatrends
- Global footprint and capabilities established and growing
- Expansion in polymers for flexible packaging will drive growth in Americas
- Investments supported by DSM in recent years enable growth far beyond GDP with differentiated products in several industries
- Innovation in all end markets will support further growth



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DSM Resins & Functional Materials

Rob Crowell, President Functional Materials

US Field Trip

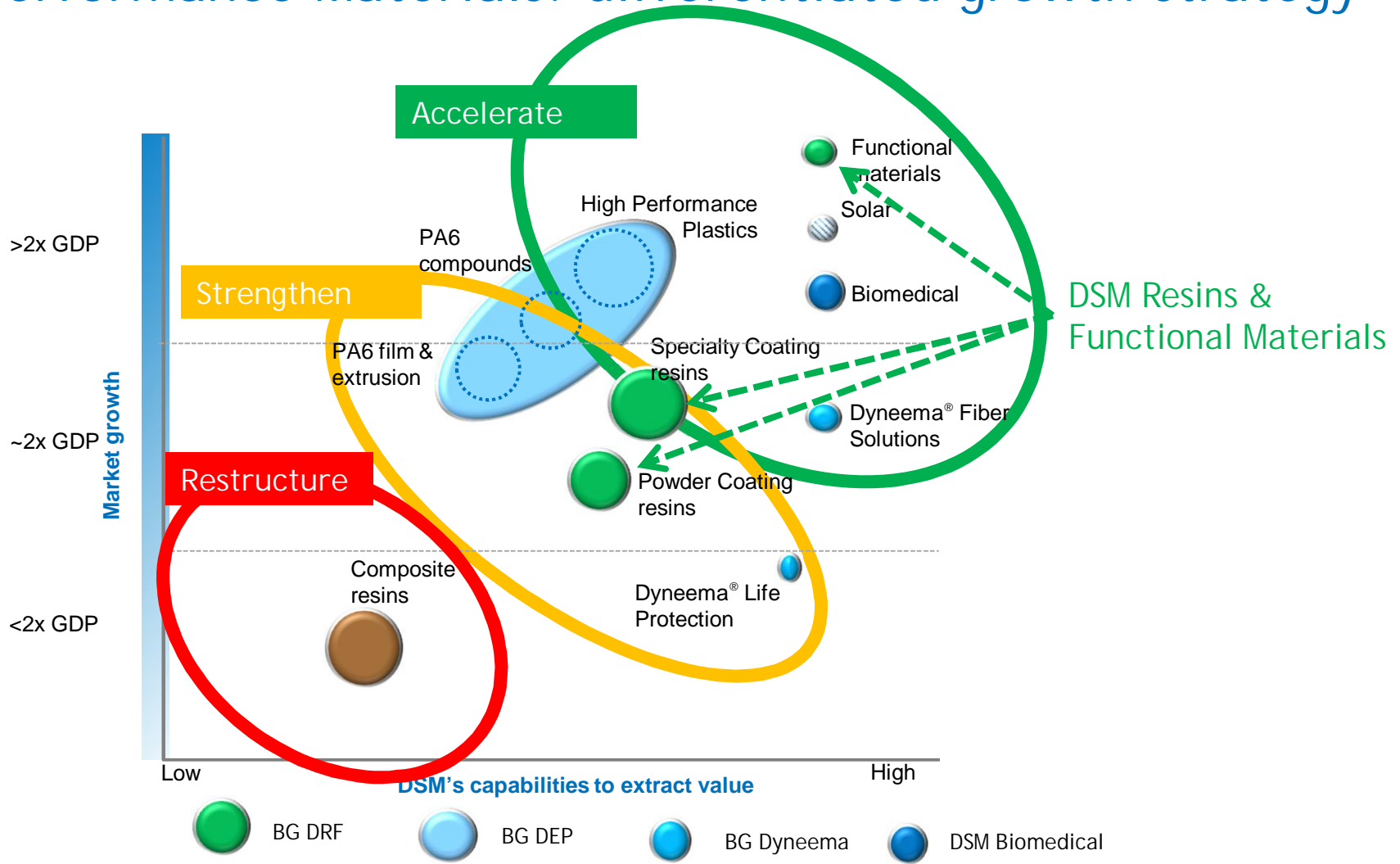
September 4, 2014

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

Performance Materials: differentiated growth strategy



DSM Resins & Functional Materials (DRF)

- A global player in the development, manufacturing, marketing and sales of high-quality resins solutions for paints, coatings, composites, 3D printing resins and optical fiber coatings
- Our mission: We generate value for our customers by working with them to provide more sustainable materials to meet regulatory needs and better respond to end-user demands through continuous innovation

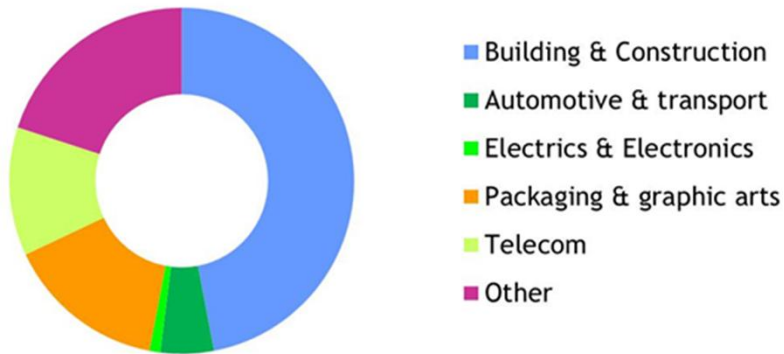
Our businesses:

- UV curable resins
- Powder Coating Resins
- Specialty Coating Resins
- Functional Materials
 - ✓ Fiber optical coatings
 - ✓ Somos / Stereolithography

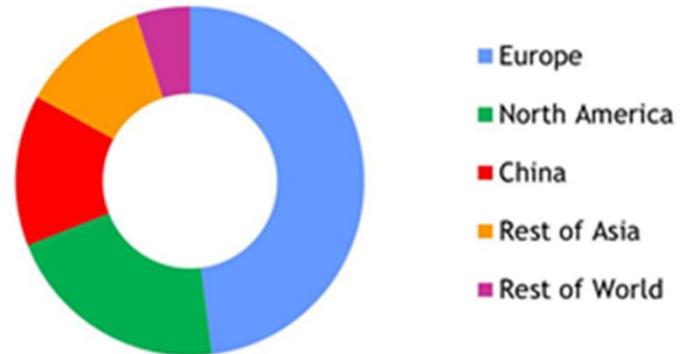


Overview of our markets, regions and products

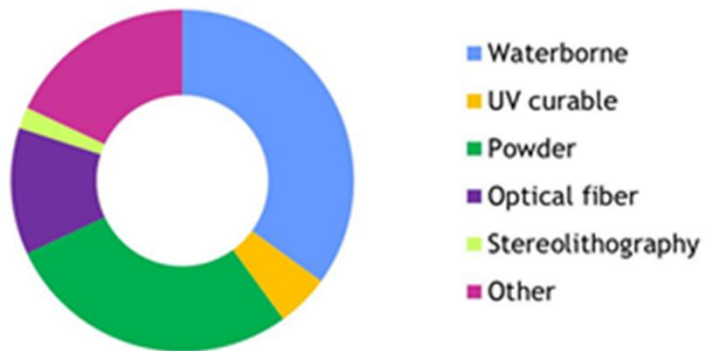
2013 Sales by End Market



2013 Sales by Region



2013 Sales by Product



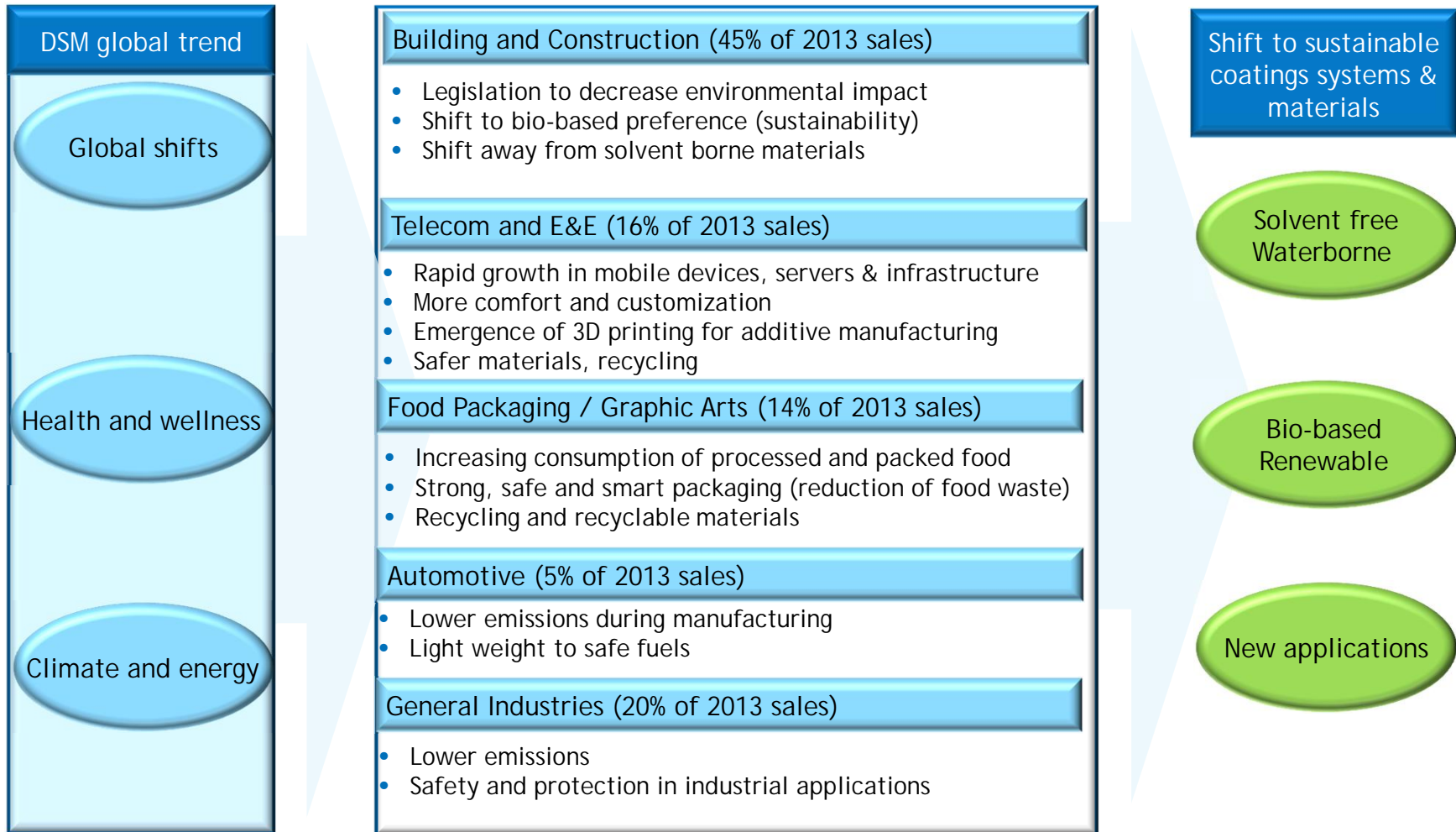
Market Position Coating Resins & Functional Materials			
	Top position	Top 2-3 position	Niche player
Water-based Coating Resins		■	
Powder Coating Resins	■		
UV-Curing Coating Resins			■
Optical Fiber Coating Resins	■		
Stereolithography		■	

Strategic Progress in DSM Resins & Functional Materials

- **Cost reductions & efficiency improvements**
 - ✓ By restructuring and margin management activities significantly improved financial performance in Powder and Specialty Coating resins
- Growth through **sustainable innovations**
 - ✓ By introducing “Supercoating” for Fiber Optic Materials to ensure continued market leadership in segment
 - ✓ Moved away from solvent borne coatings to waterborne systems in portfolio: from 50% of portfolio in 2000 to less than 20% expected in 2015
- Strong sales growth and presence in **High Growth Economies**
 - ✓ Established “Waterbased China platform” to develop sustainability awareness in industrial coating market in China
 - ✓ Acquisition of AGI in UV curable resins (Taiwan-China)

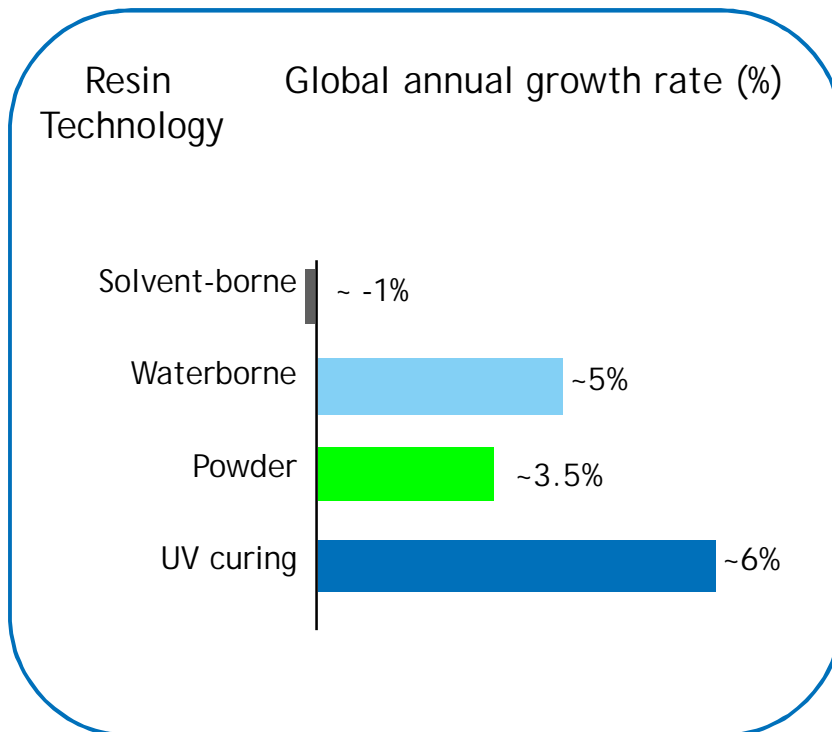


Megatrends drive our key end-markets

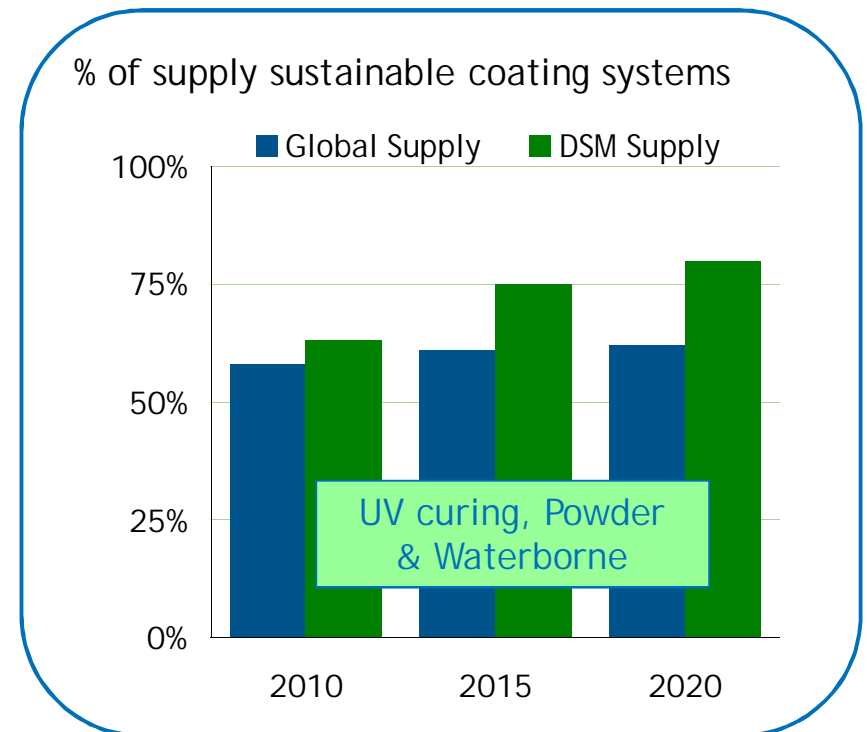


Global shift to sustainable coatings

Shift to more sustainable coatings



DSM focus on sustainable coatings



Driven by legislation and growing consumer awareness

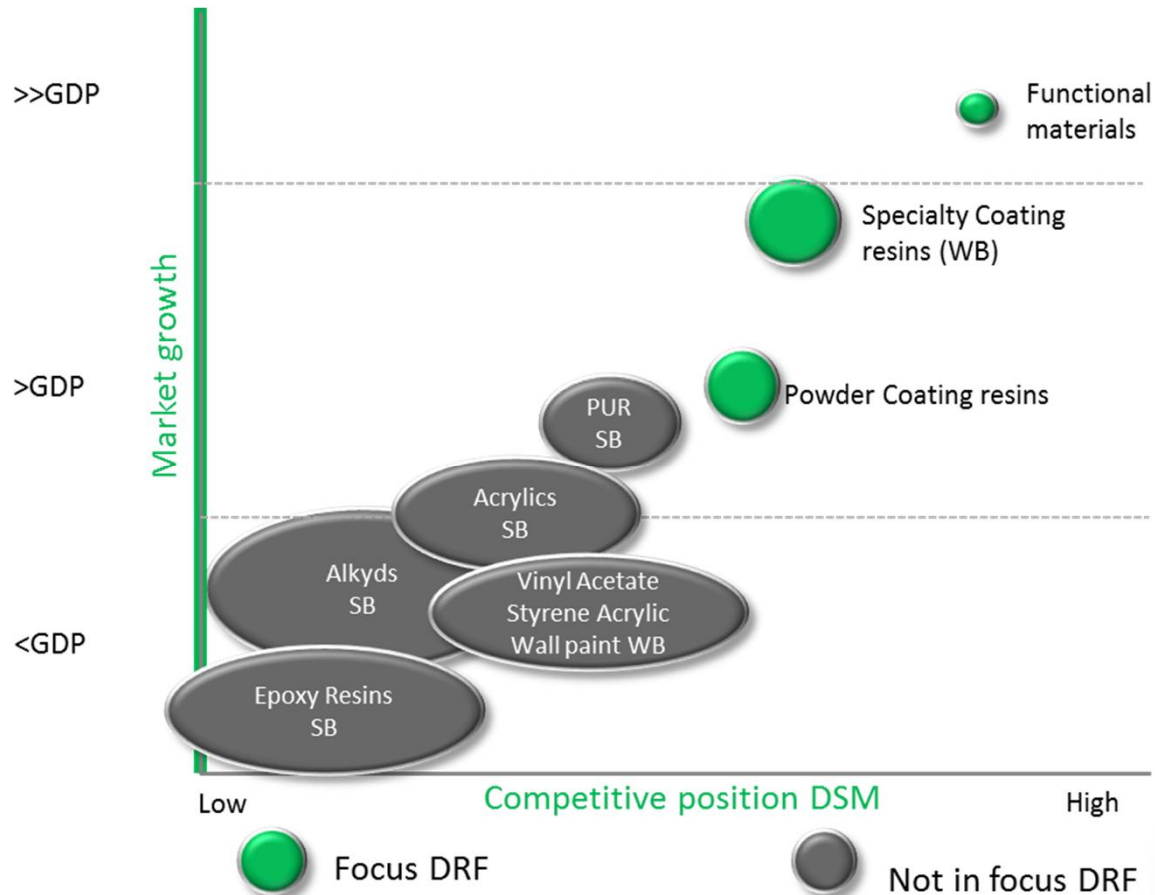
Well distributed in regulated markets



To drive a sustainable economy, legislation is needed
Legislation is intensifying in the world and driving markets to sustainable coatings systems

Significant growth opportunity for DSM in non-regulated, high growth economies

Our market positions



- ✓ DSM only active in small, higher value-add part of the coating industry, based on current technological competences
- ✓ DSM is a niche player in most attractive areas (green). Commodities (grey) requiring backward integration into monomers
- ✓ Although being a niche player, DSM is sizeable enough and well positioned to leverage its competences

Focus on sustainable technologies in attractive growth market segments

Our businesses: UV Curable Resins (AGI)



Photo: UV curable floor coating

- DSM-AGI (51% DSM controlled JV acquired in 2011)
- Offers a broad range of environmentally-friendly UV (ultraviolet) curable resins used in coatings and inks for wood, flooring, plastic and graphic arts applications
- Top customers: DIC, ECI, Xtreme, Renner, Heyo
- Main competition: Allnex, Sartomer
- Strategic Direction:
 - ✓ Growth in specialty UV curable coating technologies
 - ✓ Backward integration for Functional Materials

Our businesses: Powder Coating Compounds

- Powder coating products for metal with development focused on sustainable differentiated technologies that cure at lower temperatures, efficiency improvements, reduction of energy consumption and, most importantly, new substrates (wood)
- Manufacturing in the US at Augusta, Georgia
- Large customers: Valspar, Jotun, Axalta, Akzo, PPG
- Main competition: Allnex, Arkema
- Strategic Direction:
 - ✓ Growth in specialties such as Ultra for wood substrates



Powder coatings for metal applications



Powder coatings for wood

Sustainable innovation: Powder coated wood

- Trends** Increased sustainability awareness, faster and cost effective production of end product
- Application** Paint for industrial wood coatings (MDF) for furniture (bathroom, office) and kitchen cabinets etc. NO compromises on performance (same or even better)
- Main Features** Solvent free coating, highly efficient use of paint, low application energy, efficient and cost effective production of end product

People
“Quality of Life”

- ✓ Health benefits (safe ingredients, zero VOC)
- ✓ Improved comfort and well-being (no odor, no hazardous compounds upon application)
- ✓ Better working conditions

Planet
“Closing the Loop”

- ✓ GHG emission reduction: up to 400% versus standard solvent borne technology
- ✓ Safe ingredients
- ✓ Efficient use of raw materials (little to no waste)



Developing most sustainable technology for coating wood

Our businesses: Specialty Resins (SR)

- SR (Specialty Resins) offers the widest portfolio of water based coating resin technologies for application in Coatings, Adhesives & Graphic Arts
- Global footprint including manufacturing in the US
 - ✓ Wilmington, Massachusetts (incl R&D)
 - ✓ Frankfort, Indiana
 - ✓ East Providence, Rhode Island
- Large customers: Akzo, PPG, Teknos, Sherwin Williams and Sun
- Main competition: BASF, Arkema, Allnex, Nuplex, Dow, Bayer
- Strategic Direction:
 - ✓ Global growth in waterborne specialties/
replacement of less sustainable technologies



Bio-based waterborne coatings: DECOVERY®



Trends

Increased sustainability awareness: from general interest to preference for buying 'green'. From fossil-based to bio-based

Application

Paint for professionals and DIY (suitable for high gloss to flat) for interior and exterior

Main Features

Natural biobased materials (DECOVERY® paint resins) opening a new era of high performance sustainable paint production without impacting the environment at any stage of its use

People
"Quality of Life"

- ✓ Health benefits (safe ingredients, zero VOC)
- ✓ Improved comfort and well-being (low odor)
- ✓ Better working conditions

Planet
"Closing the Loop"

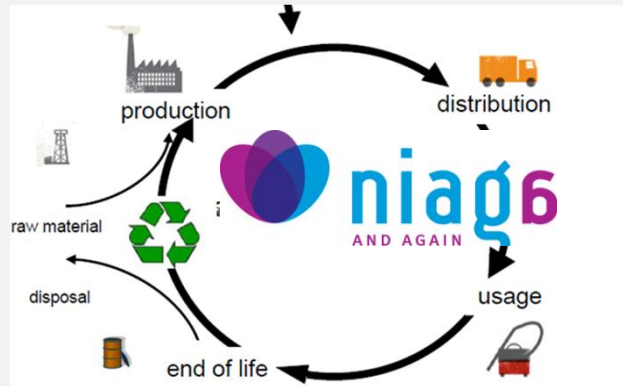
- ✓ GHG emission reduction: up to 50% versus standard technology
- ✓ Safe ingredients
- ✓ Renewable resources: based on novel biobased building blocks (50% renewable resources)



Setting up a Bio-based value chain



Sustainable innovation: Cooperation DSM-Niaga



1. Niaga's carpet fiber binding technology, combined with DSM's engineered polyester lamination adhesives technology enable the carpet industry to manufacture fully recyclable carpet systems
2. Mission is to make carpet waste obsolete (addressing major land-fill issue in the US)

Setting up a new value chain

- First success secured with positive feedback of leading carpet Producers based on trial results on first prototype carpet production machines



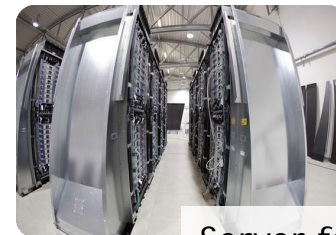
Entering new innovative business model with carpet recycling

Our businesses: Functional Materials (optical fiber)

- DSM sets the standard for optical fiber protection and performance worldwide helping to ensure greater signal reliability and field performance within optical fiber networks
- Global market share >70% with extensive intellectual property portfolio
- Headquarters and R&D in Illinois with manufacturing in North Carolina, the Netherlands and Japan
- Main competition: Momentive and Phichem (locally in China)
- Strategic Direction:
 - ✓ Growth in attractive and important Chinese growth market
 - ✓ Continuing development of wide effective area optical fiber coatings in the West driven by higher and growing bandwidth requirements



Elgin, Illinois, US



Server farms

Our businesses: Functional Materials (Somos)

- DSM also uses its strong technology base in UV curable thermosets to develop and market stereolithography materials used in 3D printing
- Large customers: Materialise, Formula 1 (multiple), Epoch Angel
- Main competition: 3D Systems
- Strategic Direction:
 - ✓ Growth globally with continuing development in new 3D printing technologies



Stanley, N.C., US



Sustainable innovation: Additive Manufacturing

What is additive manufacturing/3D printing?

- *“Process of computer-controlled joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies, such as traditional machining”*
- Additive manufacturing (AM) enables an unprecedented level of design freedom

Speeding up development and moving down the value chain

- Total markets for 3D printers, printable materials, and printed parts expected to reach US\$12 billion in 2025
- Positive government climate as 3D initiative creates new local jobs
- Opportunity to speed up adoption rate and expand the market with right partnerships and new business models
- Goal is to expand our materials offering to enable new printer technologies and capture value down the chain in end part applications



Exploring new business model with 3D Printing

Wrap-up

- DSM Resins & Functional Materials (DRF) has shifted its portfolio successfully toward specialty, value-added technologies
- We see further opportunity with the clear shift from solvent-borne technologies to sustainable solvent-free products and low emission resins
- Innovation in DRF is focused on more sustainable, high quality resins technologies and solutions in response to global challenges such as climate change, energy efficiency and the need to address health and improve well-being:
 - ✓ This approach has led to a strong increase in *ECO+ products, with higher growth rates, high value creation / margins* and lower environmental impact
- The demand is highest in Europe and the US where awareness continues to rise about the negative effects of solvent-borne systems
- We will capitalize on our innovation pipeline with ability to move the needle for DSM Resins & Functional Materials in the short term with low temperature curing powder coatings, biobased paint resins and carpet recycling



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US Field trip

Exton, Pennsylvania

September 4, 2014



DSM Biomedical

Christophe Dardel, President DSM Biomedical

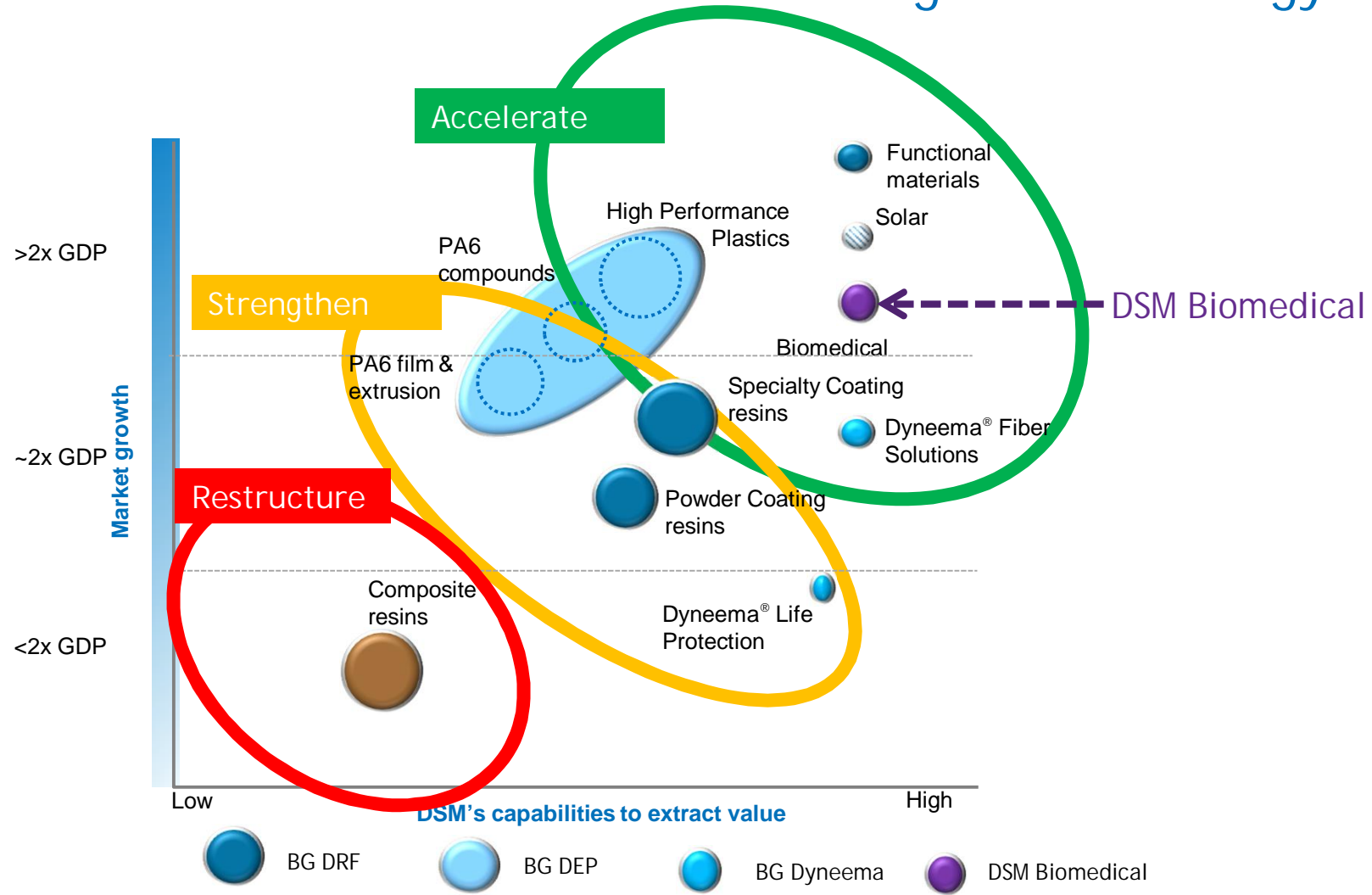
US Field Trip
September 4, 2014

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Performance Materials: differentiated growth strategy



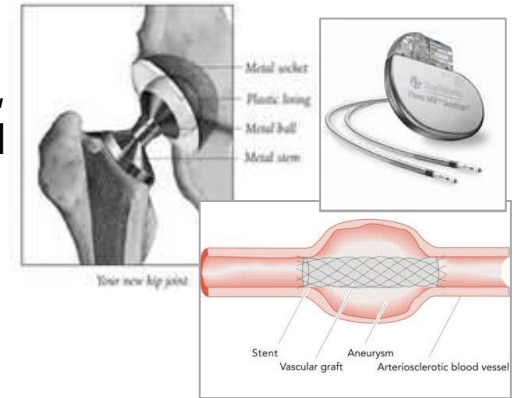
What are Biomedical Materials ?

Biocompatible material is ...

For example...

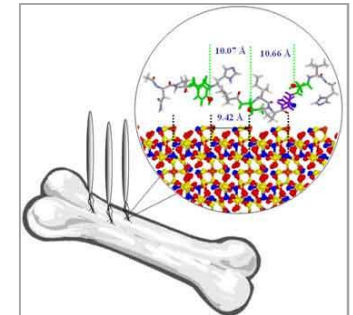
✓ ...a synthetic or natural material used to replace part of a living system or to function in intimate contact with living tissue

✓ ...artificial hips, vascular stents, artificial pacemakers, and catheters are all medical devices made from different biocompatible materials

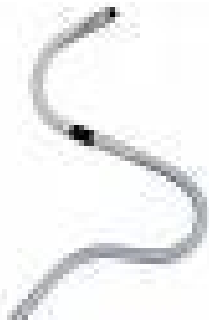
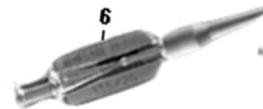
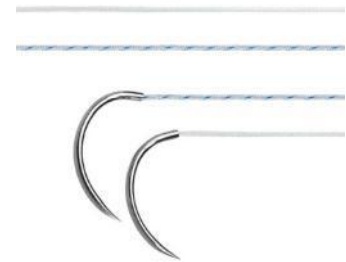


✓ ... are classically not made by living organisms but have composition and properties similar to and compatible with those made by living organisms

✓ ...calcium hydroxy-apatite coating found on many artificial hips is used as a bone replacement that allows for easier attachment of the implant to the living bone

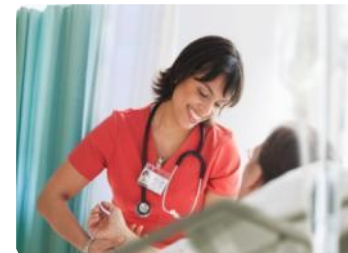


"We propose to consider materials for medical applications within and outside of the human body, both of natural and synthetic origin"

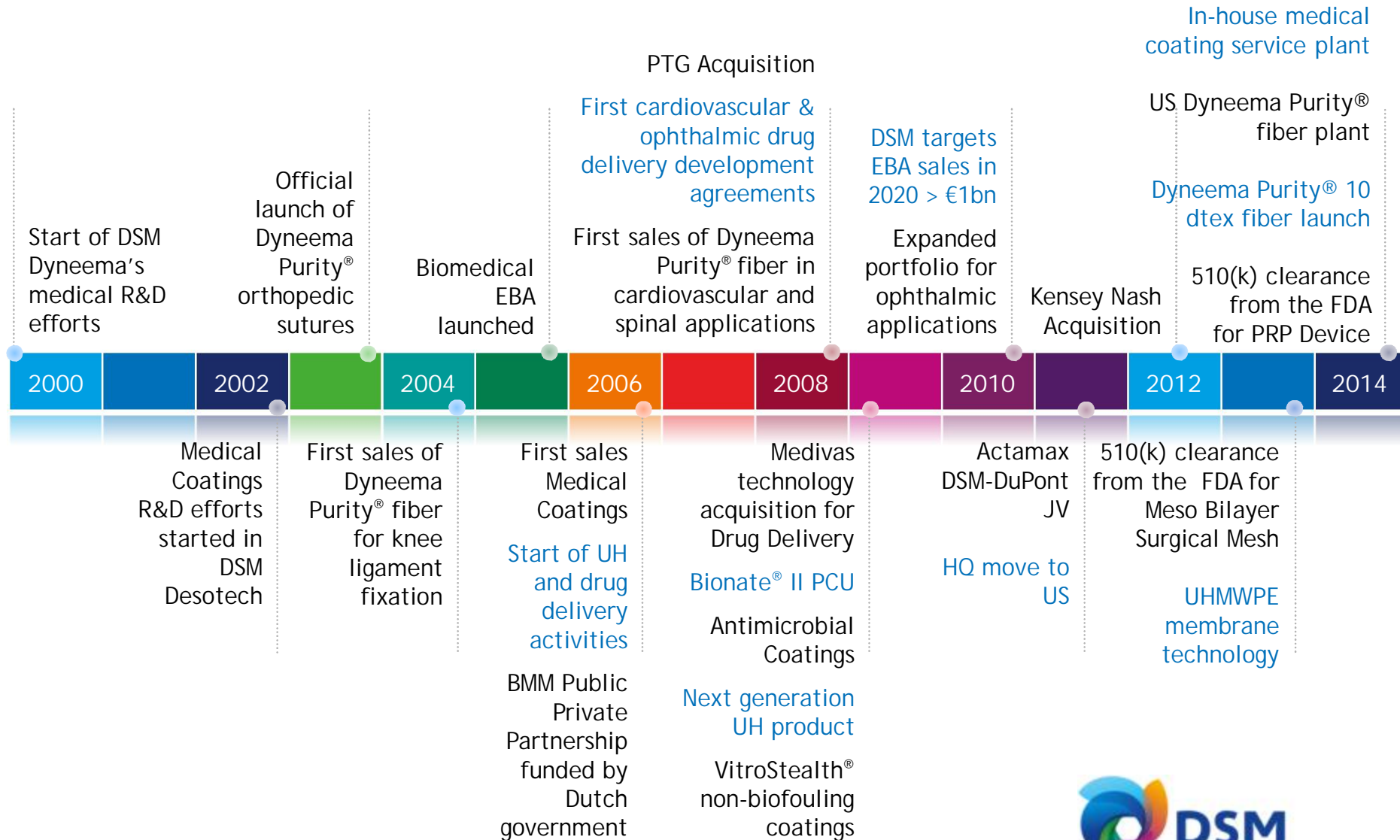


Our vision

“To be the leading development partner, trusted by the medical industry to shape the future of biomaterials and regenerative medical devices that improve and brighten patients’ lives throughout the world”



Biomedical materials history at DSM



Responding to today's trends and challenges

Global sustainability

- Committed to finding effective, sustainable solutions to medical issues facing the world



Active lifestyle

- Helping medical device manufacturers and clinicians meet the challenges in medicine - with biomedical materials that are the industry standard in strength and biostability



Healthcare costs

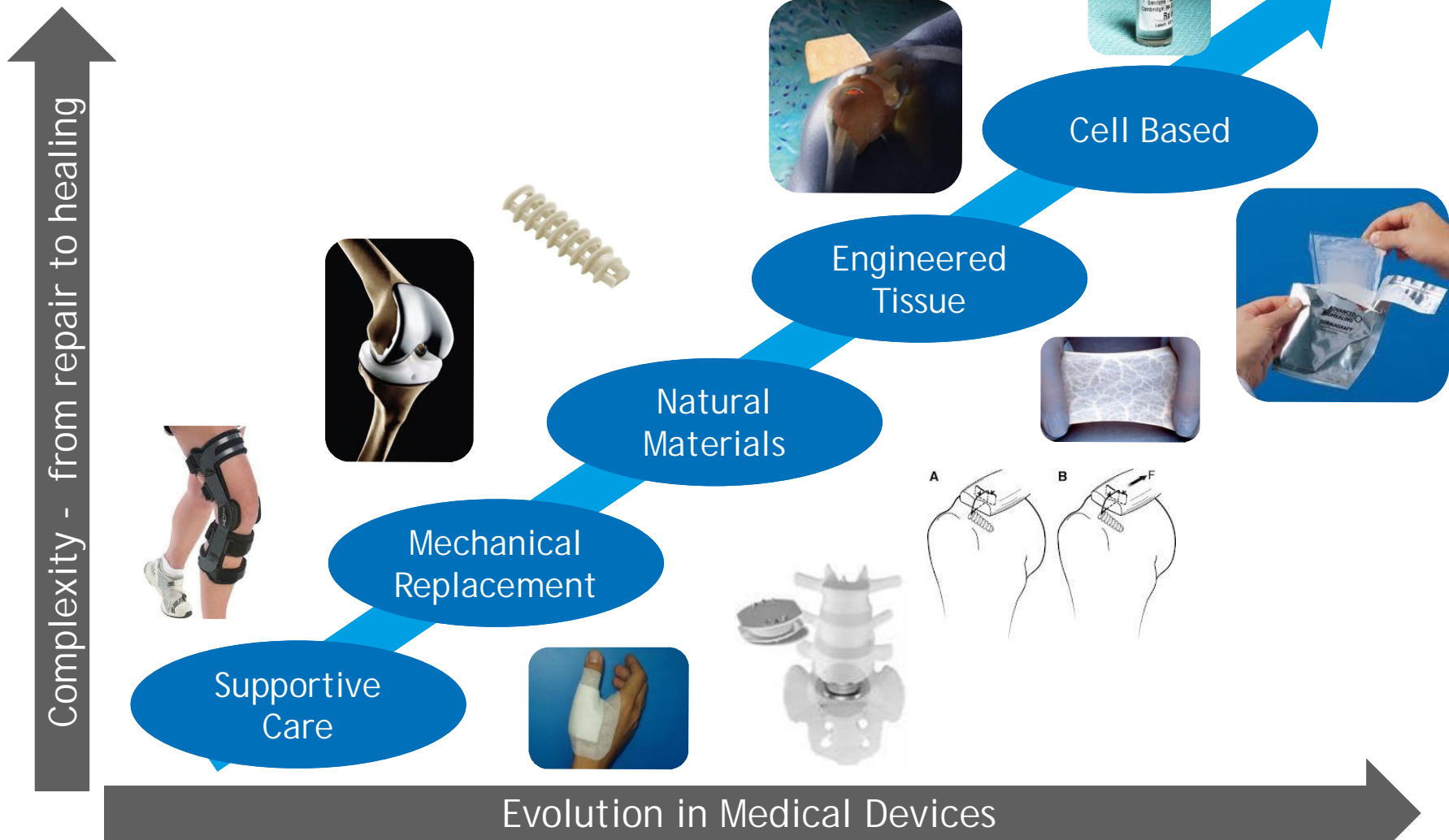
- Designing innovative biomedical materials that enable medical device manufacturers to make more minimally invasive devices which speed recovery, shorten hospital stays and minimize reoperation



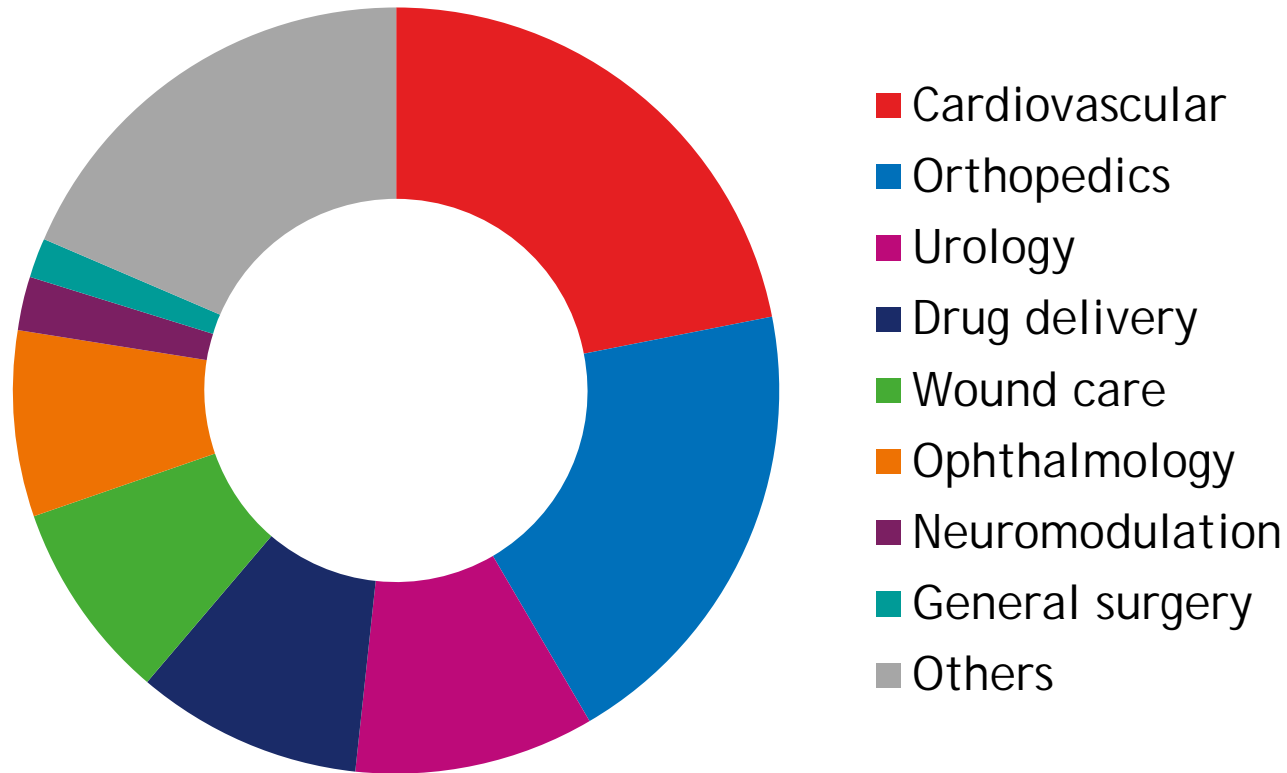
Aging population

- Contributing to treatments that help people lead longer, healthier and more active lives

From repair to healing



2013 Medical Devices Market: ~ USD 180bn*



The material solutions market is estimated at USD 30-50bn with CAGR > 2 times GDP

* Source HRI 2013

Our business model

We provide products and technologies to our customers and strategic partners (medical device and pharmaceutical companies) who utilize their expertise and well established distribution networks in a wide variety of market segments

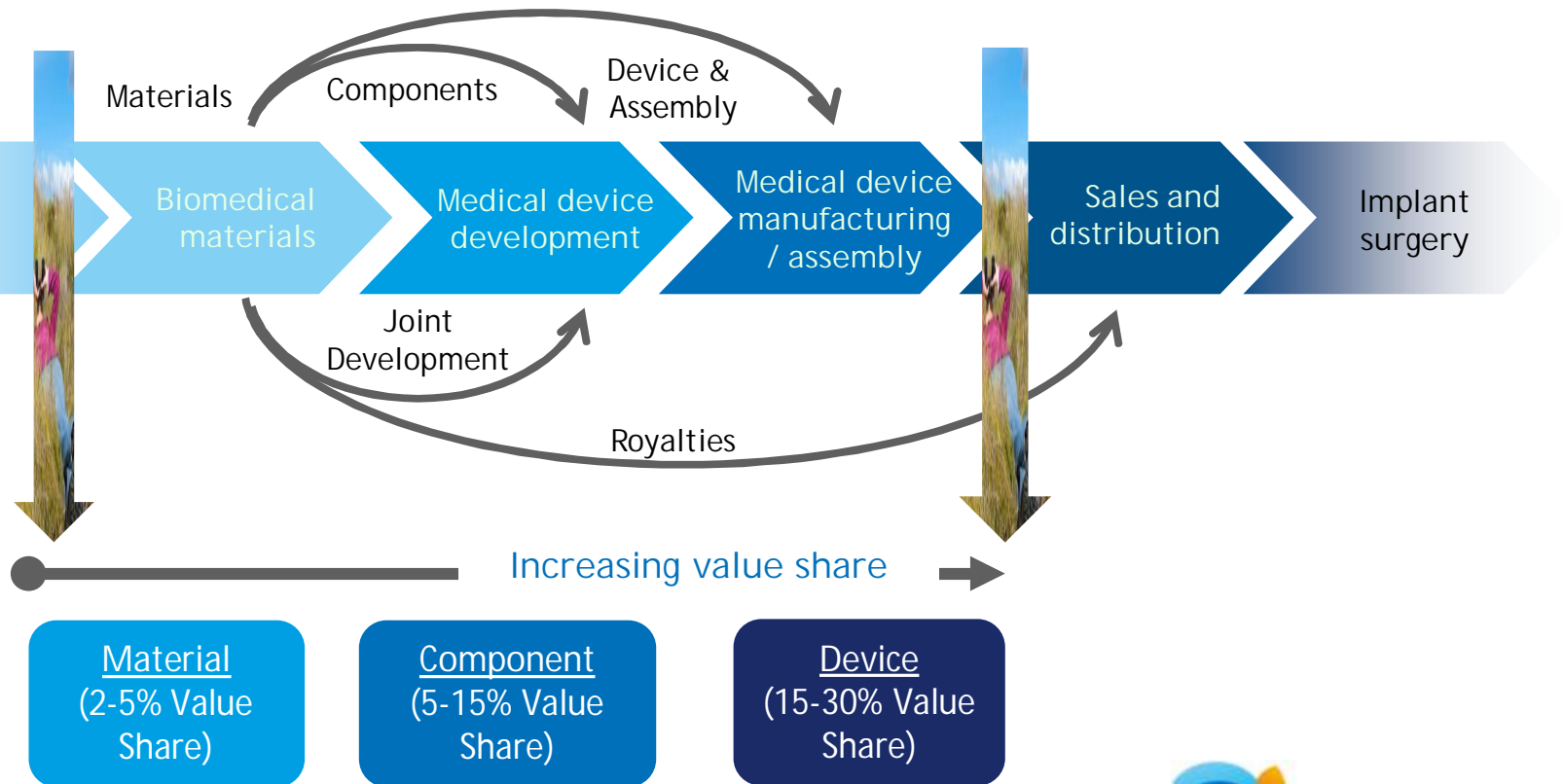


Our business growth initiatives are guided by four basic strategies:

1. Invest in our core technologies
2. Develop new proprietary biomedical material products
3. Establish new partnerships and customers
4. Manufacture biomedical materials and products for our customers

Value chain strategy

Strategy: Capitalize on material technology & capabilities to create/extract more value further down in the Value Chain without selling & distributing



The clinical segments we serve



Cardiovascular



Dental



Diabetes management



Diagnostic



General surgery



Neurologic



Ophthalmic



Orthopedic



Pain management



Plastic & Reconstructive surgery



Sports medicine



Urinary



Vascular



Women's health

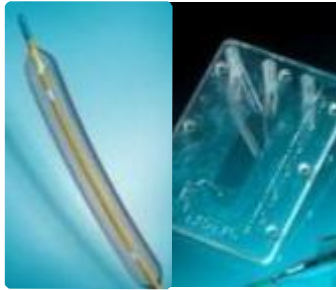
Broadest portfolio of biomedical materials

Biomedical Polyurethanes



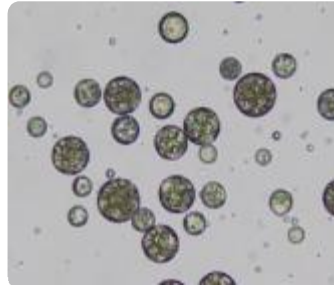
Coatings

Hydrophilic & Non-biofouling



Drug delivery

Slow, sustained release



ECMs

Extracellular Matrices



Mechanical Devices

Innovative devices and tooling



Natural Materials

Ceramics, Minerals & Collagen



Polymers & Metals

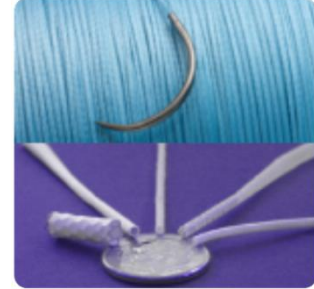
PLA, PEEK, Polyurethane & Metal Implants



Silicone hydrogels

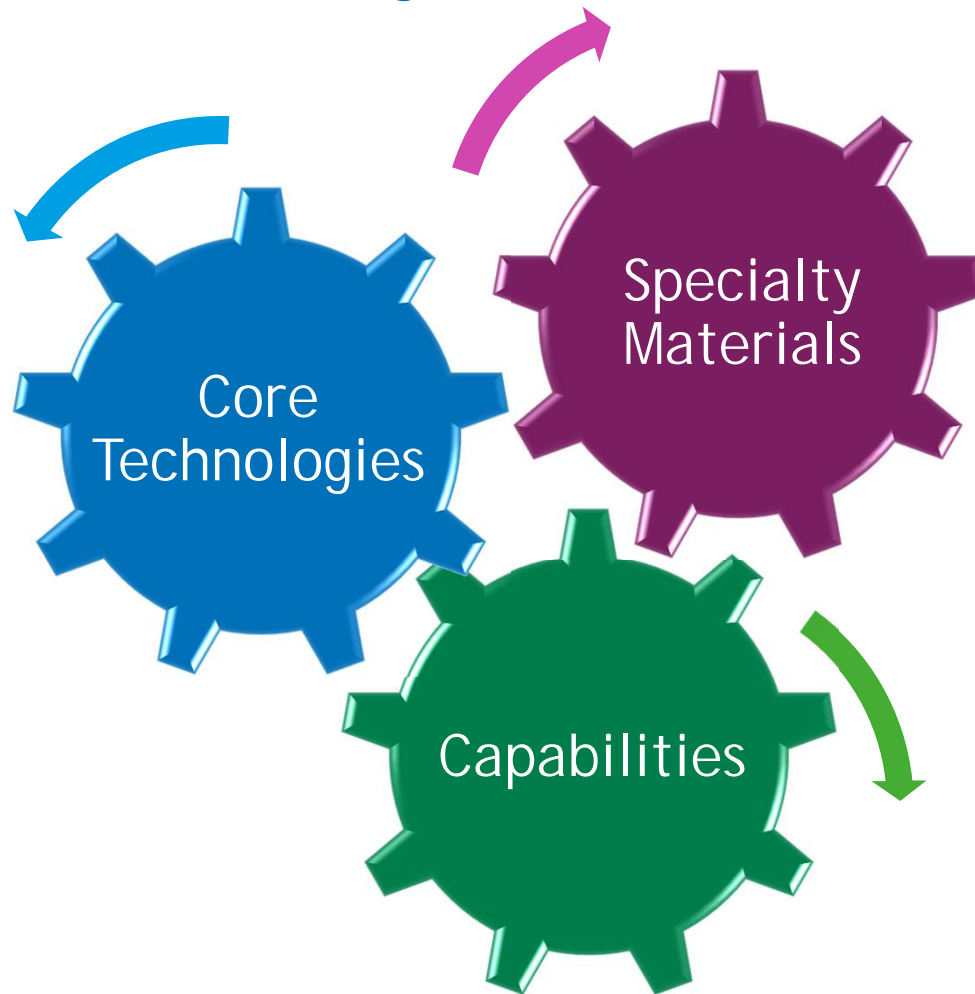


Biomedical Polyethylenes



Making medical products longer-lasting, more effective,
less invasive and more productive

Our technologies, materials and capabilities

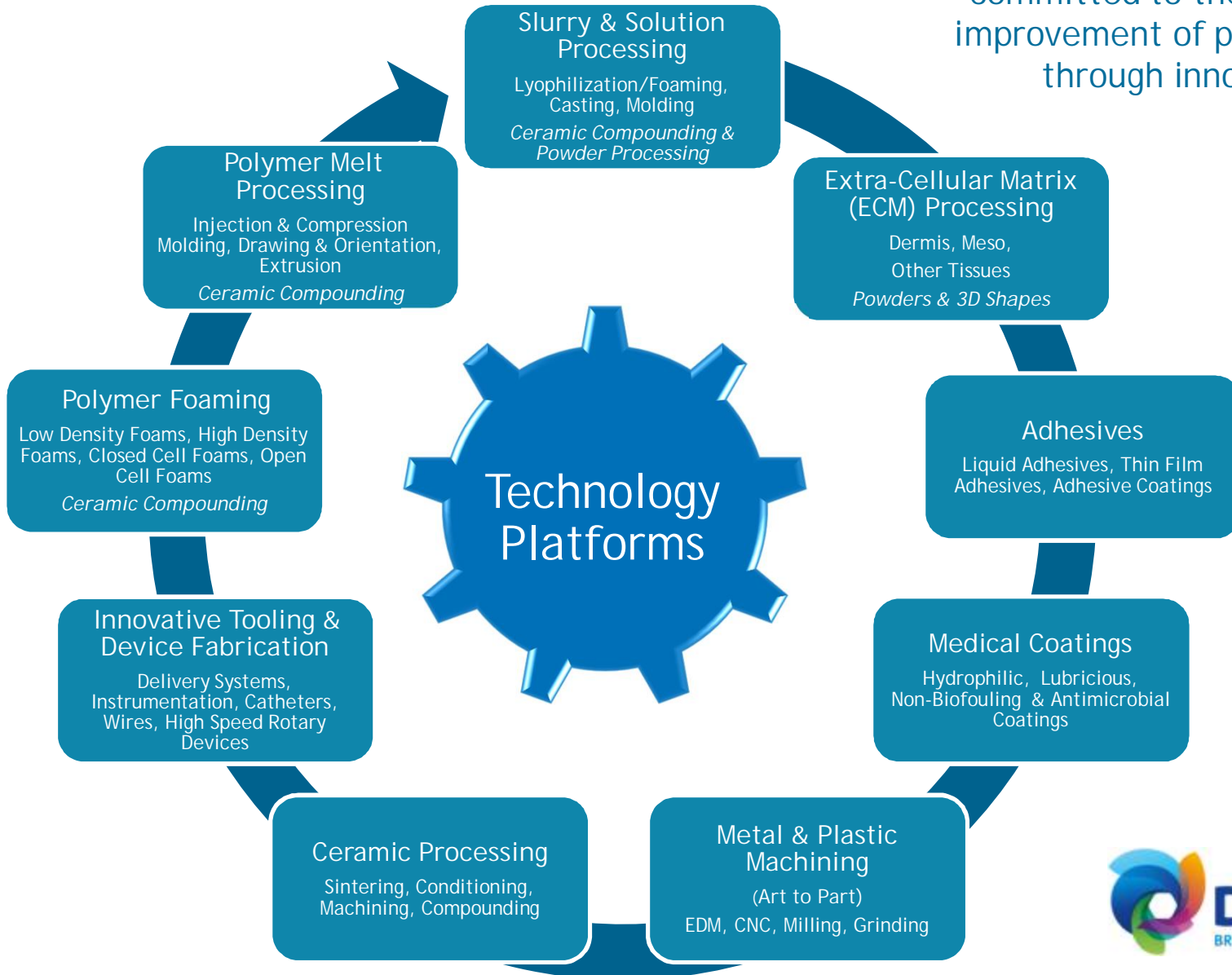


Committed to the long-term improvement of people's lives through innovation

Work together providing the most advanced and trusted solutions to the medical industry

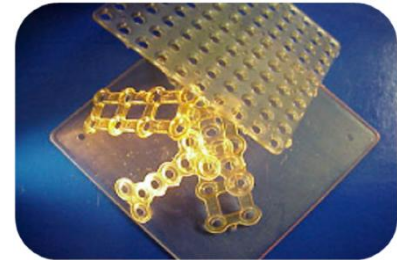
Core technologies

Part of a comprehensive established DSM organization committed to the long-term improvement of people's lives through innovation



Synthetic Resorbable Materials

- **Variety of Resorbable Materials**
 - PLA, PGA, Polycarbonates (e.g. TMC), ...
 - Polycaprolactones
- **Multiple Configurations**
 - Proprietary High Strength technology
 - Solid, Porous
- **Composites**
 - Ceramics Combinations
 - B-TCP
 - HA
 - Bioactive Glass



Applications for Synthetic Resorbable Materials

Markets

CMF

Trauma

Sports Medicine

Dental

Spine

Extremities

Cardiovascular

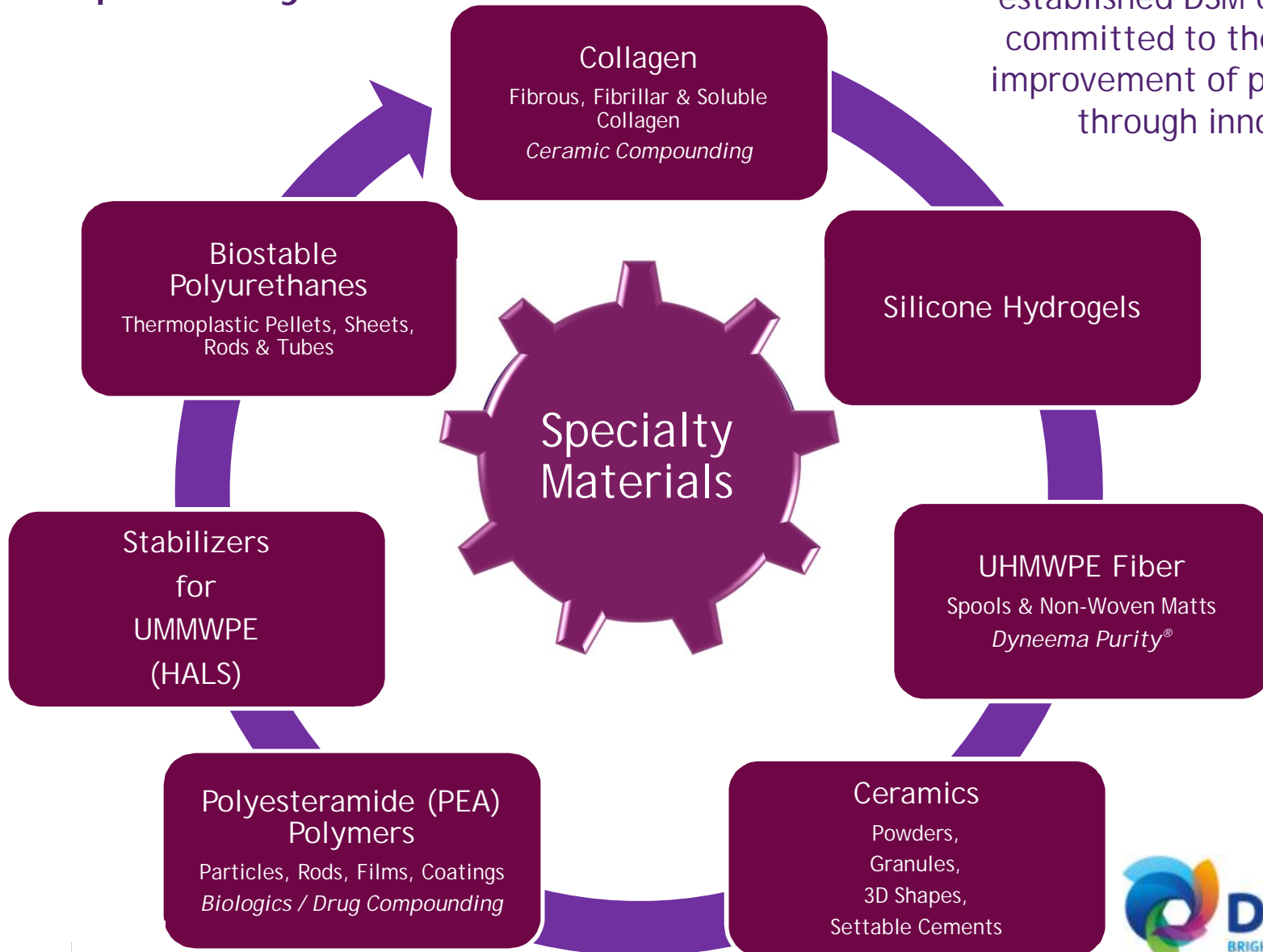
Applications

- Dental Membranes
- Trauma plates
- Micro Fixation devices: e.g. anchors, pins, screws etc.
- Spinal Fusion devices
- Stents and Shunts
- Meniscus repair device
- Joint applications
- CMF devices for reconstructive surgery
- Vascular Closure Devices

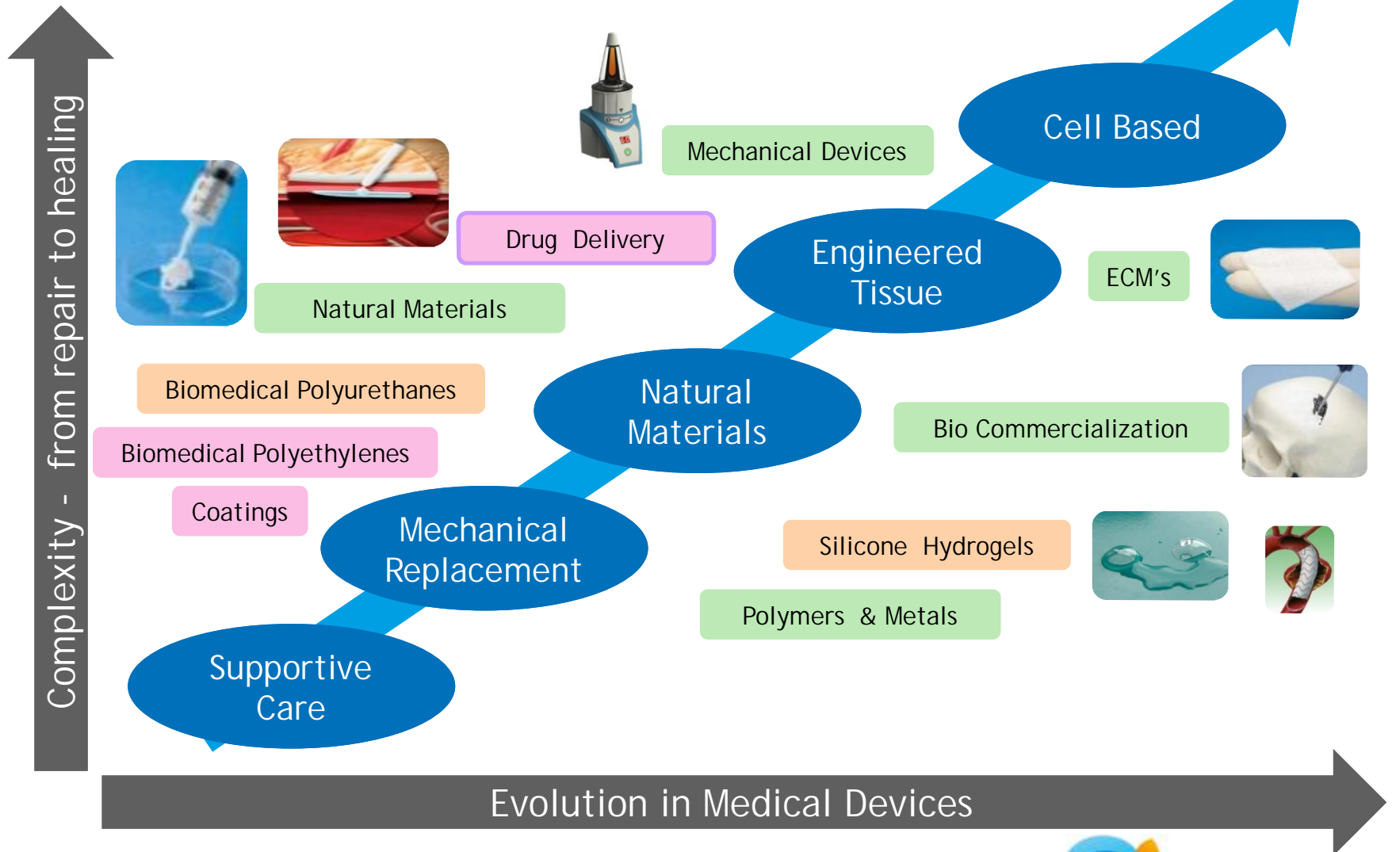


Specialty Materials

Part of a comprehensive established DSM organization committed to the long-term improvement of people's lives through innovation



Our Specialty Materials: from repair to healing



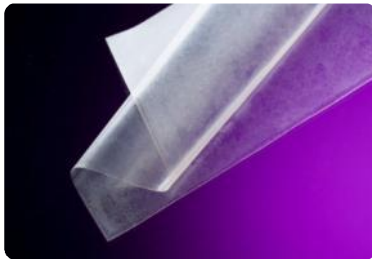
Biostable polyurethanes



Bionate® and
Bionate® II
Thermoplastic
Polycarbonate-
urethane



Elasthane™
Thermoplastic
Polyether-urethane



BioSpan®
Segmented
Polyurethane



PurSil®
Thermoplastic
Silicone-Polyether-
urethane



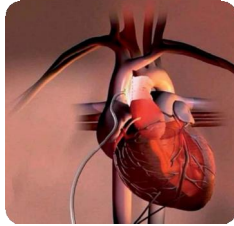
CarboSil®
Thermoplastic
Silicone-
Polycarbonate-
urethane

All polymer families have
extensive FDA Master Files

Applications for polyurethanes

Markets

Cardiovascular
Diabetes management
Diagnostic
Neurologic
Orthopedic
Vascular
Women's Health



Sunshine Heart
C-Pulse™ 2009



TCS HeartMate®
LVAD



AxioMed
Freedom® Lumbar Disc



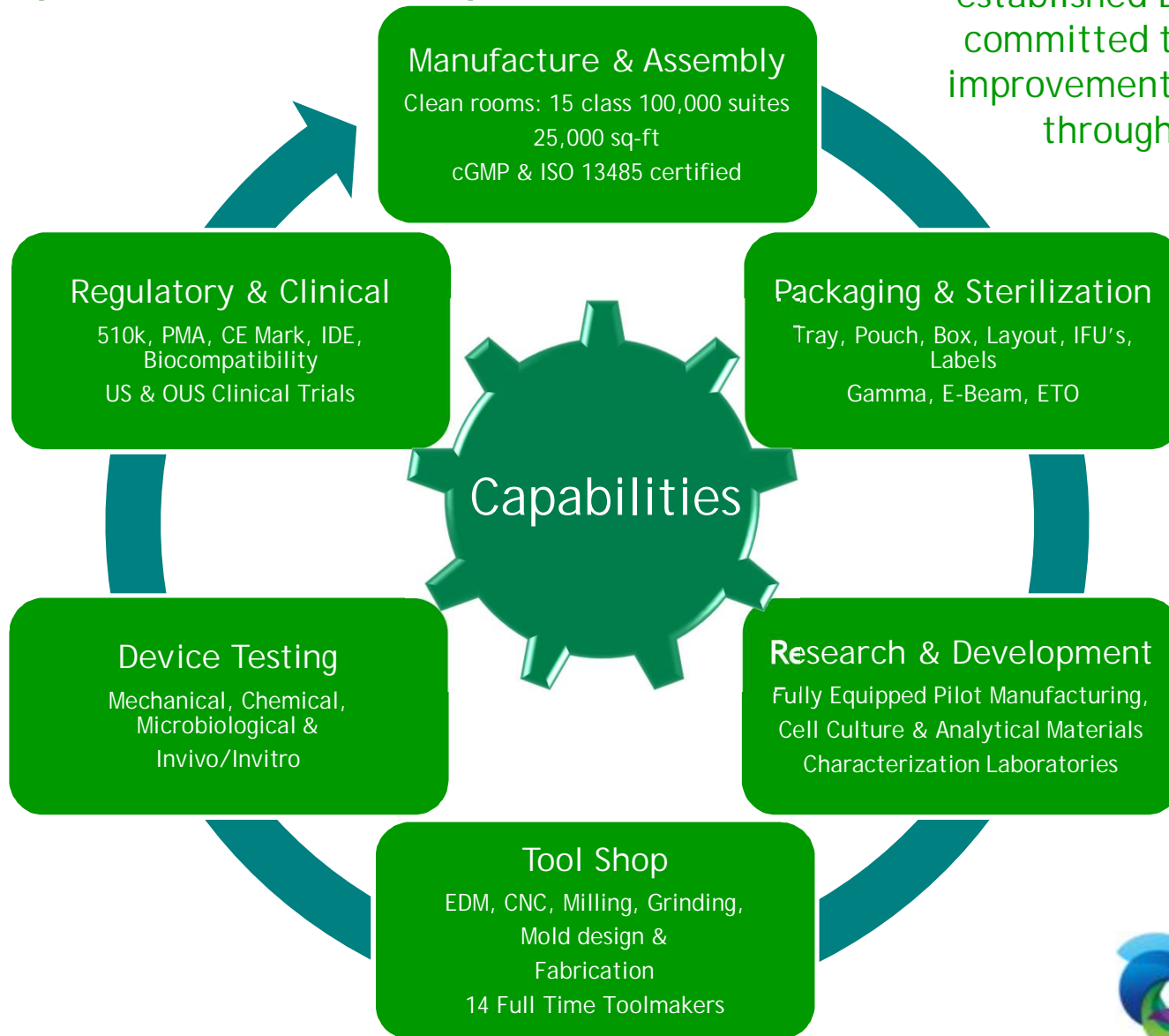
FH Industries
LP - ESP

Applications

- Articulating joint implants
- Artificial hearts
- Balloons
- Cardiac rhythm management
- Cardiovascular electrostimulation
- Continuous glucose monitoring
- Drug eluting stents
- Gynecological surgery (C-section, hysterectomy)
- Neurostimulation
- Orthopedic implants
- Pacemaker leads
- Reproductive health devices
- Spinal implants
- Total disc replacement devices
- Ventricular assist devices

Capabilities & expertise

Part of a comprehensive established DSM organization committed to the long-term improvement of people's lives through innovation



Regulatory filing and support

- Regulatory strategy consultation
 - Experienced clinical and regulatory affairs staff
- US and international regulatory filing
 - Proven track record of obtaining US and foreign regulatory approvals
- Clinical evaluation reports per ISO 14155
- Clinical investigation plan development and trial management
 - Large and small-scale clinical trials with leading medical institutions throughout the world

Who are we *Trusted* by?



DSM cell therapy development services

- Design, develop, and manufacture systems to isolate and concentrate autologous cells at the point of care
- Manage the regulatory filings and/or approvals (e.g. PMA, IDE, 510K)
- Partner with leaders in industry



"This products give us more non-operative tools to personalize the approach for the individual patient based on their level of activity, degree of injury and treatment preference," Peter Vitanzo, MD, Sports Medicine Specialist at the Rothman Institute in Philadelphia

	DSM	Competition	Benefit for physician
Performance	Consistent high platelet recovery and concentration	Variable results in PRP concentration	Doctor can trust and rely on results
Processing time	2.5 minutes	15 - 30 minutes	Patient scheduling flexibility and increased throughput
Size	Small and portable @ only 4 lbs.	24 - 68 lbs.	Easy to store in surgical specialty rooms and transport through any site of care
Procedure	3-step automated process	Multiple steps; cumbersome process	Easy to learn and use

DSM offers a repeatable model to be used in other cell therapies

DSM as Business Partner

Strong Reputation

- Large player with 100+ years of history, committed to further grow its position in the medical material field
- Supplier of materials & technologies, partnering with most large medical device companies today
- Science-based company with highest quality standards and OEM capability for medical device companies

One Stop Shop

- Broad portfolio of biocompatible materials with strong track record and FDA master files in place
- Wide range of capabilities ranging from design to manufacturing and from testing to packaging

Global Reach

- Worldwide, millions of patients have material from DSM in their body in all kind of medical devices
- DSM has teams to support you in US, EU and Asia

“DSM is helping medical device manufacturers provide better, safer and cost effective products to improve patient care”





BRIGHT SCIENCE. BRIGHTER LIVING.™