



# Product Reformulation and EPD

For Healthy Food & Drink  
Products

Interreg  
Atlantic Area  
European Regional Development Fund



CAH FES



## Contents

**1**

### **What is EDP & Product Reformulation**

EPD or Existing Product Development  
Bringing new products to market  
Pack design, process efficiency and or shelf life extension

**2**

### **Why Reformulate**

This is the subtitle that makes it  
comprehensible

**3**

### **The Challenge**

This is the subtitle that makes it  
comprehensible



## Contents

1

### **The Methodologies**

This is the subtitle that makes it comprehensible

2

### **Customer Acceptance**

This is the subtitle that makes it comprehensible

3

### **Case Studies**

This is the subtitle that makes it comprehensible

## What Is EPD and Product Reformulation ?

Achieving effective EPD and Reformulation is often far from simple, and indeed can be more technically and organoleptically challenging than initiating a brand new product.

This training module looks at why EPD and reformulation can be necessary and desirable, and provides some ideas on how to approach the tasks involved.

### NPD Trend Tracker: From wholegrain pancakes to 'fastest oven-cooked pizza snack'

By Oliver Morrison

18-Oct-2021 - Last updated on 18-Oct-2021 at 15:08 GMT



This week's gallery takes in new lower-in-sugar wholegrain pancakes and Goodfella's launch of two new Mini Stonebaked Pizza SKUs designed to tap into increased number of lunch occasions.

## What Is EPD and Product Reformulation ?

### Bringing new products to market

The idea of bringing new products to market is well established in the food sector.

Many larger companies will have dedicated NPD (New Product Development) personnel or even a team including –

- NPD Managers
- Food Technologists
- Chefs
- Process Development staff

*Smaller businesses may outsource their NPD or spread the tasks required amongst their operational staff.*

## What Is EPD and Product Reformulation ?

Making changes to your existing products

Value can be driven into your business by making changes to your existing products – This is often referred to as EPD or Existing Product Development.

This can involve a spectrum of modifications including,

- Packaging formats
- Pack design,
- Pack size changes,
- Process efficiency improvements
- Shelf life extension
- Ingredients replacement
- Ingredients reduction

**Product modification or changes to the recipe or processing methods in order to deliver the desired outcome, often involves reformulation of the core product.**

## What are the drivers of reformulation

<b>Consumer feedback</b>  Listen to your customer and move with them if their taste or aspirations change	<b>Improved consumer proposition</b>  The “New” or “Healthy” option. Reaction to the consumer or a leader of change	<b>Macro trends</b>  A dedicated follower of fashion or responding a change in the market
<b>Sustainability</b>  This can mean a Process or Product That is more eco friendly or Is more cost effective	<b>Raising input costs</b>  Trying to balance the rise in costs and keeping your RRP the same requires efficiencies	<b>Commodity shortages</b>  Unavailable ingredients or intermittent supply will force change that has to be dealt with

## Why Reformulate Your Products ?





## Why Reformulate Your Products ?

### PROACTIVE REASONS

You have new goals and ambitions for your product and decide to make changes to deliver these

#### **New Target Market**

You wish to make changes to your product to meet the needs you have identified will attract new customers

#### **Improving Nutritional Profiles**

you wish to achieve improved nutritional profiles such as reduced fat or sugar levels, or increased protein or fibre or become "free from" certain allergens to meet consumers demands for healthier products

#### **Competitive Advantage**

Your consumer research and culinary innovation programme may have revealed ways in which product changes could improve your offer to gain retailer listings and take market share from competitors

#### **Reflecting Brand Values**

You wish your products to embody improved environmental credentials such as reduced plastic packaging or address supply chain concerns such as using organic or Fairtrade ingredients, removing palm oil or ingredients associated with deforestation or low animal welfare standards.

#### **Improved Returns**

You may have identified new processing methods, more effective equipment, labour saving methods, more cost effective ingredients, ways to achieve shelf life extensions or revised packaging that will improve profitability

## Why Reformulate Your Products ?

### REACTIVE REASONS

Marketplace or supply chain circumstances change, necessitating you to make changes to your products

#### **Ingredients No Longer Available**

Many factors can impact ingredients availability as they are subject to international market dynamics, harvest & seasonal factors and the willingness of suppliers to maintain supply

#### **Suppliers No Longer Approved**

Your suppliers may fail an audit or be removed from an approved list, necessitating you finding a new supply source which may mean the ingredient performs differently

#### **Legislation Changes**

You need to react to changes in permitted ingredients or new taxation – such as “Sugar Taxes” – make reformulation desirable or even legally required.

#### **Equipment Updates**

You may need to replace old, out of date equipment or new equipment may be implemented for new products, but existing products must also utilise the new machinery.

#### **Customers Demand Changes**

Retail customers may require seasonal range refreshments, changes to nutritional profiles, the exclusion of certain ingredients, shelf life extensions or new sizes and formats of packaging to meet evolving corporate objectives. This occurs particularly often in the case of private label products.

#### **Competitor Activity**

Your competitor has brought a competing product to market that leaves your product vulnerable to losing retailer listings or sales

## Why Reformulate - Government Legislation and regulatory targets

**BBC** Sign in Home News Sport Weather iPlayer Sounds

**NEWS**


Home | Coronavirus | Climate | UK | World | Business | Politics | Tech | Science | Health | Family & Education

UK | England | N. Ireland | Scotland | Alba | Wales | Cymru | Isle of Man | Guernsey | Jersey | Local News

### National Food Strategy: Tax sugar and salt and prescribe veg, report says

By Justin Rowlatt  
Chief environment correspondent

15 July | Comments



Henry Dimbleby says the "junk food cycle must be broken"

Sugar and salt should be taxed and vegetables prescribed by the NHS, an independent review of the food we eat has suggested.

**GOV.UK** Topics Departments Government activity

→ **Coronavirus (COVID-19)** | Guidance and support

Home > Health and social care > Public health > Health improvement > Healthy eating


### Research and analysis

#### Sugar reduction and wider reformulation: interim review

An interim review outlining progress towards achieving the 20% sugar reduction and the next steps.

From: [Public Health England](#)  
Published 14 September 2017

#### Documents

 [Sugar reduction and wider reformulation programme: interim review](#)  
Ref: PHE publications gateway number 2017336  
HTML

#### Related content

- [Sugar reduction: progress report, 2015 to 2019](#)
- [Calorie reduction: guidelines for the food industry](#)
- [Sugar reduction: juice and milk based drinks](#)

# Why Reformulate – Consumer Interest in enhanced foods

Example - With unprecedented consumer interest in protein and protein-enhanced foods and beverages, product developers are working hard to create consumer products that will **satisfy this burgeoning craving**.

It can be an enormous challenge for even the most experienced product developer to choose the right ingredient from the right source for their chosen format.

INSIGHT GUIDE

## Choosing a Protein Ingredient Partner

20 OCT 2021  
Wednesday

Format: PDF file | Document type: Insight Guide | Promoted Content  
This Insight Guide has been written by Glanbia Nutritionals, and any views and opinions expressed do not necessarily reflect those of [www.foodnavigator.com](http://www.foodnavigator.com)



### The Essential Guide to Choosing a Protein Ingredient Partner



RELATED CATEGORIES: [Proteins](#)

With unprecedented consumer interest in protein and protein-enhanced foods and beverages, product developers are working hard to create consumer products that will satisfy this burgeoning craving. It can be an enormous challenge for even the most experienced product developer to choose the right ingredient from the right source for their chosen format. The following guide helps to outline choices and considerations in choosing a protein ingredients supplier and partner.

## Customer Compliance with Legislation

Sainsbury's

Start your search here



150 Sainsbury's  
LTD 2009

[Home](#) > [T&Cs and Company Values](#) > **What is the Soft Drinks Industry Levy?**

### What is the Soft Drinks Industry Levy?

As part of their plan to tackle obesity in children, the Government introduced the "Soft Drinks Industry Levy" on 6<sup>th</sup> April 2018, which is an added charge to suppliers on added-sugar soft drinks with more than 5g per 100ml sugar. Click [here](#) to find out more.

Which drinks are affected by the sugar levy? ✓

Which drinks aren't affected by the sugar levy? ✓

Are you making added profit from the levy? ✓

Why does some product cost more at Sainsbury's? ✓

Why haven't you changed the recipe of your own brand soft drinks to avoid the levy and keep the original lower price? ✓

Why do Diet Coke and Coke Zero cost more than Coca-Cola? ✓

Why is Coca-Cola no longer included in your meal deal? ✓

Have you delisted x product because of the levy? ✓

Why are your high-juice drinks so much more expensive? ✓

#### Important information

[FAQs to help you](#)  
[Product Recalls](#)

Compliance with Customer targets



**Tesco makes ambitious new commitments to support healthy, sustainable diets**

5 March 2021



## Companies leading by example



[About](#) [Sustainability](#) [Products](#) [Applications](#) [Insights](#) [Careers](#) [Q](#)

### Improving nutrition, naturally

Our flavour modulation solutions help brands create nutritionally optimised products with great taste. Leverage our taste modulators, sensory expertise and in-house processing capabilities to make better, more balanced products.

**Kerry Tastesense™**



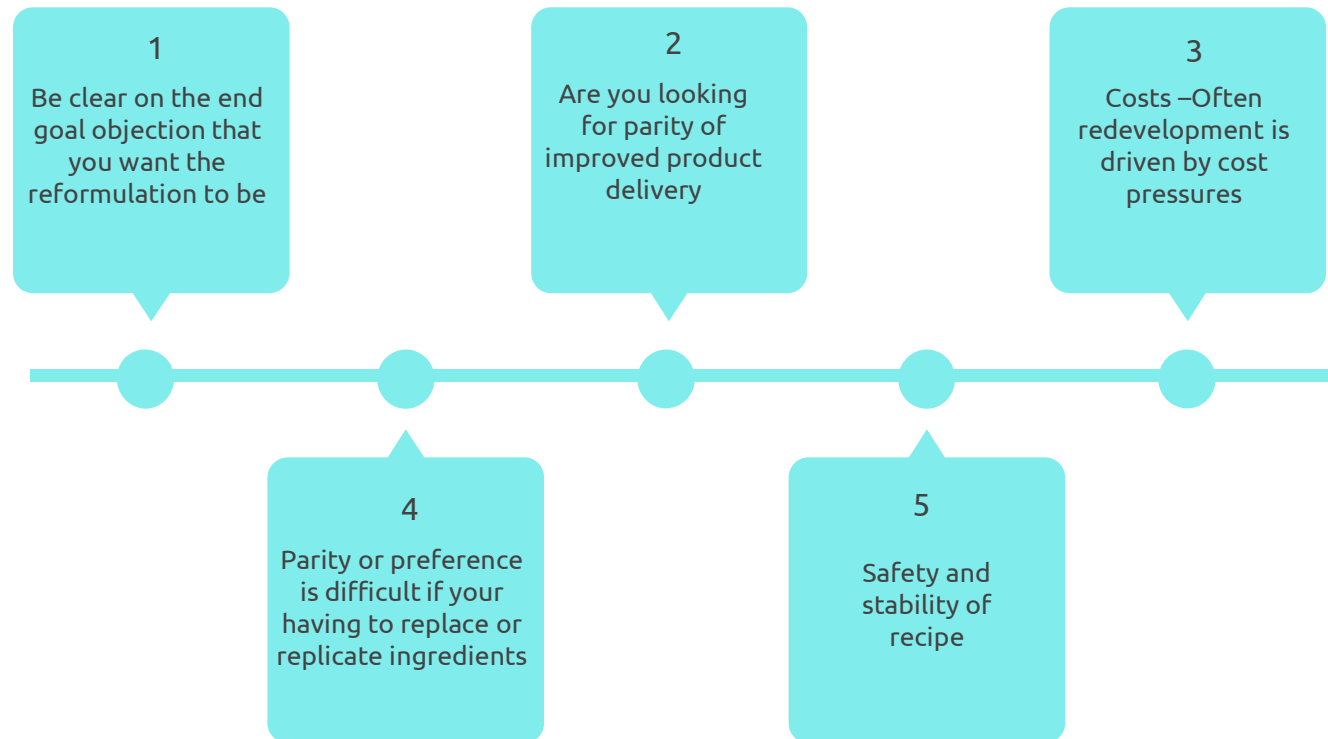
### Explore our Tastesense taste modulation portfolio

**Sweet** Salt Mouthfeel Masking

#### Tastesense Sweet

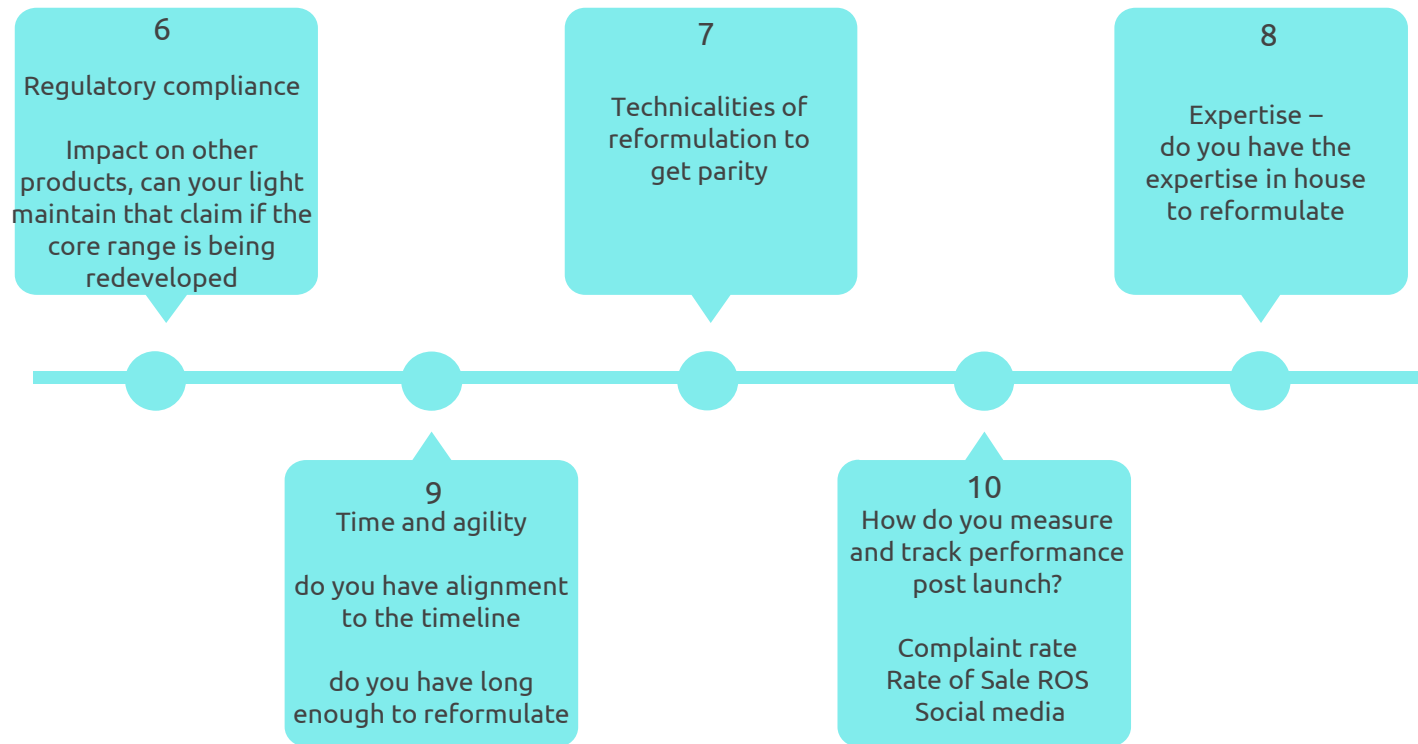
With the Tastesense Sweet range we can reduce sugar and meet nutrition targets while maintaining the sweetness, taste, texture and overall mouthfeel sugar brings to products. Because of our fully in-house processing capabilities, TasteSense Sweet allows us to provide a solution that performs across a wide range of categories, from beverages to bakery and dairy to sauces.

## The challenges of reformulation





## The challenges of reformulation



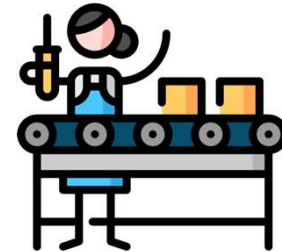
**The whole team needs to agree the EPD objectives –  
and all be working towards achieving the same outcomes**



**Culinary**



**Sales**



**Production**




**Technical/ Food Safety**



**Procurement**

## Methodologies for a systematic and documented approach to reformulation



### Triangle Test

This testing approach is 2:1 blind test to see if the consumer can tell the difference

### Product Acceptance

This would be a hall test by 100 people for 1 product.

Providing an understanding of what the average consumer thinks

– Jar scores (just about right)

### Trained sensory panel

A 2 products sensory profiled for comparison by a small group of trained experts to form a descriptive analysis

### Line trails

Before commitment to new recipes it's important to scale up to a line trail, to check that the recipes are still acceptable from a taste and stability perspective, as well as running down the line

## The Importance of a Systematic Approach

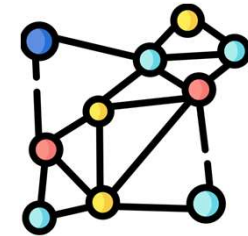
Making a change to one element of your food or drink product such as,

- Ingredients,
- recipe,
- processing
- or packaging format

Can have multiple impacts or cause a chain reaction to your product.

Meaning that a product has to be rebalanced and altered in a number of ways to achieve your desired results.

*This may sound long-winded and expensive, but taking a step by step, well planned and well executed approach often saves time and money in the long run.*



## A Systematic Approach Continued

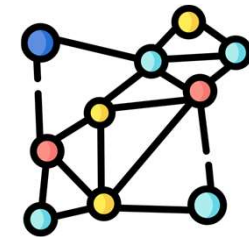
It can be tempting to make all the changes that you feel will achieve your desired outcomes at once and conduct your product trials accordingly.

This works very well – as long as you achieve your goals completely at the first attempt !

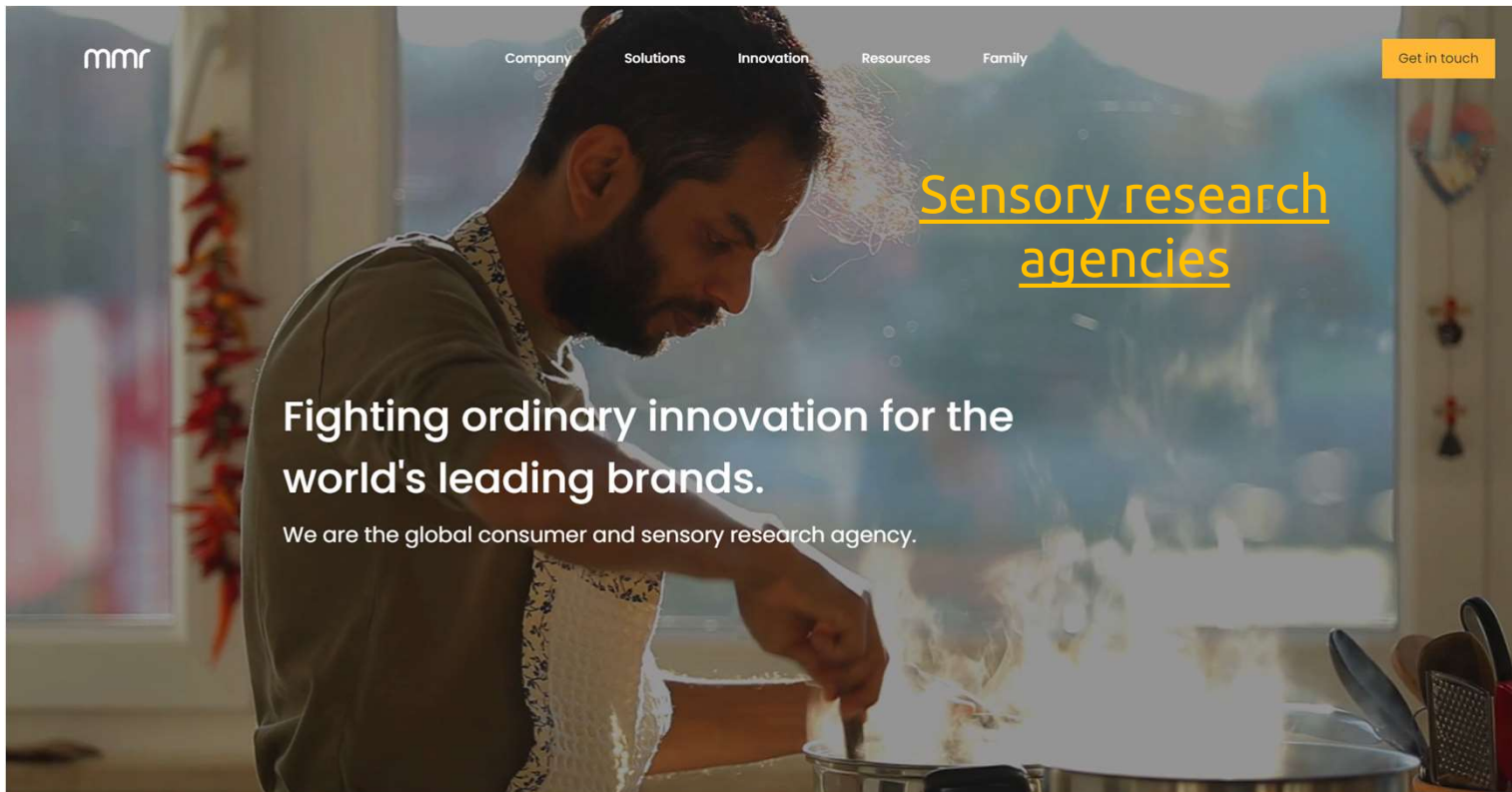
Sadly this seldom happens, as elements of the product and packaging may interact in ways that cannot always be foreseen.

If you have made multiple changes at once, it can be very difficult to determine

- which change has caused which effect,
- which have contributed to reaching your goal,
- which have hindered this.



## Finding companies that can help you on your journey

A man with a beard and a patterned shirt is cooking in a kitchen. Steam is rising from a pot on the stove. The background shows a window with a view of a mountain range. The website layout includes a navigation bar at the top with the 'mmr' logo and links for 'Company', 'Solutions', 'Innovation', 'Resources', and 'Family'. A 'Get in touch' button is in the top right corner. The main text is overlaid on the image.

mmr

Company Solutions Innovation Resources Family

Get in touch

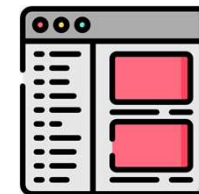
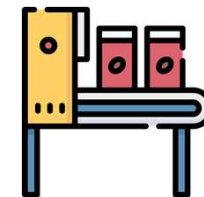
Sensory research agencies

Fighting ordinary innovation for the world's leading brands.

We are the global consumer and sensory research agency.

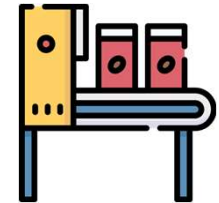
## A Systematic Approach Continued

1. Carefully consider each change you plan to make and determine a step by step, methodical approach – changing only one element.
2. Consider how you can change and assess one factor at a time, building these up to achieve your desired outcome.
3. If you are assured that two factors are interdependent, plan how you will assess the impacts of each to understand what is revealed by your bench-scale tests or production trials.



## A Systematic Approach Continued

4. Clearly define what is being changed – quantify this if you can, for example ingredients weights or processing order, machinery settings, labour and processing amendments, yields and usage or uptake levels
5. Create a template to capture and record what takes place during your production trials, agree what metrics you will use to judge success and record the trial data accordingly
6. Plan a sequence of trials to reach your goal and ensure that the budget for this (ingredients, packaging, labour, testing of trial samples) is approved, and access to production line time is agreed.





## **Methodologies for a systematic and documented approach to reformulation**

---

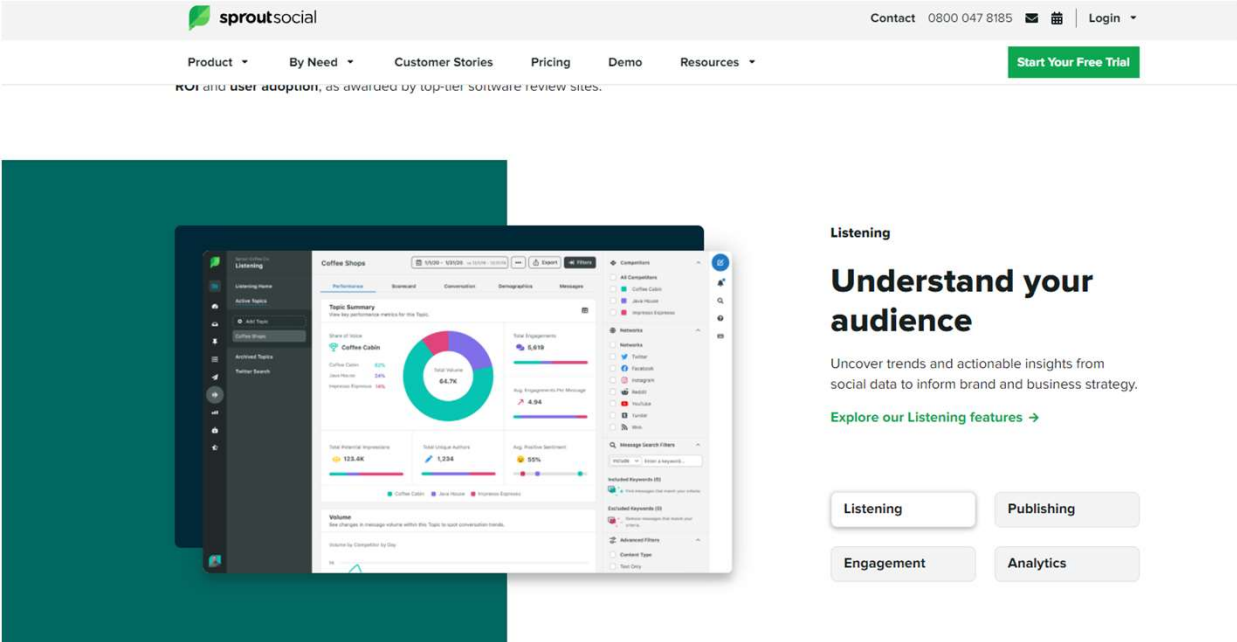


**Make sure to  
monitor and record  
customer contacts  
and complaints (cpm)**

# Customer Buy In

In today's marketplace you can access feedback and comments from your customer base by seeing what they post online about your product.

You can use software like SproutSocial (other apps are available) and they can deliver feedback direct to your inbox



## Telling Your Customers About Your Reformulation

### Reasons for an Overt Approach

- You may wish to highlight your reformulation or EPD changes to customers
- The new recipe or format is an improvement, adds value and extends the appeal of the product and is therefore an opportunity to grow sales
- The product is now able to compete in a new market sector, so you want to make its new attributes clear to a wider customer base
- The allergen status has changed, so you need to make sure customers are well informed about this

## Telling Your Customers About Your Reformulation

### Reasons for a Covert Approach

- The changes may have been made for internal supply, processing or logistical reasons, and you have worked hard to ensure that they have not impacted the product eating or usage qualities
- Your EPD or reformulation has been made to increase company profitability and you do not wish your retail customers to know about this and require a proportion of the cost savings achieved
- You may not wish to draw attention to the product reformulation as you do not want to risk alienating customers or damaging sales
- The changes have been made within existing on pack information such as ingredients declarations or nutritional information, to avoid expensive packaging write offs

## The importance of ensuring customer acceptance of redeveloped products

---

- Without our consumers you do not have a business or brand
- As a brand the consequences of not getting it right are huge
  1. *Loss of consumers , leading to reduced Rate Of Sale (ROS),*
  2. *Reduced market share, leading to customer listings under pressure*
- Consumers want to be acknowledged – take time to respond to their aspirations and acknowledge the work that has been done.

There are plenty of case studies of companies who have gotten this wrong

## The importance of ensuring customer acceptance of redeveloped products

- 1. New Coke – 1985
- PepsiCo's share of the U.S. cola market was almost 30 per cent and was threatening to outsell Coca-Cola as the number one cola-flavoured drink. To counteract this, Coca-Cola replaced its signature branded drink Coke, with 'New Coke', which the company claimed had a smoother and sweeter taste.
- Just 77 days later, the company brought back old Coke under the guise of 'Classic Coke'. The reason being that only 13 per cent of soda drinkers liked 'New Coke'. Campaigns were launched, signatures collected, and a telephone hotline forced the company to bring back its original soft drink.



## The importance of ensuring customer acceptance of redeveloped products

- McPizza – late 1980s to early 1990s
- McDonald's decided to add pizza to its menu in the eighties, putting slices next to successful menu items such as the world-famous Big Mac and Quarter Pounder.
- However, this was not received as well as hoped. Customers wanted fast food from McDonalds, and with an average cooking time of 11 minutes, frustrations rose.
- But it wasn't only the wait, the pizzas couldn't even fit through the drive-in windows!

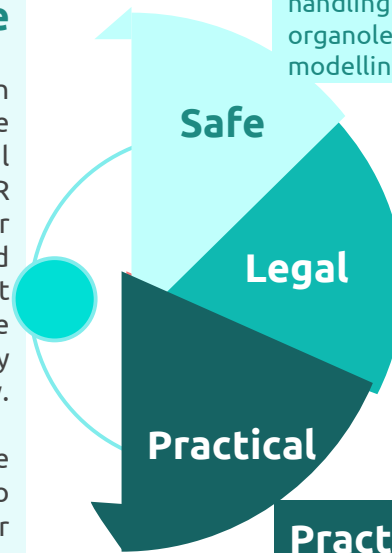


## Considering the Wider Implications of EPD and Reformulation

### Consumer Acceptance

As we have outlined in depth, the ultimate test of a successful reformulation or EPR project is that your consumers accept and enjoy your product and sales are protected, or ideally grow.

However there are many other aspects to consider – for example:



### Food Safety

It is **CRITICALLY IMPORTANT** to carefully and comprehensively review the **Food Safety implications** of your reformulation or EPD. This should include a HACCP review with full information available about any new ingredients and suppliers, new or altered processes and handling practices and updated shelf life, microbiological and organoleptic performance over life, or an agreed methodology for modelling the safety of the amended product.

### Legality

Changing your product may have implications for its legal status in the market place, for example certain food products are subject to specific regulations, they may have a reserved description which specifies that only products meeting certain compositional requirements may use that name, they may be subject to a protected geographical status, requiring them to be made in a certain place or to defined processes, and for any nutritional claims such as Reduced Fat, High in Fibre or Rich in Iron, specific rules must be met.

### Practicalities

Your EPR or reformulated product needs to be produced within agreed cost targets : so handling, storage, processing parameters, labour inputs, work in progress handling, packing and distribution must all be achievable at a sustainably affordable level.



## Case study – The introduction of the soft drinks Industry levy (SDIL)

- In April 2018 the levy was introduced to encourage manufactures to reformulate to bring down the amount of sugar In our diets, specifically those of children.
- Companies will pay 18p per litre on soft drinks between 5-8g of sugar per 100ml
- 24p for soft drinks over 8g per 100ml
- On a 750ml bottle of the branded drink the tax was an additional 13.5p, impacting both the RSP and the promotional price point.

The screenshot displays the GOV.UK website interface. At the top, the GOV.UK logo is on the left, and navigation links for 'Topics', 'Departments', and 'Government activity' are on the right. A search bar is also present. Below the header, a dark blue banner reads 'Coronavirus (COVID-19) | Guidance and support'. The main content area shows the breadcrumb 'Home > VAT > Soft Drinks Industry Levy' and the HM Revenue & Customs logo. The title 'Policy paper Soft Drinks Industry Levy' is prominently displayed, with the publication date 'Published 5 December 2016' below it. A 'Contents' section on the left lists links: 'Who is likely to be affected', 'General description of the measure', 'Policy objective', 'Background to the measure', 'Detailed proposal', 'Monitoring and evaluation', and 'Further information'. A 'Print this page' button is also visible. The 'Who is likely to be affected' section states that UK producers, importers, retailers, and consumers are affected, and mentions an exemption for the smallest producers and operators. The 'General description of the measure' section explains that the levy applies to the production and importation of soft drinks with added sugar, and that it will apply to producers and importers of these drinks.

GOV.UK

Topics Departments Government activity

→ Coronavirus (COVID-19) | Guidance and support

Home > VAT > Soft Drinks Industry Levy

HM Revenue & Customs

Policy paper  
**Soft Drinks Industry Levy**  
Published 5 December 2016

Contents

- Who is likely to be affected
- General description of the measure
- Policy objective
- Background to the measure
- Detailed proposal
- Monitoring and evaluation
- Further information

Print this page

**Who is likely to be affected**

UK producers of soft drinks, importers of soft drinks, retailers of soft drinks and consumers who buy soft drinks in the UK.

There will be an exemption for the smallest producers and also operators importing of soft drinks from the smallest producer abroad.

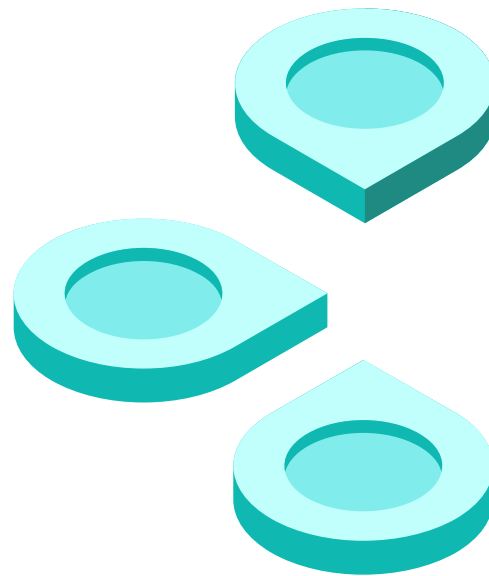
**General description of the measure**

This is a new levy that applies to the production and importation of soft drinks containing added sugar.

The levy will apply to the producers and importers of these types of drinks. It will have a

## Reduction in sugar without impacting taste is a challenge

Sugar carries flavour



- Sugar and salt both enhance flavour
- Salt in sweetcorn brings out the sweetness

- To reduce sugar we look at sweeteners
- These can be natural or artificial

## Case study – The introduction of the soft drinks Industry levy (SDIL)

- Reformulation was undertaken to address the SDIL and two liquid options were developed
  - Sugar under 5g per 100ml
  - Full fruit juice recipe (SDIL exempt)



This option was not viable the headline RSP needed to be increased and price elasticity modelling showed to high a drop in sales.

Price of the new ingredient was not stable and could impact on future viability

## Reduction in sugar without impacting taste is a challenge

---

They opted for a natural sweetener



For the majority of consumers this was acceptable but for some it left a bitter aftertaste

This was picked up on consumer testing but at the time was preferable to artificial sweeteners





We hope that you have found this training module a useful and helpful support to your healthy food and drink innovation.

This training module is one of a number of training opportunities, organised into themed training programmes to support SME's (small & medium sized enterprises) in the participating regions of Wales, Northern Ireland, Ireland, Spain, Portugal and France to successfully bring new and reformulated healthy food and drink products to market.

The training was created by the partners within the AHFES project which is a quadruple helix Atlantic area healthy food eco-system for the growth of SME's funded by the European Union under the Interreg Atlantic Area Funding Programme.

This programme promotes transnational cooperation among 36 Atlantic regions of 5 European countries and co-finances cooperation projects in the fields of Innovation & Competitiveness, Resource Efficiency, Territorial Risks Management, Biodiversity and Natural & Cultural Assets.

For more information about other training available [please click here.](#)



This project is co-financed by the  
European Regional Development Fund  
through the Interreg Atlantic Area Programme



## Credits

---

This is where you give credit to the ones who are part of this project.

Did you like the resources on this template? Get them for free at our other websites.

Presentation template by [Slidesgo](#)

Icons by [Flaticon](#)

Images & infographics by [Freepik](#)

Author introduction slide photo created by **katemangostar** - Freepik.com

Big image slide photo created by **jcomp** - Freepik.com

Text & Image slide photo created by **rawpixel.com** - Freepik.com

Text & Image slide photo created by **Freepik**