Ipsos MORI

# THE REFORMULATION CHALLENGE

# SUGAR IS CAUSING A STIR

The rise of the sugar debate has pushed the issue of reformulation up the agenda across food and drink companies. Regulatory pressure to reduce the levels of sugar in people's diets, prompted by concerns around increasing obesity and diet-related illness, is forcing manufacturers to find ways to reduce sugar content in their products or offer low sugar/sugar-free alternatives in their portfolios.

Changing the composition of food and drink products is not the only means to achieving a healthier dietary intake, but it is one of the most effective ones[01] because reformulation reduces the requirement of consumers to actively/consciously make a change in their behaviour[02].

Reformulation is not a new challenge. Products are frequently changed in response to business needs, perhaps a desire to harmonise and simplify recipes across markets, to adopt a more secure supply chain, or to reduce costs to either increase profitability or maintain a price point. Reformulation can also be the driver of innovation, identifying products that might better satisfy a new audience or growing need.

However, reformulation for sugar reduction brings some additional difficulties because of the other properties that sugar provides in the structure and texture of many products[03], and the perceived disadvantages of many current sweetener substitutes. Making reduced-sugar products that are acceptable to consumers and their complex tangle of conscious and non-conscious preferences and desires is a difficult job. Here we unpick how to address some of the challenges and how we might turn these into opportunities.

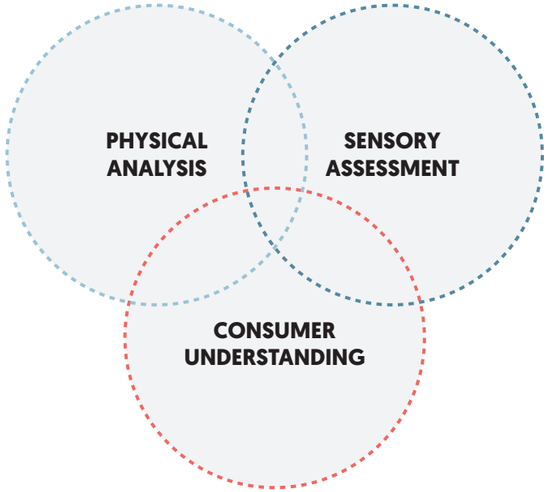
REFORMULATION REDUCES THE REQUIREMENT OF CONSUMERS TO ACTIVELY/CONSCIOUSLY MAKE A CHANGE IN THEIR BEHAVIOUR

# 3 INGREDIENTS FOR SUCCESSFUL REFORMULATION

Reformulation is most likely to succeed if it is founded on a solid understanding of what drives consumer preference, through rigorous experimentation and exploration of prototypes around the current recipe.

**A COMBINATION OF THREE DATA SOURCES IS CRUCIAL FOR ANY REFORMULATION WORK:**

Detailed compositional analysis (e.g. ingredient levels) and physical product measurements of the current and any potential new formulations, and also competitor products for reference.




Objective descriptive assessment of a product's sensorials – the components of appearance, smell, taste, texture and aftertaste that make up the total product experience – as determined by a panel of trained product evaluators.

Information on the extent to which consumers like or dislike a product, usually from a controlled sequential evaluation of products.

By combining physical and sensory information we can understand the extent to which changes in key ingredients can influence a change in product delivery, e.g. how varying the levels of sugar or an alternative sweetener can affect the levels of perceived sweetness.

Further combining these with consumer understanding enables us to explore how changing the levels of these ingredients influences how much consumers like a product, e.g. how the change in sweetness profile affects overall product opinion.

The skilled statistical modelling of these data elements enables us to determine what ingredient changes are needed to have a positive effect on consumers, or what changes might be made without liking being impacted. Where a dimension is polarising, identifying different consumer liking segments (e.g. those consumers who prefer a sweeter product and others a less sweet one) allows different reformulation strategies to be explored and balanced for the best overall level of acceptance.

Our work modelling technical, sensory and consumer data globally has led us to develop an intuitive simulator to explore key product characteristics and identify optimised product profiles. Importantly, this recognises the inter-dependencies between key product variables, showing the effect of a change to one dimension on other related dimensions. With this we can identify better formulations, or model consumer reactions to new recipes without additional consumer research.

| Key product variables | | Choose new product levels | Optimal levels |
|---|---|---|---|
| Sweetness | 34.9 | 39.4 | 42.5 |
| Crispness | 29.0 | 39.2 | 41.1 |
| Saltiness | 7.3 | 34.5 | 35.2 |
| Wheat Flavour | 26.3 | 26.8 | 28.9 |
| Overall Liking | 7.61 | 8.01 | 8.56 |

Use the simulator to build a new product profile, to learn how overall liking might be improved and how close to optimal you are

We are also advancing the capabilities of product optimisation with a new analytical solution, Sensory Spatial Segmentation[04]. This enables modelling on consumer liking segments based on incomplete test designs, while existing segmentation solutions require costlier complete designs. Given the potential expense to manufacturers in exploring reformulation, having a faster, more flexible environment in which to test and explore combinations could be vital to success.

# KEEPING IT QUIET OR OWNING UP

There is a distinction between 'stealth' and 'up-front' reformulation. Stealth reformulation – where 'imperceptible' changes are made to products without informing consumers – is considered a more effective approach for sugar reduction because consumers need make no change in behaviour to benefit from a reduced sugar intake.

However, an imperceptible change is difficult to achieve when replacing sugar with alternative sweeteners, and almost impossible if seeking to replace all sugar in one step. The reformulation strategy may then be to find a sensory profile that can be reached over time, via a series of smaller changes which consumers do not notice, and so they habituate to the gradual shift.

If stealth reformulation is too difficult, it is perhaps better to instead manage consumers' expectations. For instance, Nestlé announced that they had reduced the sugar level in their iconic Kit Kat brand, replacing it with more milk and cocoa. By making consumers aware of the change in the product and the potential benefits to them, the hope is that they will be more accepting of a change to their product (should they notice one).

AN IMPERCEPTIBLE CHANGE IS DIFFICULT TO ACHIEVE WHEN REPLACING SUGAR WITH ALTERNATIVE SWEETNERS

Reformulation does not necessarily lead to replacement, but can be a spur to innovation and increased consumer choice. Soft drinks brands have offered different 'diet' versions of their key brands for decades, and the market is now seeing a proliferation of new reduced sugar options, even on iconic brands such as Heinz Baked Beans and Lucozade.

# THE NEED TO CONSIDER THE BRAND

Whatever the reformulation strategy, the final validation stage is crucial to ensure a successful launch.

While development is usually completed unbranded, validation needs to be branded: surely every marketer has heard the cautionary tale of the development of 'New Coke' which won in blind testing but was rejected by consumers because it wasn't the Coca-Cola taste they were used to? Moreover, the product should be framed in the context of the likely communication around a new product, in line with the weight and prominence of the messages: introducing a full 'reduced sugar' concept gives a false impression of the salience if it is only mentioned with a small on-pack flash.

The testing method is designed for the appropriate level of risk assessment. A monadic approach is usually suitable for validation of up-front reformulations, but a sequential or comparative approach is likely to be needed to confidently go ahead with a planned stealth launch.

Ipsos also has the ability to explore the potential success or risk of the reformulated product mix with our innovation benchmarking system, bringing a commercial understanding to the validation alongside in-depth product diagnostics and optimisation.

# INVESTING EARLIER FOR SWEETER REWARDS

By investing early in strategic research, you have a greater chance of succeeding in market. The thorough and systematic approach to product optimisation helps you avoid an inefficient 'tweak and test' cycle to reformulation, and offers the possibility of identifying product opportunities for your future pipeline. The push for sugar reduction has undoubtedly created challenges for many businesses, but foundational research can help identify the sweet spots that can lead to success.

# END NOTES


01. Overcoming Obesity: An initial economic analysis. Discussion paper – November 2014. http://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/how-the-world-could-better-fight-obesity

02. The Intervention Ladder. Nuffield Council on Bioethics. http://nuffieldbioethics.org/report/public-health-2/policy-process-practice

03. Julian M. Cooper. The challenges of reformulation for sugars reduction. February 2017. http://www.fstjournal.org/features/31-1/sugars-reduction

04. J. Zach, L. Markowitz, J. Cho, B. T. Carr. Sensory Spatial Segmentation for incomplete designs. Poster presentation, Pangborn Sensory Symposium, Providence RI, USA. August 2017

## FOR MORE INFORMATION PLEASE CONTACT US

Ipsos is a global leader in product testing and has extensive experience of creating, managing and delivering expert product development insight. With our end-to-end product testing capabilities – from early stages of product experimentation to the final assessment – we can be a valuable partner on your reformulation journey.

Whether your business is directly impacted by sugar regulation or may be so in future, or you have a different reformulation challenge, please contact us to learn how we can help you.

### HEAD OF PRODUCT TESTING UK

Alex has over 20 years' experience in the market research industry, and leads the development of Ipsos' product and pack testing approaches in the UK.

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## ABOUT IPSOS MORI

Ipsos MORI, part of the Ipsos group, is one of the UK's largest and most innovative research agencies, working for a wide range of global businesses, the FTSE100 and many government departments and public bodies.

We are passionately curious about people, markets, brands and society. We deliver information and analysis that makes our complex world easier and faster to navigate and inspires our clients to make smarter decisions.