



Sodium Reduction: A Food Industry Perspective

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2 November 2017



Introduction to Unilever

OUR COMMITMENTS TO
SODIUM REDUCTION

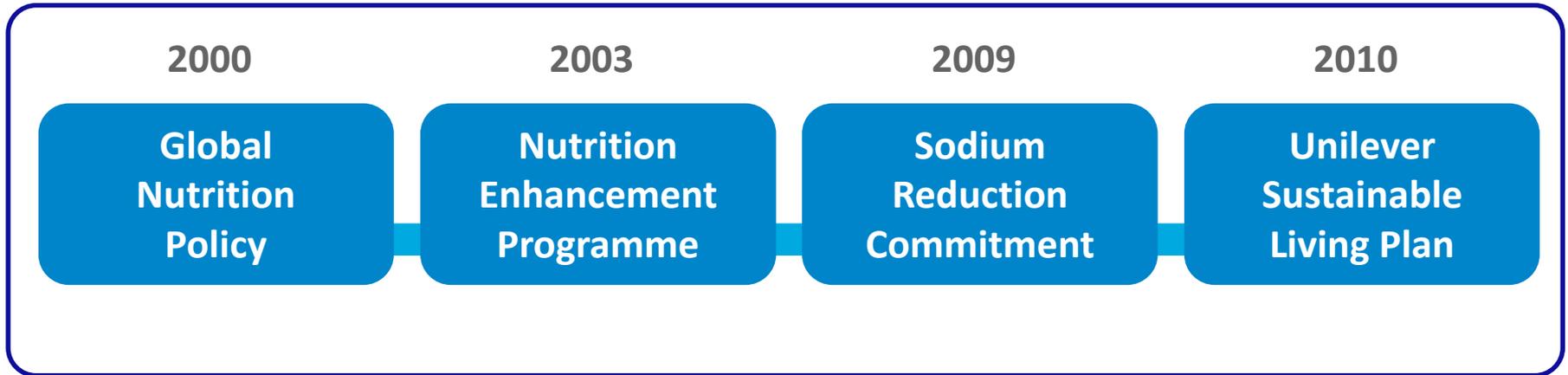


Unilever Sustainable Living Plan

– 3 big goals by 2020



Strong record for better products



Our commitment

By 2020, we will double the proportion of our Foods and Refreshment portfolio meeting **Highest Nutrition Standards**

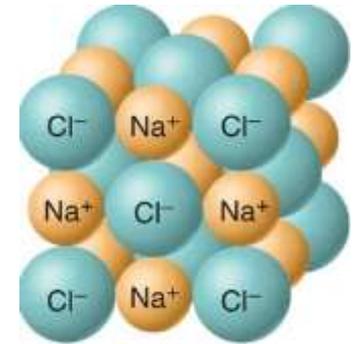
and

By 2020, 75% of Foods will meet benchmarks for 5g salt/day

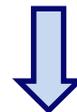
2016: 61% of Foods portfolio meets salt criteria

Why focus on salt?

- NaCl = **sodium chloride** (= regular table salt)



Sodium plays an important role:	
In the food	In the body
<ul style="list-style-type: none">• Taste (enhancement)• Preservation• Texture	<ul style="list-style-type: none">• Regulating fluid balance in the body• Muscle contractions• Conduction of nervous impulses• Regulating blood pressure



For all this we need $<1\text{g}$ salt per day

Dietary sources?

- Western countries:
~75% most salt intake comes from processed food

bread and cereals >25%
meat (products) ~20%
cheese ~10%
soups ~10%

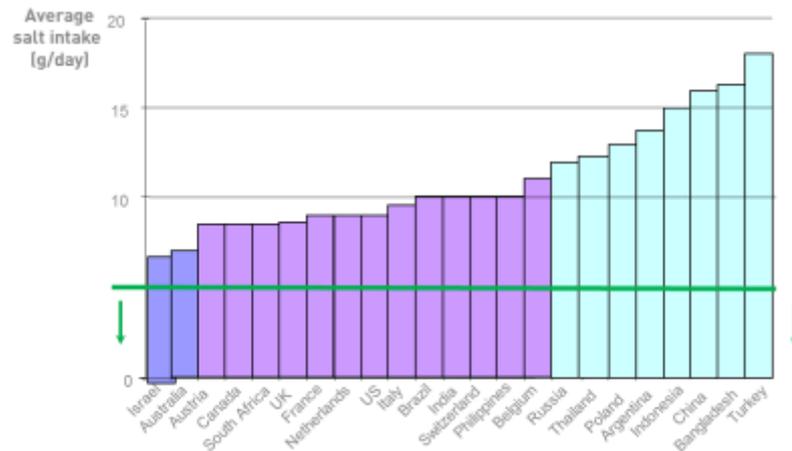


- Asia: most comes from added salt/salty additions



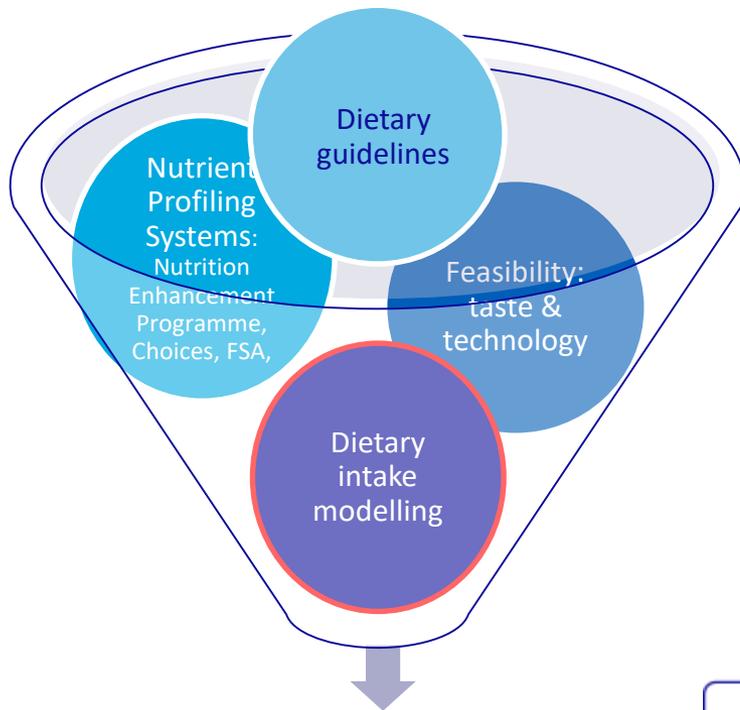
The need to reduce sodium

- The World Health Organization (WHO) recommends a reduction in salt intake to <5 g salt (=2000 mg sodium) per day to reduce blood pressure and risk of cardiovascular disease, stroke and coronary heart disease
- Worldwide salt intakes exceed the recommended intake of 5 g per day



- In Unilever we are reducing the amount of salt in our products right across our portfolio, in an effort to help consumers meet the daily salt intake recommendation of 5g.
- This is challenging, but should be possible if food industry works together and take consumers on the journey

Sodium standards defined per product group & explained in peer-reviewed publication



Global product group-specific sodium standards

Original Article

European Journal of Clinical Nutrition (2015) **69**, 799–804; doi:10.1038/ejcn.2015.5; published online 18 February 2015

Food and health

Reducing salt in food; setting product-specific criteria aiming at a salt intake of 5g per day

OPEN

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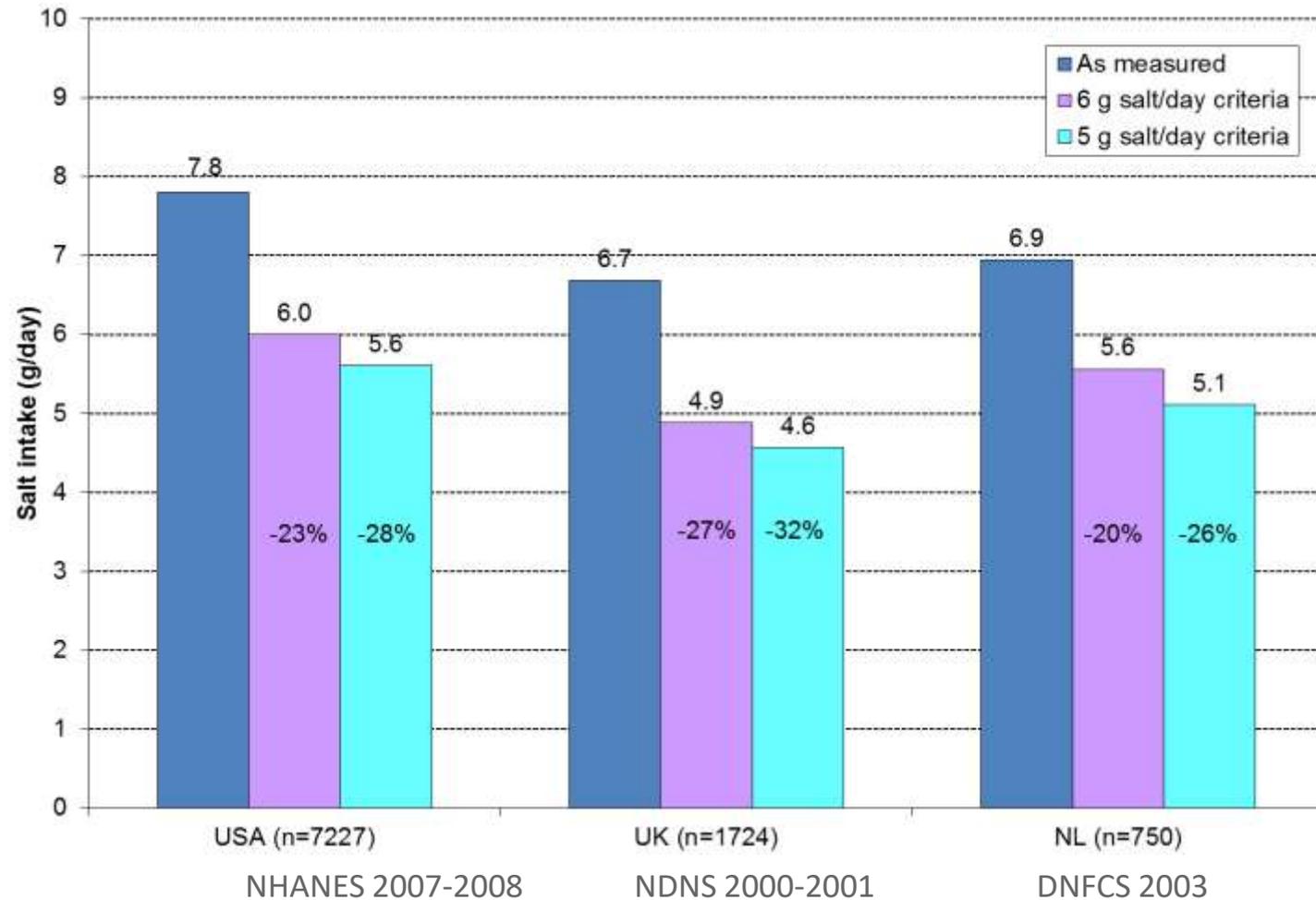
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<http://www.nature.com/ejcn/journal/vaop/ncurrent/full/ejcn20155a.html>

	SIX GRAM SALT/DAY (2400mg sodium/day)	FIVE GRAM SALT/DAY (2000mg sodium/day)
Sodium content [mg/kcal], OR insignificant level [mg/100g]	≤ 1.6 ≤ 100	≤ 1.3 ≤ 100
Product category-specific (sodium levels as prepared):		
• Bread and breakfast cereals [mg/100g]	≤ 375	≤ 375
• Processed meat, -products, and -substitutes [mg/100g]	≤ 675	≤ 675
• Processed fish and -products [mg/100g]	≤ 340	≤ 340
• Cheese and -analogues [mg/100g]	≤ 900	≤ 675
• Spreads and cooking products [mg/100g] or [mg/kcal]	≤ 720 OR ≤ 1.6	≤ 470 OR ≤ 1.3
• Main dish [mg/kcal]	≤ 2.2	≤ 1.6
• Filled sandwiches/rolls [mg/kcal]	≤ 1.6	≤ 1.4
• Soups [mg/100g]	≤ 360	≤ 265
• Meal sauces [mg/100g]	≤ 540	≤ 340
• Dressings and table sauces [mg/100g]	≤ 1080	≤ 750
• Snacks [mg/100g] or [mg/kcal]	≤ 1.6	≤ 300
• Side dishes [mg/100g]	≤ 250	≤ 250
• Seasonings [mg/100g]	≤ 360	≤ 265

Modelling the impact of reformulation towards standards on population salt intake



Examples of salt reduction in the Netherlands

2014-2015



2013-2014



2010-2012



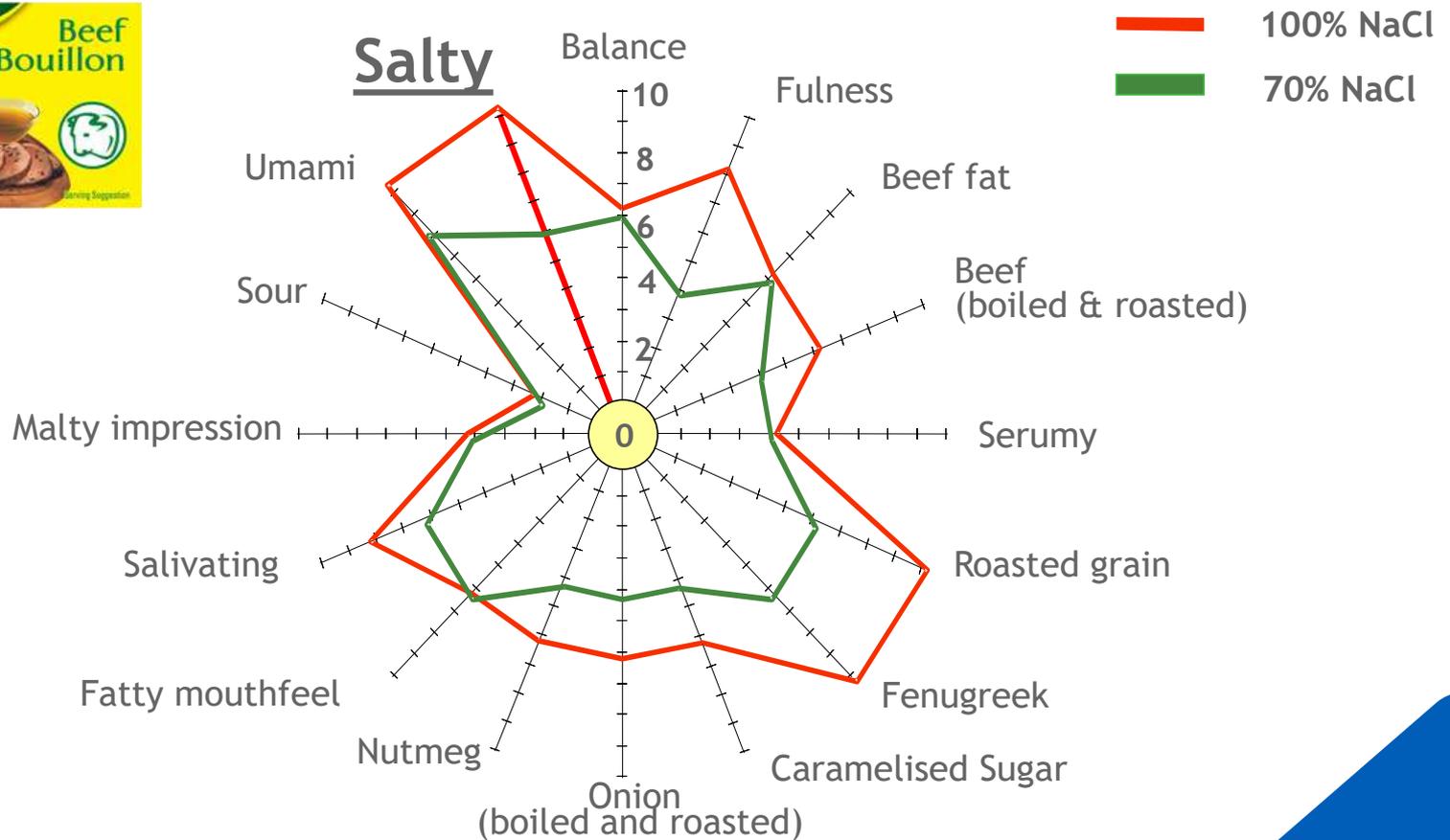
Challenges in salt reduction

technological aspects
consumer aspects



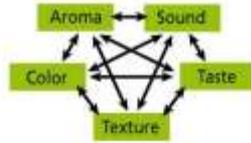
Salt is important for many sensory aspects

Beef bouillon



A range of approaches needed for salt reduction

- Available technology has allowed us to reduce salt (sodium) levels in our products by 20-30%:
 - without impairing consumer's enjoyment of the product
- We are investing in new technologies that will allow us to go further.
- However, salt reduction impacts costs:
 - gradual reduction is cheapest
 - reduction of 20-30% will increase costs of raw material by 5-30%.
 - the cost of reformulation.

Approach	
	Step-wise reduction
	Salt substitutes KCl, other salt substitutes
	Salt boosters
	Multisensory principles aroma, herbs, spices
	Distribution of salt

Consumer awareness of salt



Global consumer study:
n=6987 adults, 8 countries, web-based questionnaire
Newson et al, Appetite 2013;7:22-31

- Average intake across all countries was 9.5 g salt per day
- Globally 34% were not interested in changing their salt intake
- Respondents saw reducing salt intake as healthy and important, BUT they underestimated their own intake

- Recent study in NL (n=2013 adults, web-based questionnaire):
 - 83% considered their salt intake as satisfactory
 - 34% added salt at the table; 26% were using low-salt alternatives

Communication and Labels influence liking & choice



Chocolate cake



Belgian 'Black Forest' double chocolate cake

Claims that are too explicit may not be motivating



Same soup, same salt content, but with a different label

Soups with the label *'Now reduced in salt'* were

- Expected to be less liked
- Perceived as least salty
- Less liked after tasting

And claims may have an undesired impact on behavior...



No claim



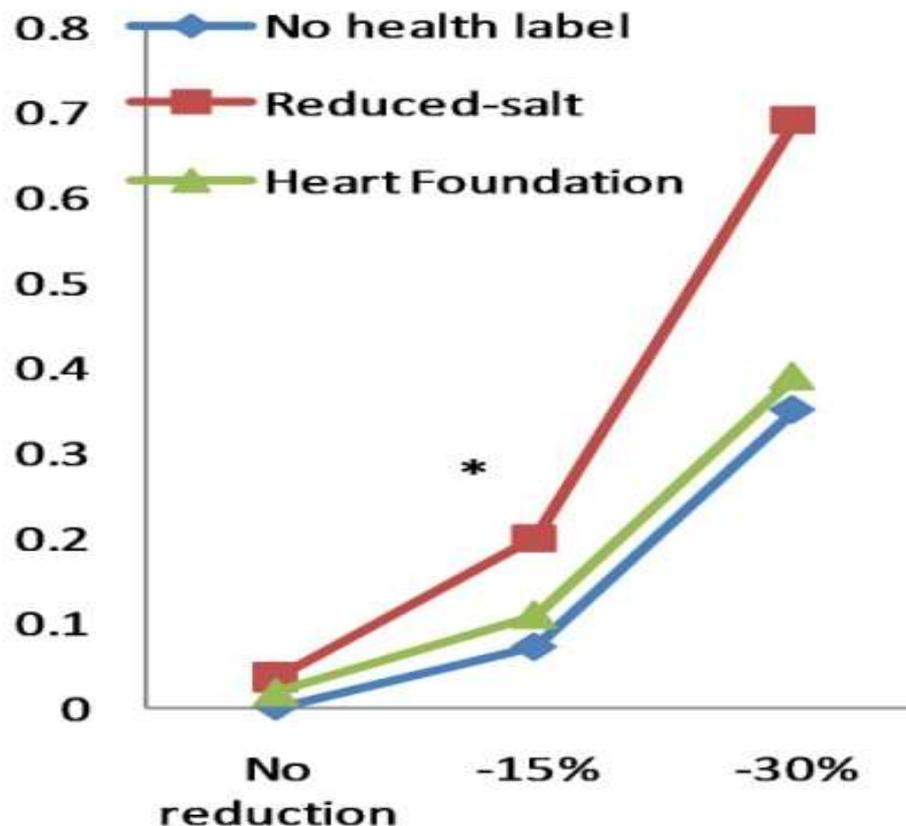
"Now reduced in salt, great taste"



Heart foundation tick

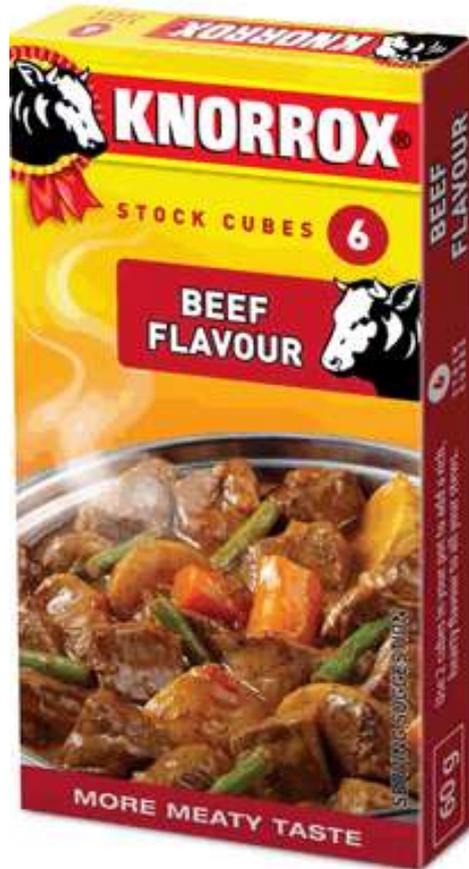


Average amount of salt (grams) added



Claims may drive table salt use, even to the point of overcompensation

Examples of successful communication



South Africa
'More meaty taste'



Brasil
'25% reduced in salt – same great taste'

Consumer acceptance of salt replacers



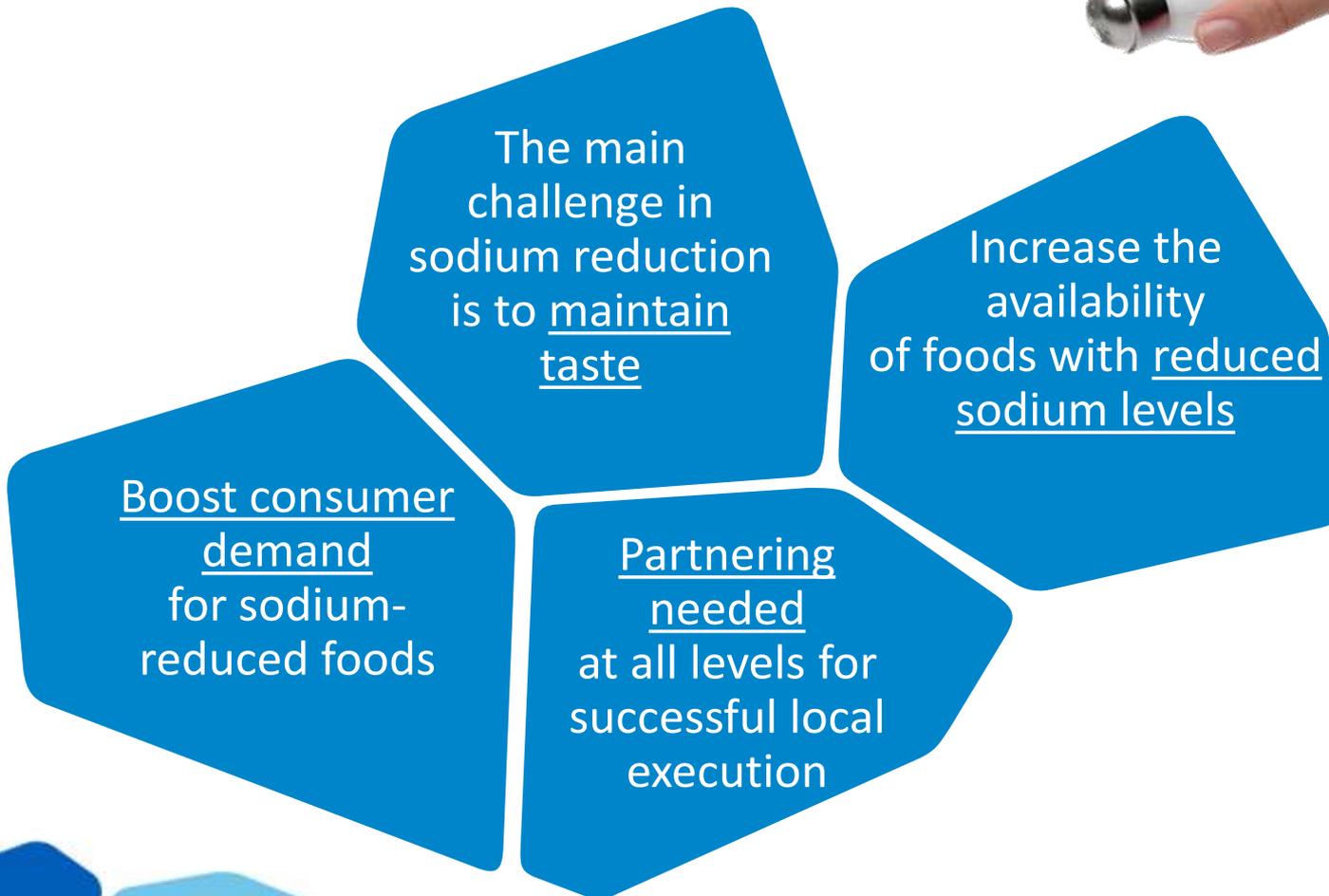
- Potassium chloride is a potent salt substitute
- Currently regulated labelling as '*potassium chloride*'
- This 'chemical' name is not liked by consumers – leading to barriers to use by manufacturers

	UK	Germany	Poland	France	Netherlands (belgium)	Spain (Italy, Portugal)	Sweden
Sea salt	5,5		5,5	5,6	5,1	5,6	5,9
Salt	4,7	5,4	4,9	5,1	4,4	5,3	5,5
Salt replacer: potassium chloride	3,5		2,9	3,4	4	3,3	3
Potassium chloride (natural mineral salt)	4,7		3,7	4,8	4,3	4,9	4,9

Unilever consumer research data

- The European Soups and Sauces Association *Culinaria Europe* is advocating for 'clean' yet informative labelling terms:
 - Potassium salt
 - Potassium mineral salt
 - Mineral salt (potassium)

INSIGHTS FROM OUR SODIUM REDUCTION STRATEGY

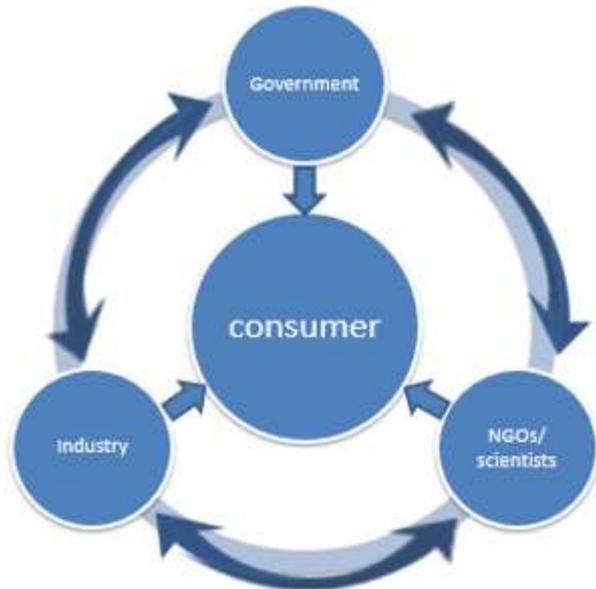


MULTI STAKEHOLDER APPROACH NEEDED



IUNS-UNILEVER SALT SUMMITS COLLABORATION 2012-2017

Multi-stakeholder approach needed
to achieve the behaviour change



2012-2014:

- Workshops in 7 countries
- Focus on consumer understanding

2015-2017:

- Workshops in 3 countries
 - Sri Lanka, April 2016 – 50 participants
 - Netherlands, March 2017 – 40 participants
 - Indonesia, July 2017 – 53 participants
- Focus on action planning, based on solid science and global insights

THANK YOU

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MODELLING IMPACT OF SALT REPLACEMENT BY POTASSIUM



- Dietary intake data from Dutch Food consumption survey (VCP 2007-2010)
- Replacement of required NaCl reduction by KCl in **all** manufactured foods (20%, 50%, 100%)
- Calculation of impact on sodium and added potassium intakes
- EFSA considers <6000mg/d of *total* and <3000 mg/d of *added* potassium as safe

Additional potassium intake – modelled distribution (n=2106 men and women, 18-65y)

20% scenario

50% scenario

100% scenario

