



Research

Healthier consumer trends – opportunity or risk?

Since 2015	Head of Global Product & Technology Development, SVP
2011 - 2015	Global Head of R&D, SVP
2010 - 2011	R&D Manager Beverage SBU
2007 - 2010	VP Operations, Cereal Partners Worldwide S.A.
2005 - 2007	Technical and R&D Manager Confectionery SBU, VP
2003 - 2005	Technical Manager Netherlands and Nordic Region
2001 - 2003	Product Technology Centre Head Orbe, Switzerland
1996 - 2001	Product Technology Centre Head Lisieux, France
1994 - 1996	Group manager R&D Singapore / China
1991 - 1994	Project manager Product Technology Centre Orbe, Switzerland

Dr Johannes J. Baensch

Head of Global Product & Technology
Development

Berenberg's European Conference
London, December 2015

Key messages



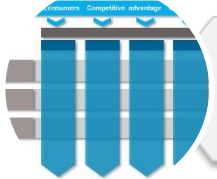
We understand consumer needs and preference – today and in the future



We have strong science & technology behind our products and brands



We balance taste and nutrition



We develop appropriate structures

Outline

1

Changing environment

2

Why processed food

3

Consumer trends

4

Our R&D setup

5

Consumer centricity

6

Technology lead

7

Examples

8

Conclusions



Research

A changing environment creates new challenges and opportunities

Food vs. nutrition

From under nutrition to obesity



Population growth

From 7.1 to 9.6 billion in 2050 70% in urban areas



Sustainably
feeding the
world population

Globalization

will further expose the food system to economic and political pressures



Production & climate change

Scarcity of land, water and energy



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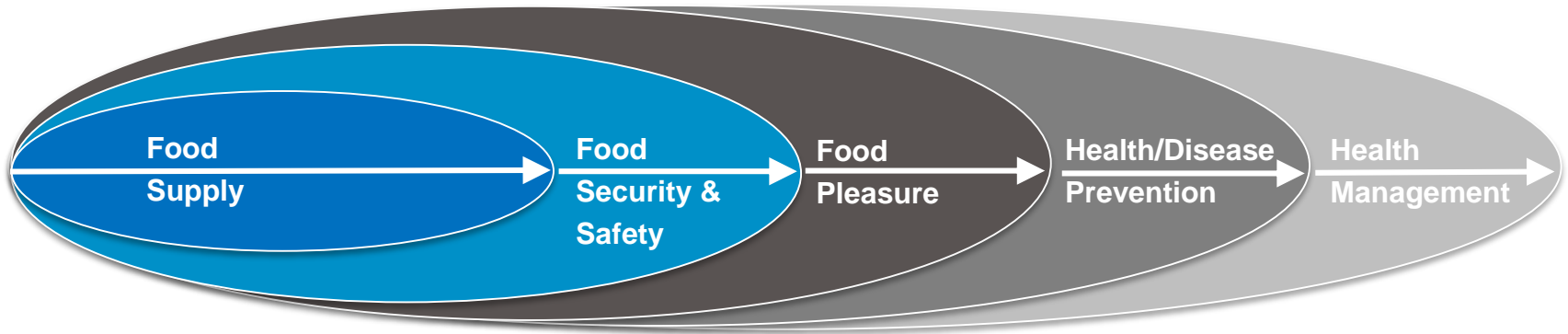
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Conclusions

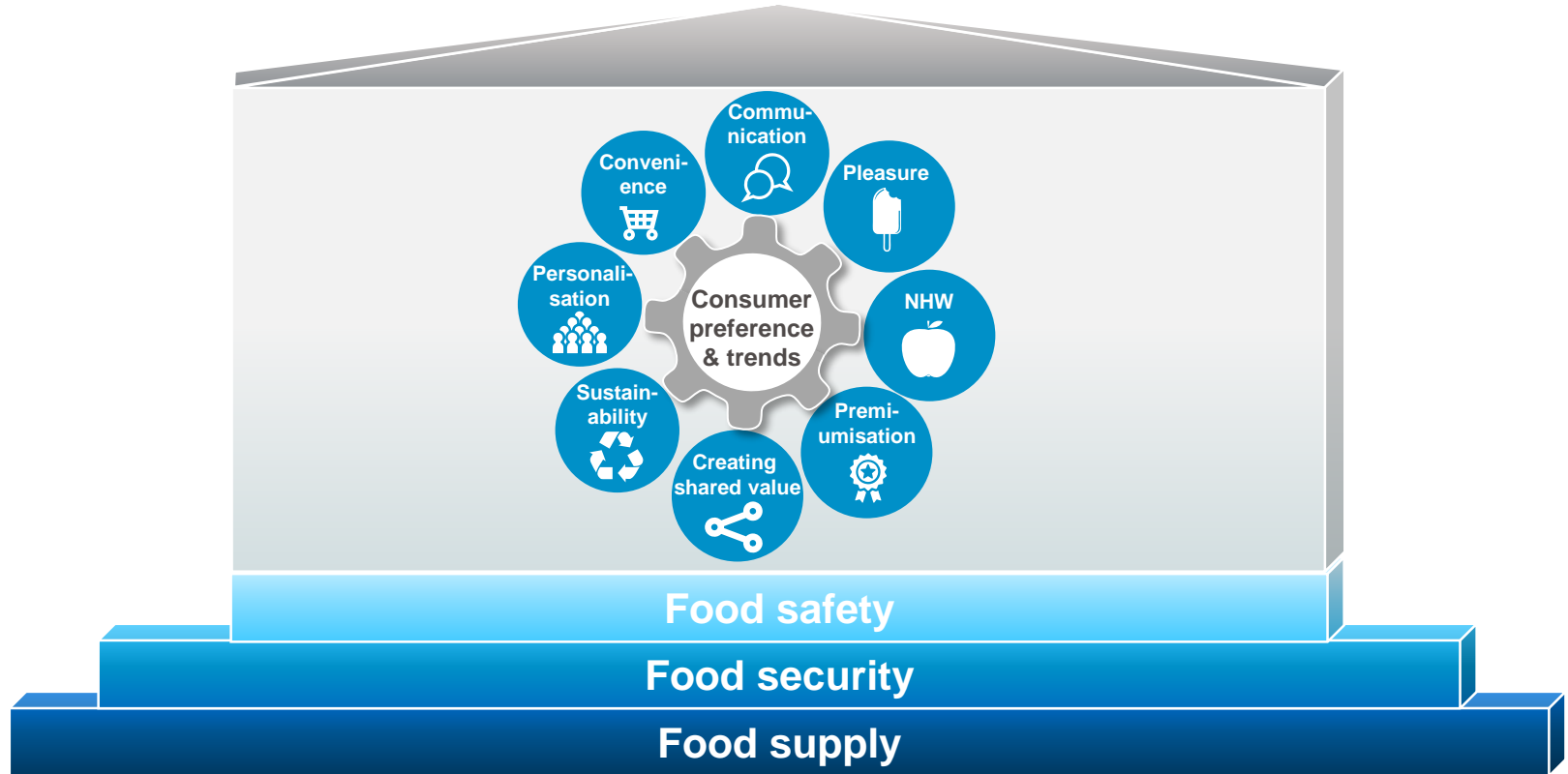


Research

Innovation supports our Food Safety, Nutrition and Health Roadmap



Processed food adds value



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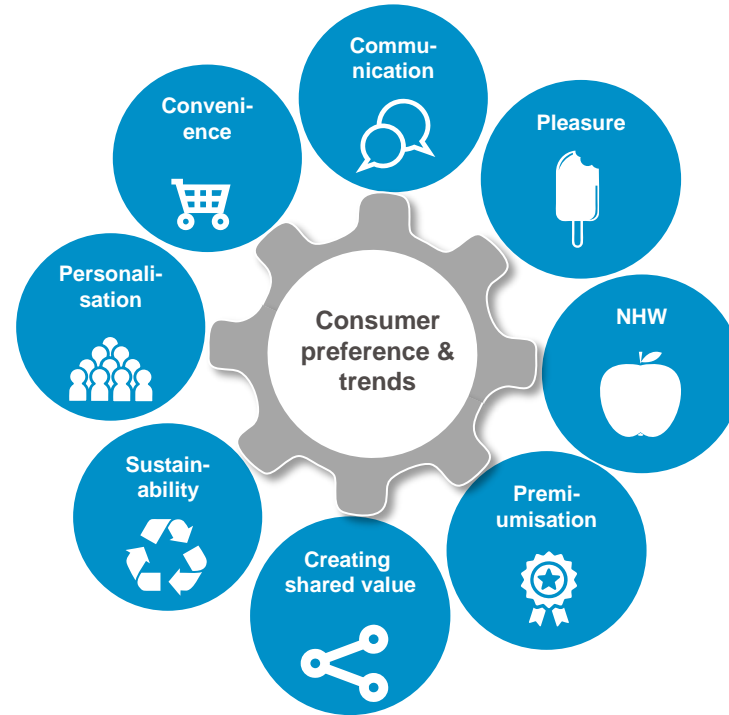
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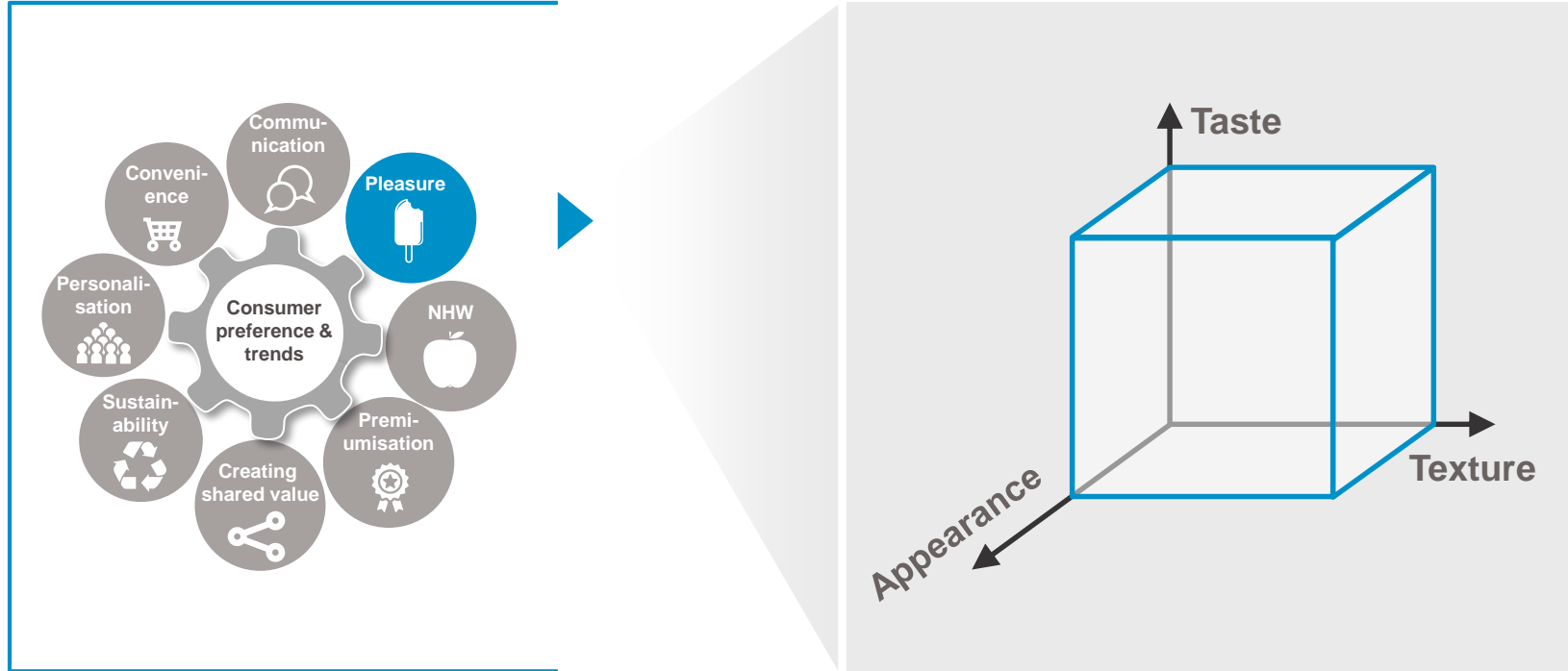


Research

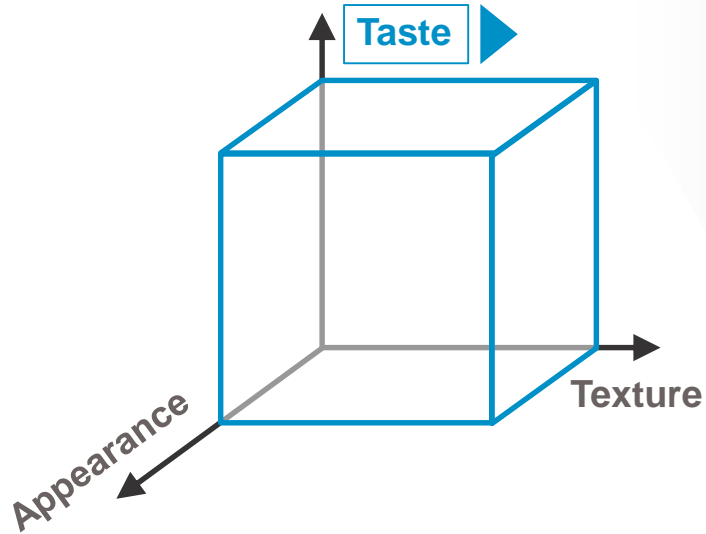
We leverage consumer preference & trends



And quantify the dimensions of food pleasure



... to translate what drives consumer preference



Sweet



Sour



Bitter



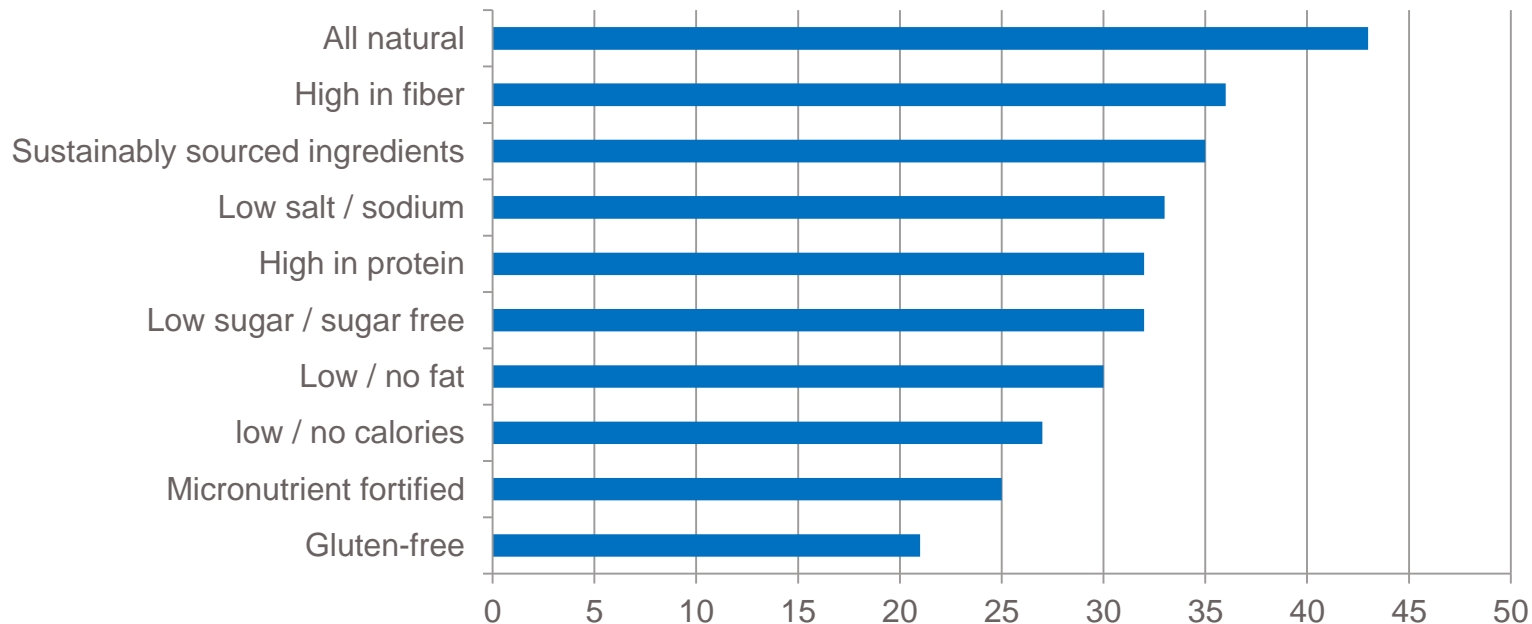
Salty



Umami



We address selected food attributes, which are relevant for our consumer



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We have unmatched R&D capability to innovate



Discover

- Nestlé Institute of Health Sciences
- Nestlé Research Center
 - Nestlé Clinical Development Unit



Develop

- R&D Centres
- PTCs



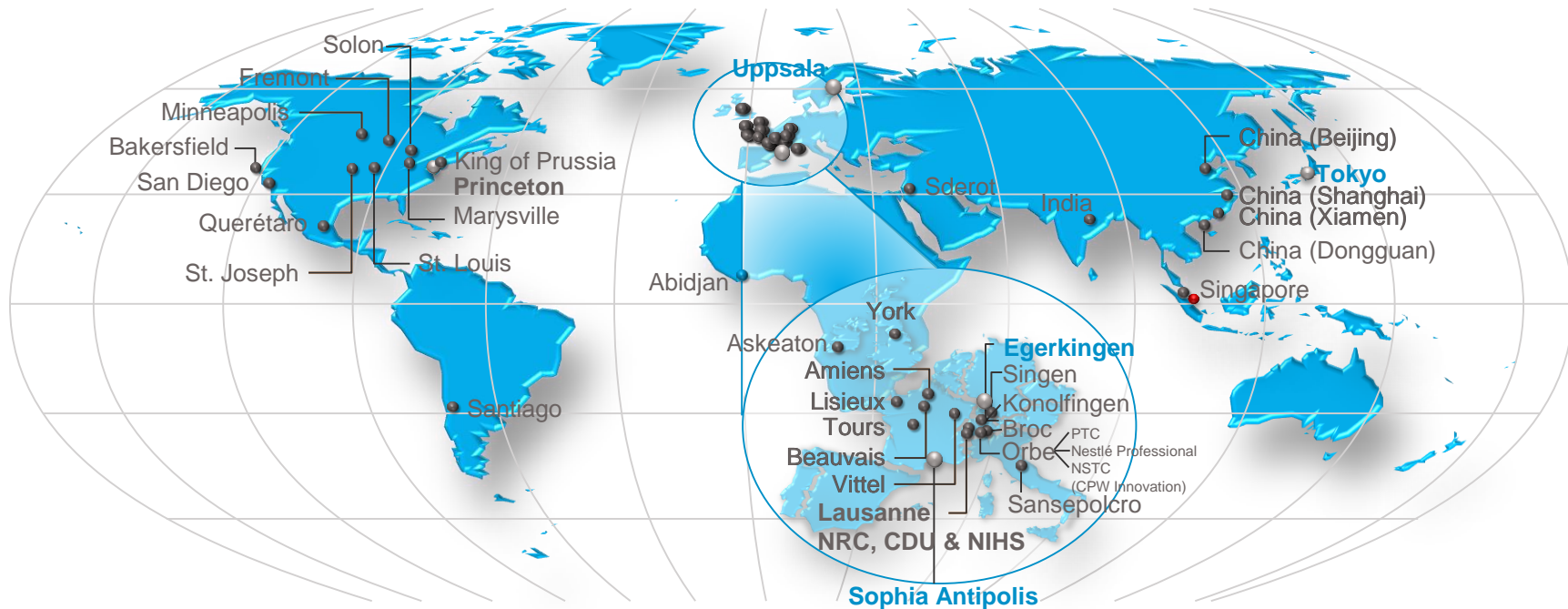
Deploy

- > 300 AGs
- In over 80 countries



Research

Our R&D network has a global reach



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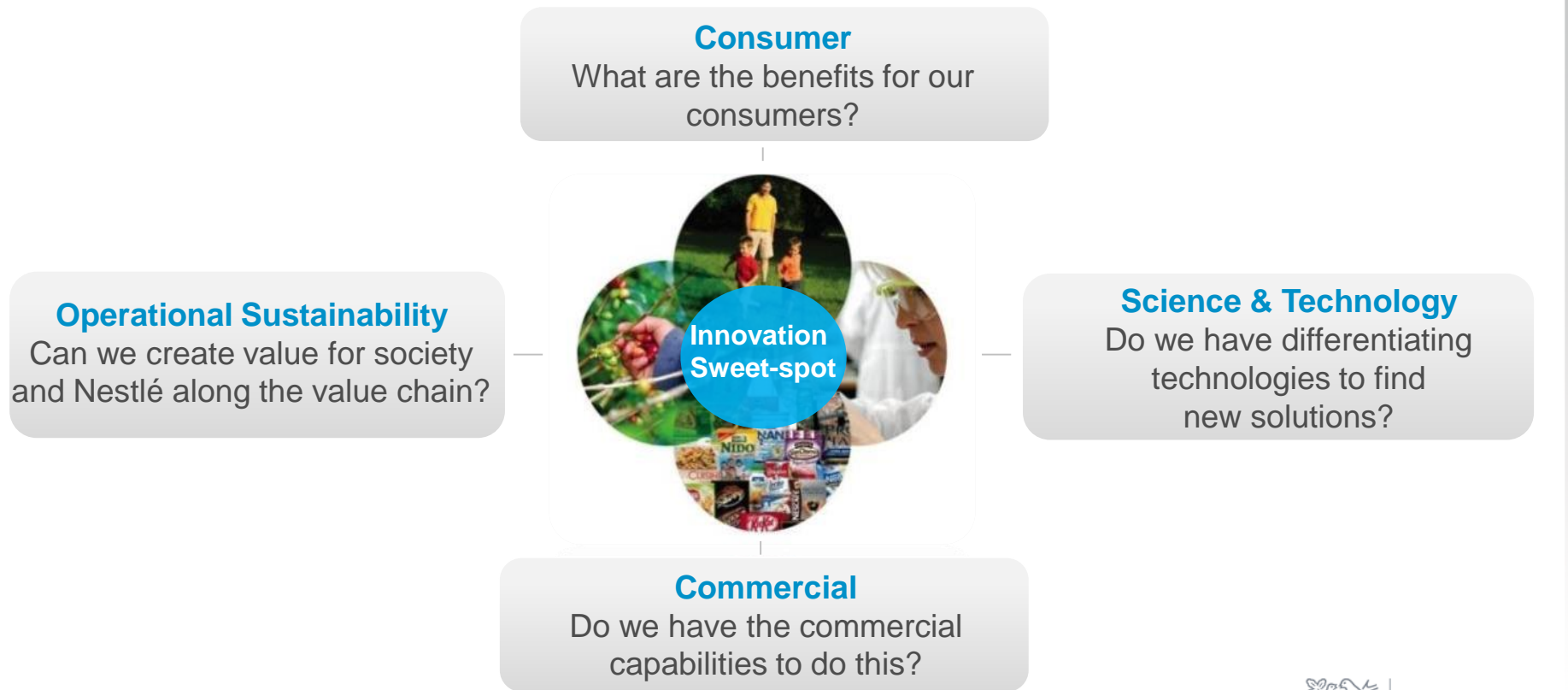
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Research

The consumer at the center of our thinking and activity



Therefore we address the whole value chain



Sourcing
Ingredients

Manu-
facturing

Packaging

Distribution

Marketing
Sales

Consumer
Experience
or Service

... new or more efficient solutions

... new consumer offers or benefits



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We apply consumer feedback in LEAN product design

Structured consumer data analysis

Understand consumer value drivers

Identify value adding ingredients & processes

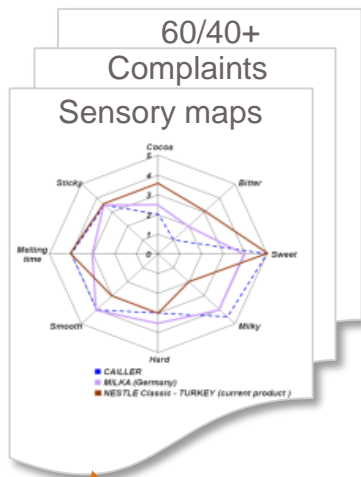
LEAN product design

Ingredients

Reformulation

Process technology

Visual design



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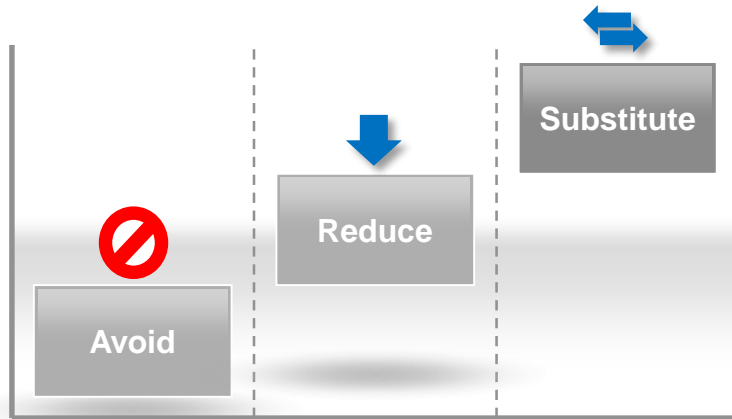
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Conclusions



Research

We provide balanced nutrition and...



- Consumer understanding
- Perception physiology
- Air
- Water
- Carbohydrates
- Biotransformation
- Sweeteners & taste enhancers

We reduce sugar & fat to drive consumer preference in Ready to drink

Science & Technology

Consumer centric reformulation without compromise on taste and texture:

- 54% total sugar reduction
- 45% total fat reduction
- 25% more protein



Outcome

Health Care Professionals understand better nutritional composition compared to the competitor product (1400/94%)

New Nesquik with great taste that kids love and mums approve – a perfect milk modifier

Sugar reduction compliant
with WHO recommendations



> 1'000 tons of sugar
reduced worldwide



Micro fortification to support
Kids' growth & development



Fortification

Potassium 15%

Vit D 30%

Iron 15%

Vit C 15%

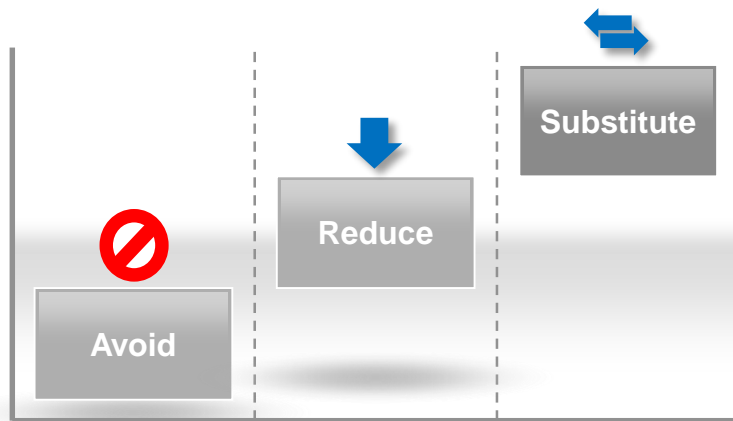
Zinc 15%

Vit B1 15-30%



Research

We provide balanced nutrition and...



- Consumer understanding
- Perception physiology
- Air
- Water
- Carbohydrates
- Proteins
- Bulking agents
- Food structuring

We substitute partially hydrogenated oil with high oleic soybean oil

Science & Technology

Partnership with *DuPont Pioneer* to grow new soy oil crop at large scale for the first time



Liquid Coffee-mate

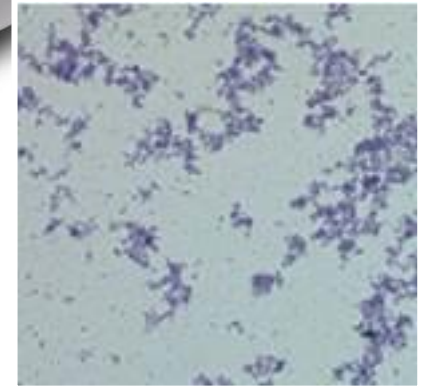


Outcome

By end of 2015 (US):

- 45% SFA reduced
- 25'800 tons of oil substituted
- 9'900 tons of trans fat removed

Protein aggregation can lead to a viscosity increase



A great example – Mövenpick of Switzerland (2015)

Vanilla & Brownies

Vanilla & Brownies new product

Mix recipe

Milk fat

Dairy proteins

Stabilizer



New mix recipe

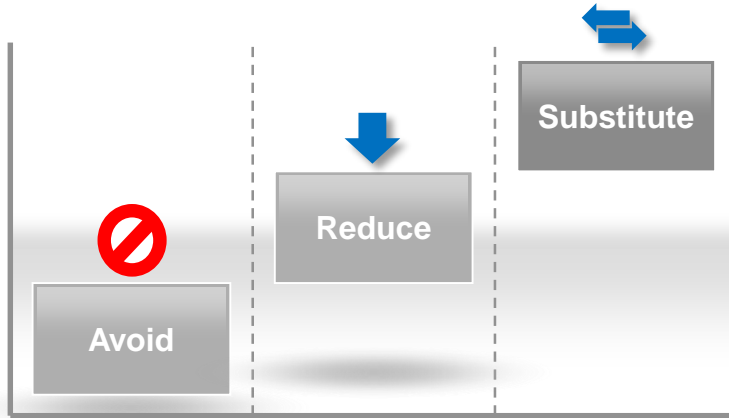
-28 % fat

Increased protein content

NO Starch

New technology wins 60/40 vs. full fat Ice Cream

We provide balanced nutrition and...



- Consumer understanding
- Perception physiology
- Minerals
- Biotransformation
- Culinary art & taste compensation
- Material science

We deliver great taste, while reducing sodium and SFA in Instant Noodles

15% SODIUM reduction
whilst improving taste



50% SFA reduction through
pre-drying & oil blend
optimization

Exported in 17 countries
under 4 brands



We drive micronutrient fortification to counteract malnutrition

More than 167 billion servings in 2013

200 billion servings fortified by 2016



Nestlé is engaging in biofortification of maize, cassava, wheat etc.

Planting & consumption by smallholder farmers will improve the nutrient supply

We incorporate whole grain technology in RTD

Science & Technology

Enzymatic hydrolysis of cereals to generate and stabilize fibers in liquid application



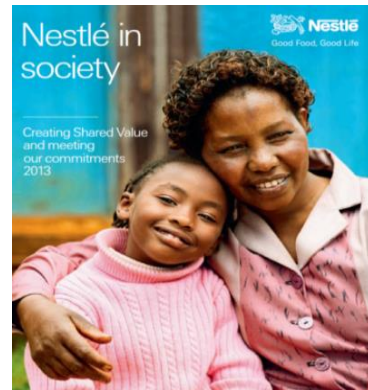
Outcome

- 8 g whole grain/serving
- Fibers, vitamins, mineral preserved
- Sugar reduction



In a retrospective we have achieved a lot

	2012	2013	2014
# renovated products for nutrition or health considerations	6692	7789	10818
# products with reduced sodium, sugars, trans-fat, total fat, calories or artificial colorings	3317	4221	6973
# products with increase in nutritious ingredients or essential nutrients	4691	4778	6359



Out of home solutions deliver multiple choice through consumer interaction

Input

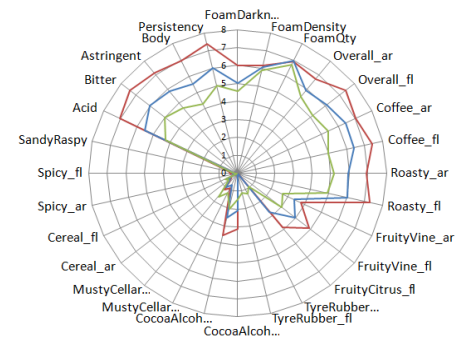
- Machine settings
- Coffee type
- Milk components
- Sugar

MILANO 2

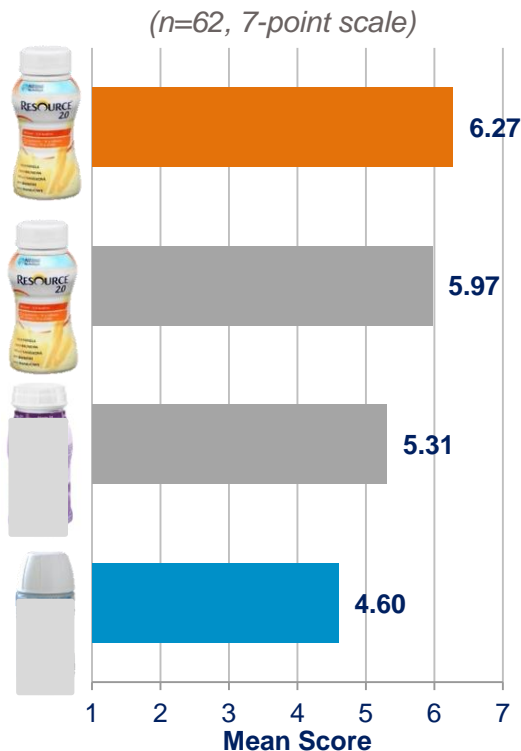


Understanding the process influence on sensory characteristics

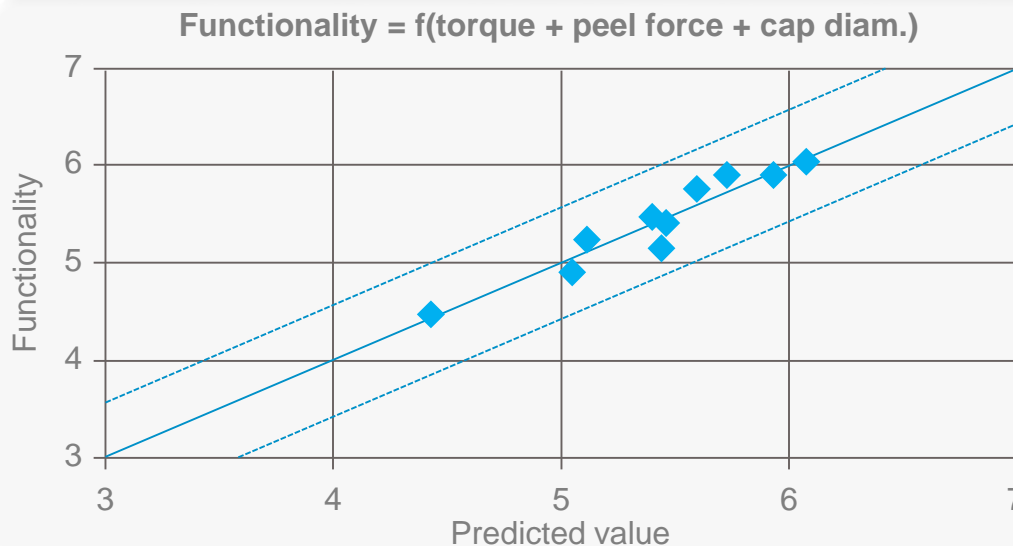
Outcome



We focus on packaging to drive consumer preference

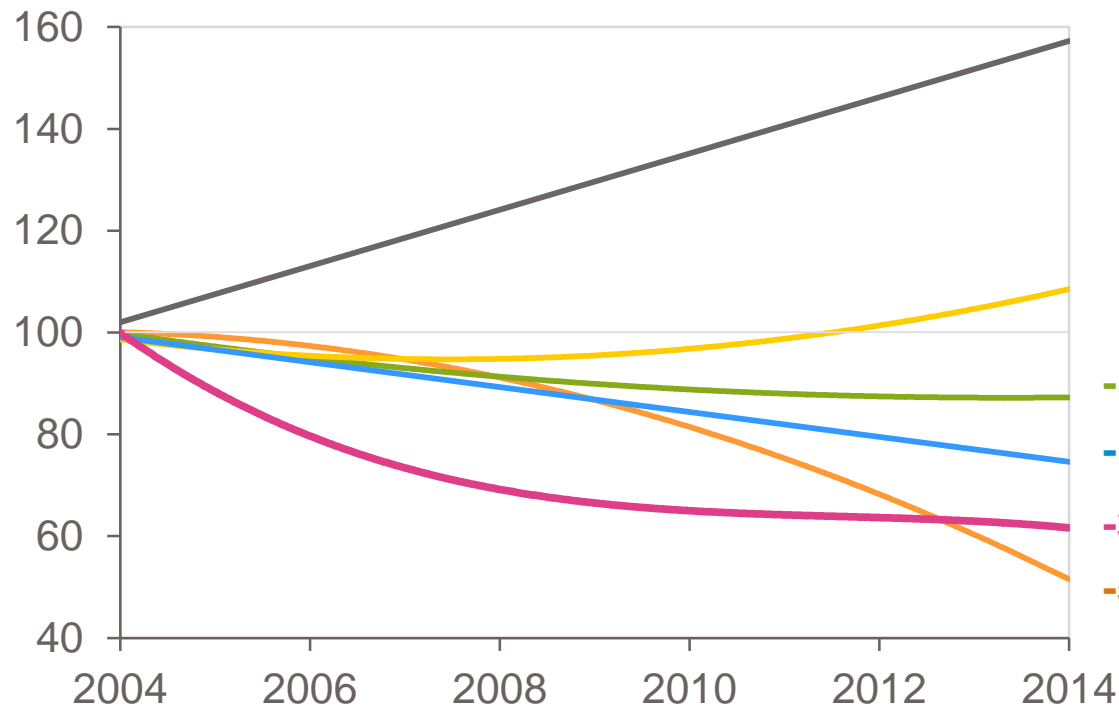


Preference = Handle Open Read



We deploy our innovations and ensure sustainability

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61% Production volume

6% Total on-site energy consumption

-14% Direct GHG emissions

-16% Total water withdrawal

-38% Total water discharge

-51% Total waste for disposal



Research

Consumer centric product I&R is paying off (US)



- NHW benefits, e.g. gluten free, high in protein, organic
- Ethnic dishes



- Rich in proteins, complex carbohydrates and vegetables
- Modern ethnic flavours



- Fresh and real, not dehydrated vegetables giving authentic, clean taste



- Clean label