

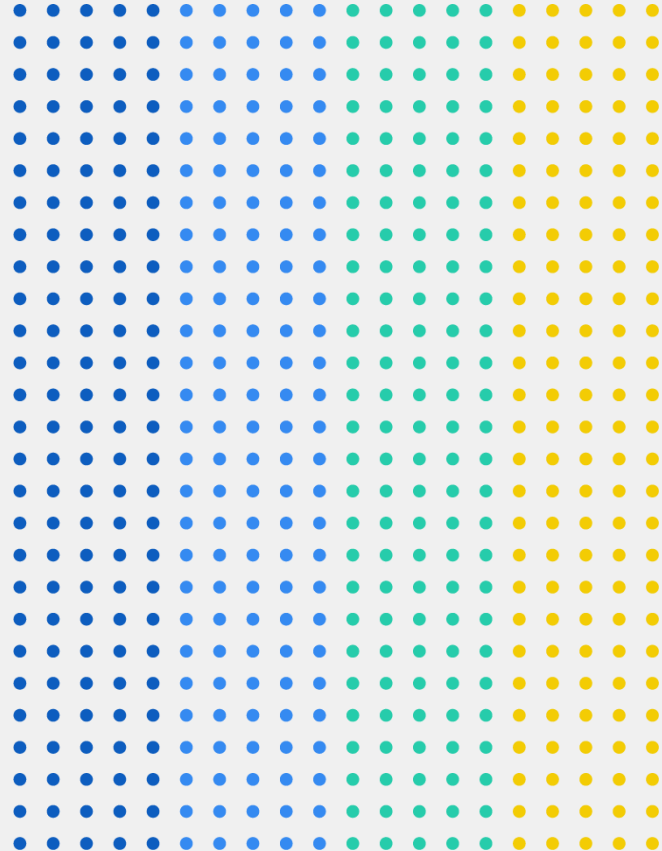


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# About Creme Global

**Creme Global is a Scientific Data  
Modelling & Technology Company.**

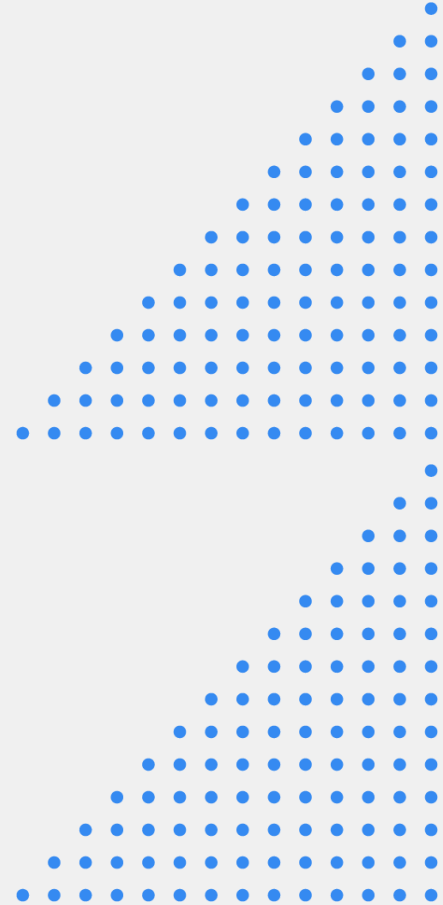
Creme Global uses data science to understand food intakes, nutrition and health in consumer populations to inform food formulation and public health strategies.



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# FDI Creme Global Reformulation Project

Overview and Methodology



# FDI Creme Global Reformulation Project Overview and Methodology

Estimate the impact of reformulation and the introduction of new products on the nutrient intakes of the Irish population.

## Surveys Used:

The National Teens' Food Survey (2005 – 2006)  
National Children's Food Survey (2003 – 2004)  
National Adult Nutrition Survey (2008 – 2010)  
National Pre-school Nutrition Survey (2010 – 2011)

## Nutrients:

Sodium  
Fat  
Saturated Fat  
Sugar  
Energy



Project Scope  
Retail

# Phase 1 - Reformulated Products Only

INTERNATIONAL JOURNAL OF FOOD SCIENCES AND NUTRITION, 2018  
<https://doi.org/10.1080/09637486.2018.1438375>



Check for updates

## RESEARCH ARTICLE

### A probabilistic intake model to estimate the impact of reformulation by the food industry among Irish consumers

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#### ABSTRACT

This project quantified the impact that voluntary reformulation efforts of the food industry had on the Irish population's nutrient intake. Nutrient composition data on reformulated products were collected from 14 major food companies for two years, 2005 and 2012. Probabilistic intake assessments were performed using the Irish national food consumption surveys as dietary intake data. The nutrient data were weighted by market shares replacing existing food composition data for these products. The reformulation efforts assessed, significantly reduced mean energy intakes by up to 12 kcal/d (adults), 15 kcal/d (teens), 19 kcal/d (children) and 9 kcal/d (pre-schoolers). Mean daily fat intakes were reduced by up to 1.3 g/d, 1.3 g/d, 0.9 g/d and 0.6 g/d, saturated fat intakes by up to 1.7 g/d, 2.3 g/d, 1.8 g/d and 1 g/d, sugar intakes by up to 1 g/d, 2 g/d, 3.5 g/d and 1 g/d and sodium intakes by up to 0.6 g/d, 0.5 g/d, 0.2 g/d, 0.3 g/d for adults, teenagers, children and pre-school children, respectively. This model enables to assess the impact of industry reformulation amongst Irish consumers' nutrient intakes, using consumption, food composition and market share data.

#### ARTICLE HISTORY

Received 31 August 2017  
Revised 31 January 2018  
Accepted 5 February 2018

#### KEYWORDS

Probabilistic; dietary intake;  
industry; sugar; food choice;  
sodium; fat; add

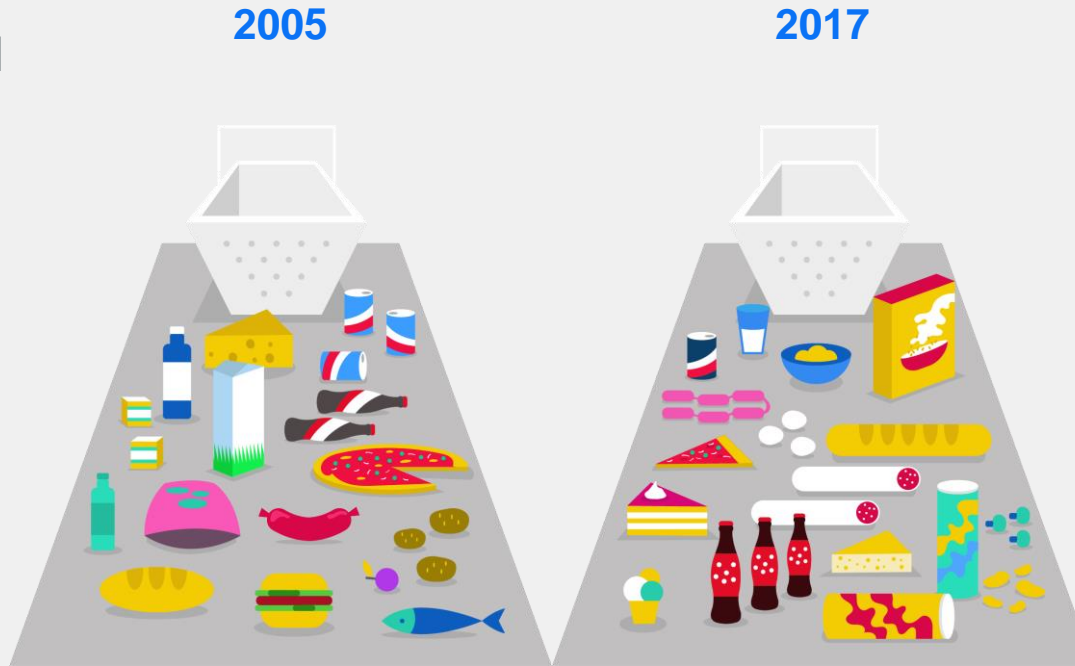
Directly replaced survey foods – no scope for product choice changing between years.

## Phase 2 - Enhanced Methodology

**Phase 2** uses similar principals to **Phase 1** but in addition, **Phase 2** takes account of new products and discontinued products.

- Consumers movement away from products popular in 2005 to products popular in 2017.
- Composition of the products changing.
- More data, giving a more holistic view of the market.

Consumer Basket



## Food categories included:

- ❑ Beverages excluding milk
- ❑ Desserts, biscuits, cakes, ice-cream and confectionery
- ❑ Meat products
- ❑ Milk and dairy products
- ❑ Breakfast cereals
- ❑ Rice, pasta, savouries and gluten free bread
- ❑ Savoury snacks including crisps
- ❑ Soups, sauces, pulses and misc. foods
- ❑ Spreading fats

# Participating companies

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# Data Collection Portal

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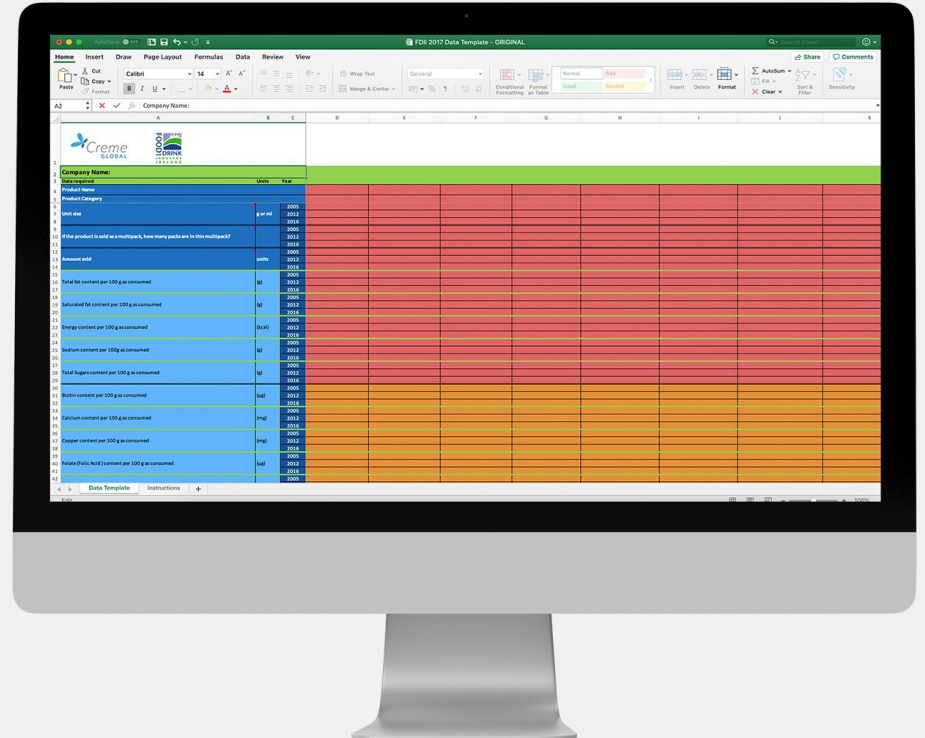
Companies

1,780

Food Products

23,305

Concentration data  
points collected



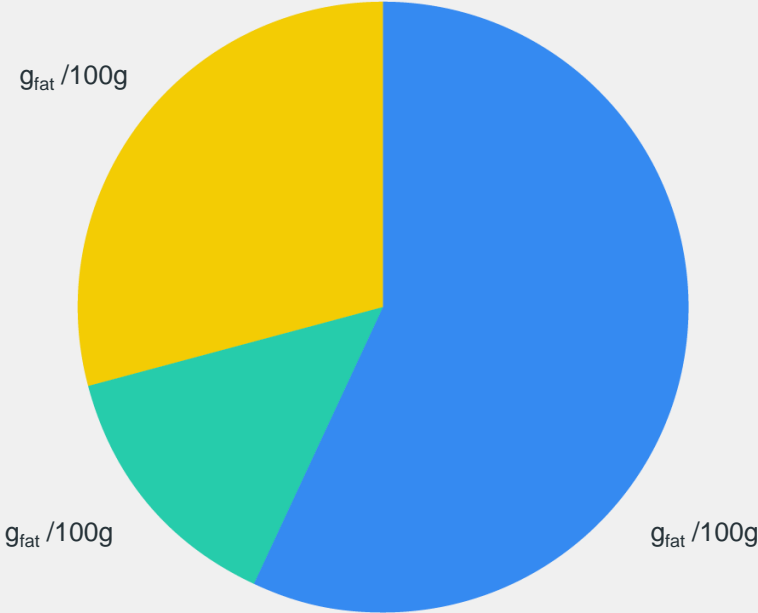
# Associating market share with concentration values

2005

Product 1

Product 2

Product 3



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# Associating market share with concentration values

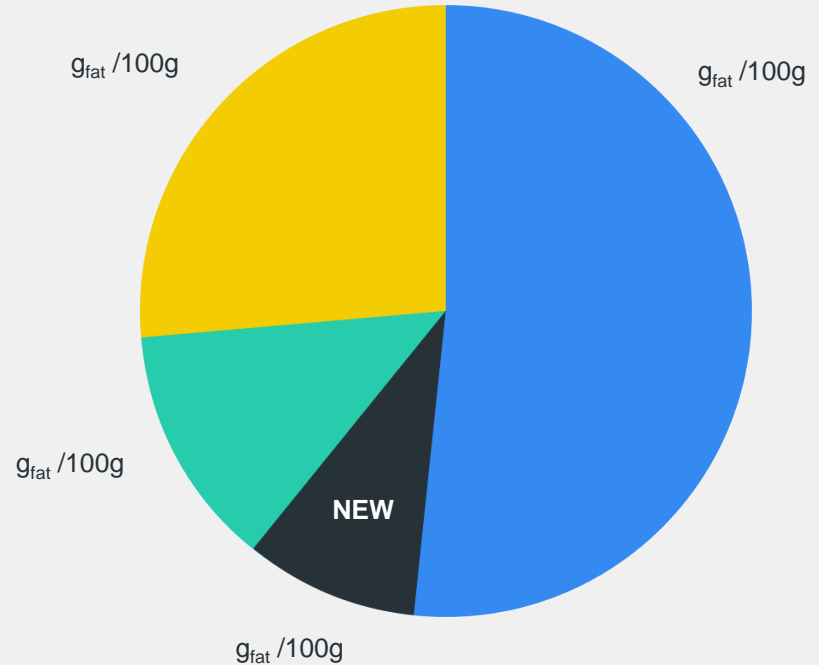
2017 **New product enters the market**

Product 1

Product 2

Product 3

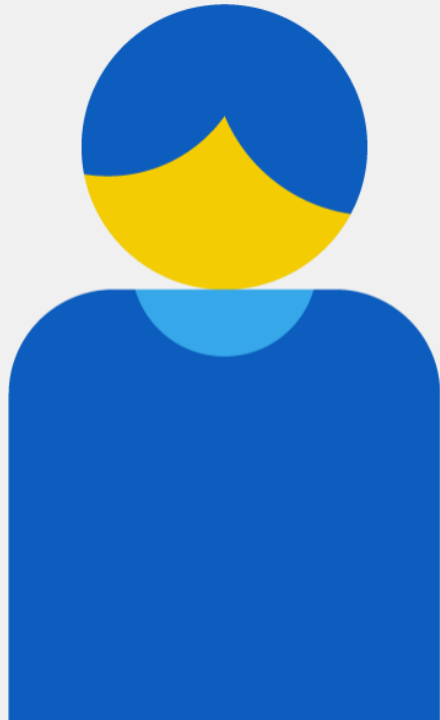
Product 4



# Probabilistic Intake Model

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Diary Day 1



Frequency



Amount

40g

500g

200g

90g

Nutrient Concentration



0.6%



0.02%



1.5%



0.007%

# Probabilistic Intake Model

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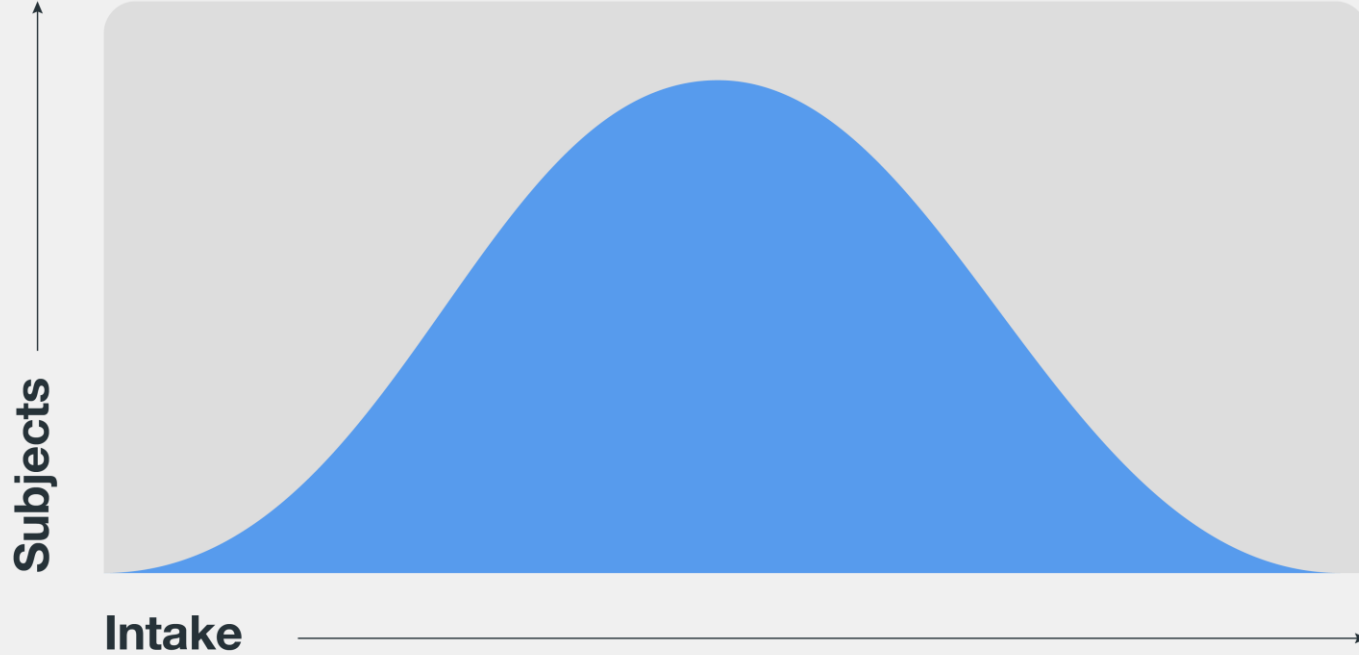


# Probabilistic Intake Model

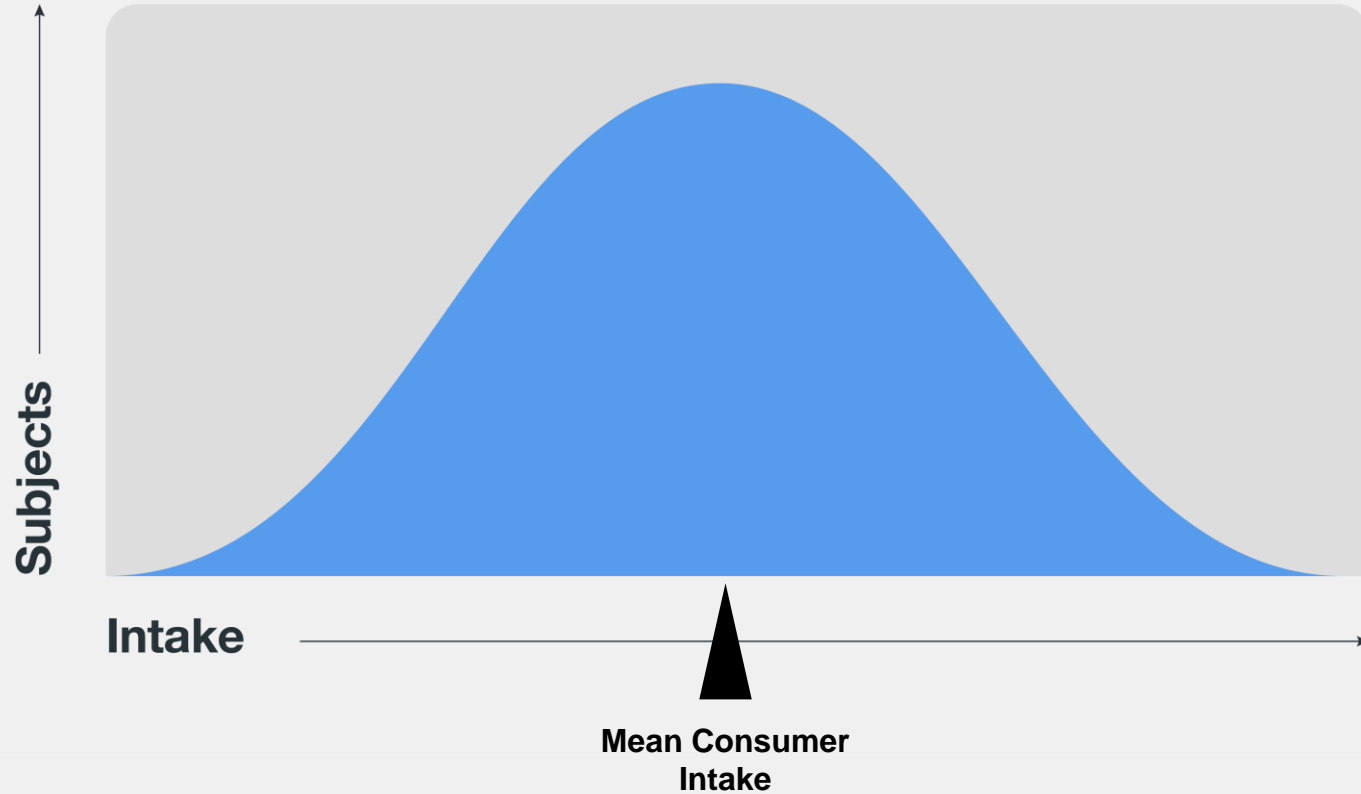
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# Nutrient Intake

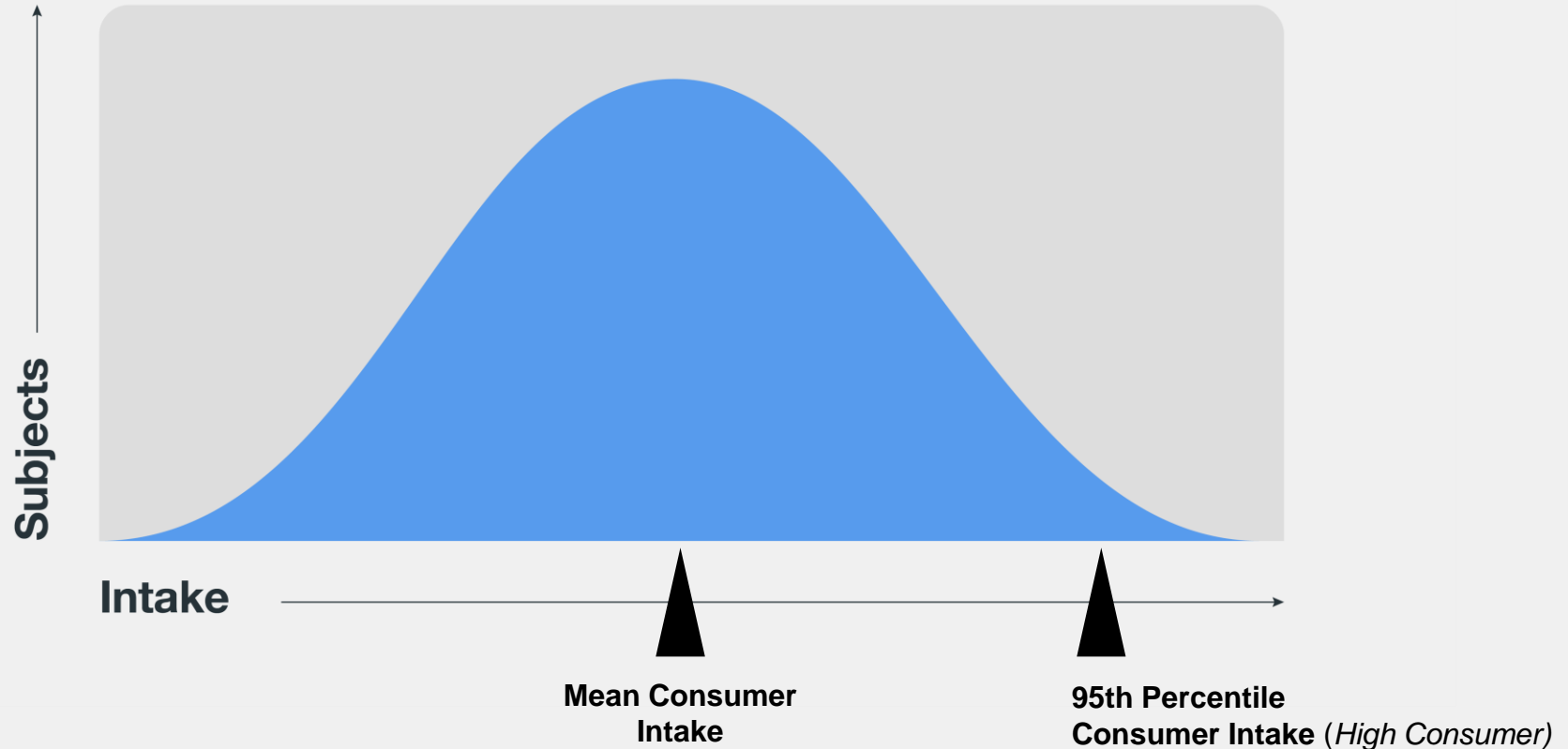


# Nutrient Intake





# Nutrient Intake



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# Rest of Market

Optimistic Scenario

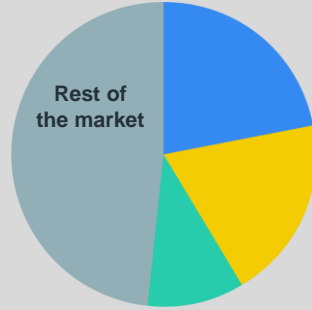


2005

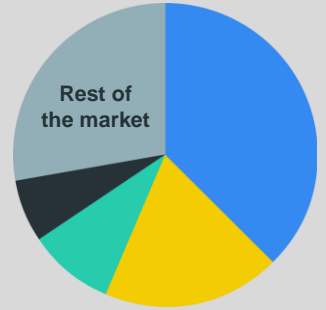


2017

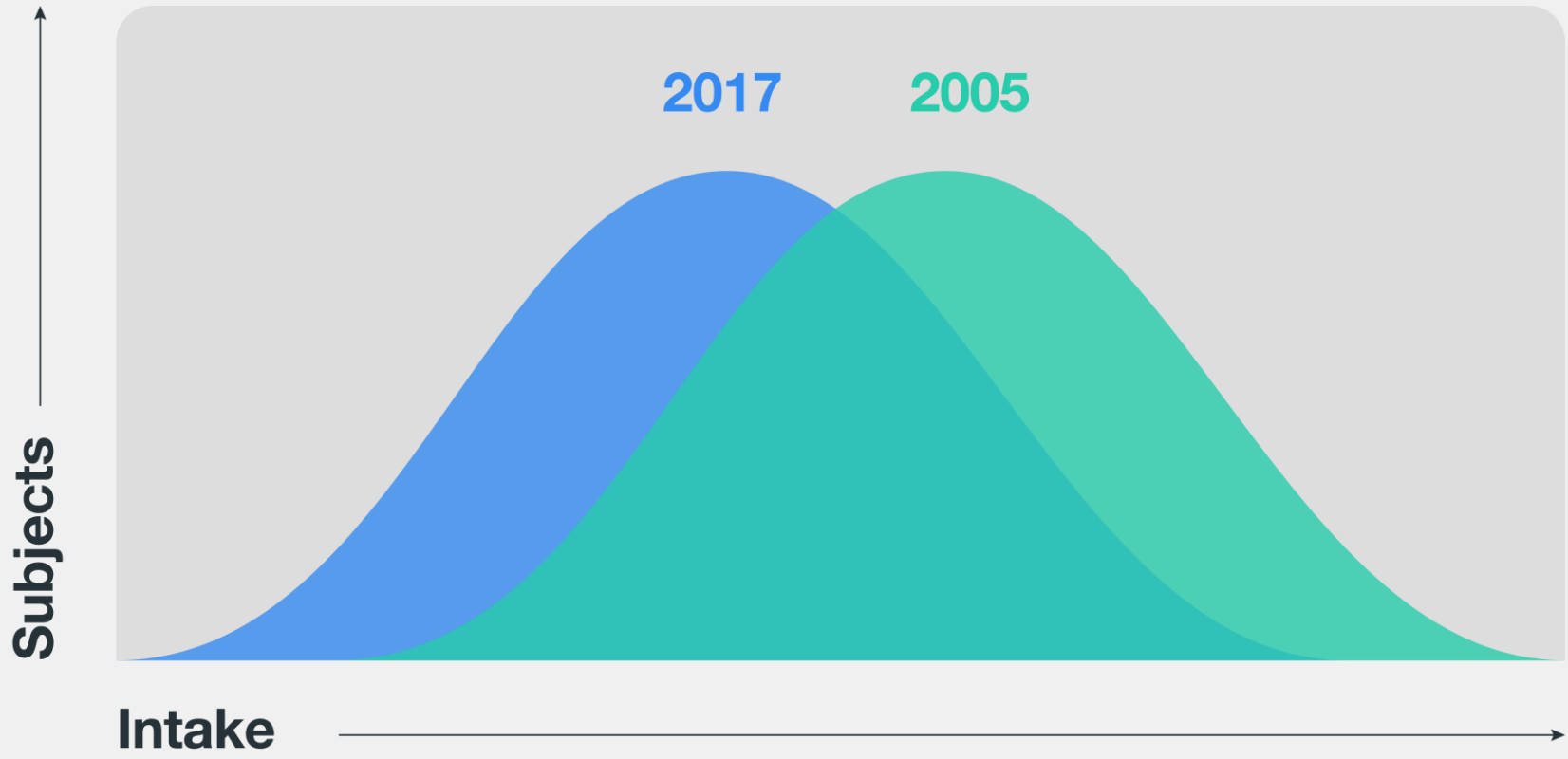
Conservative Scenario

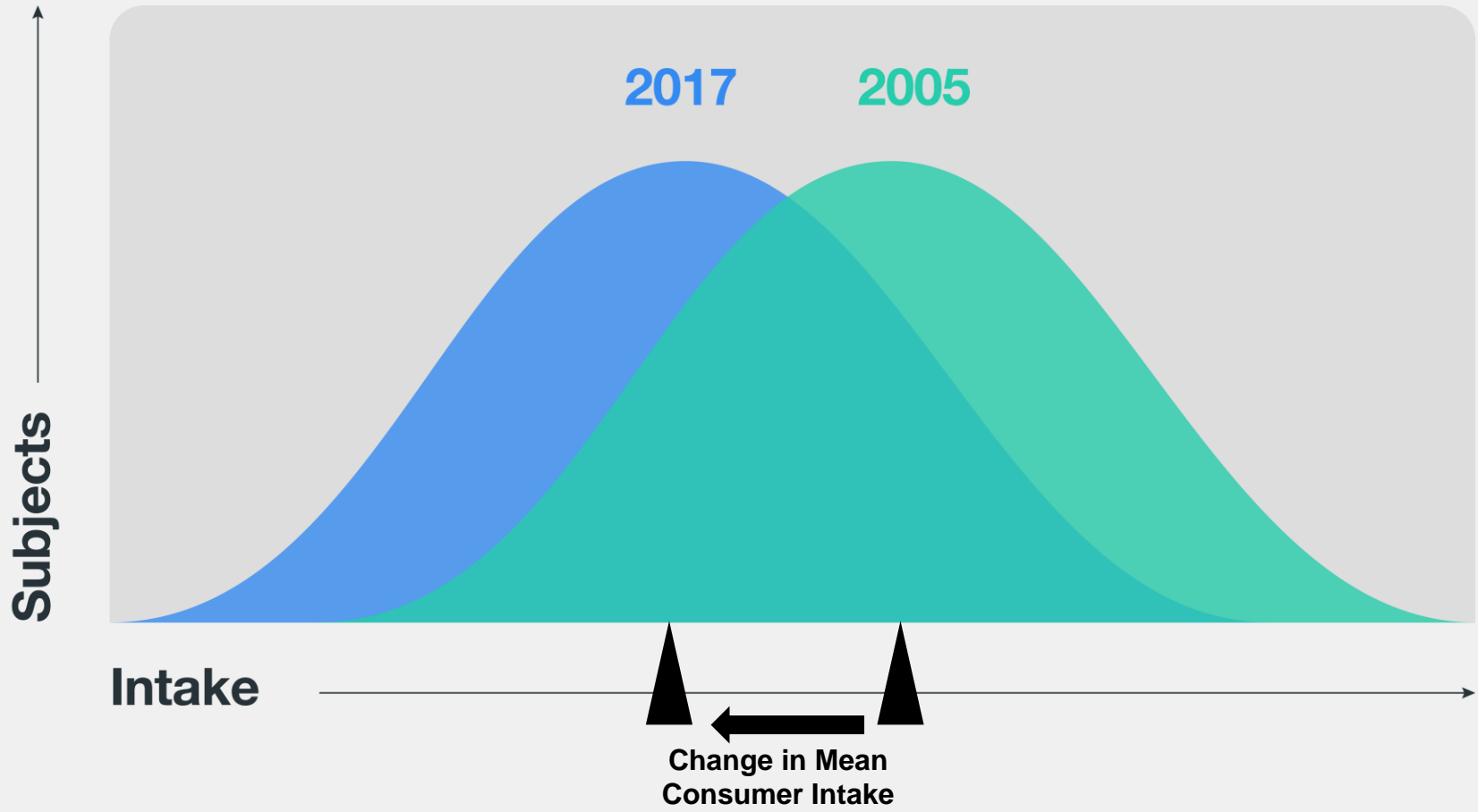


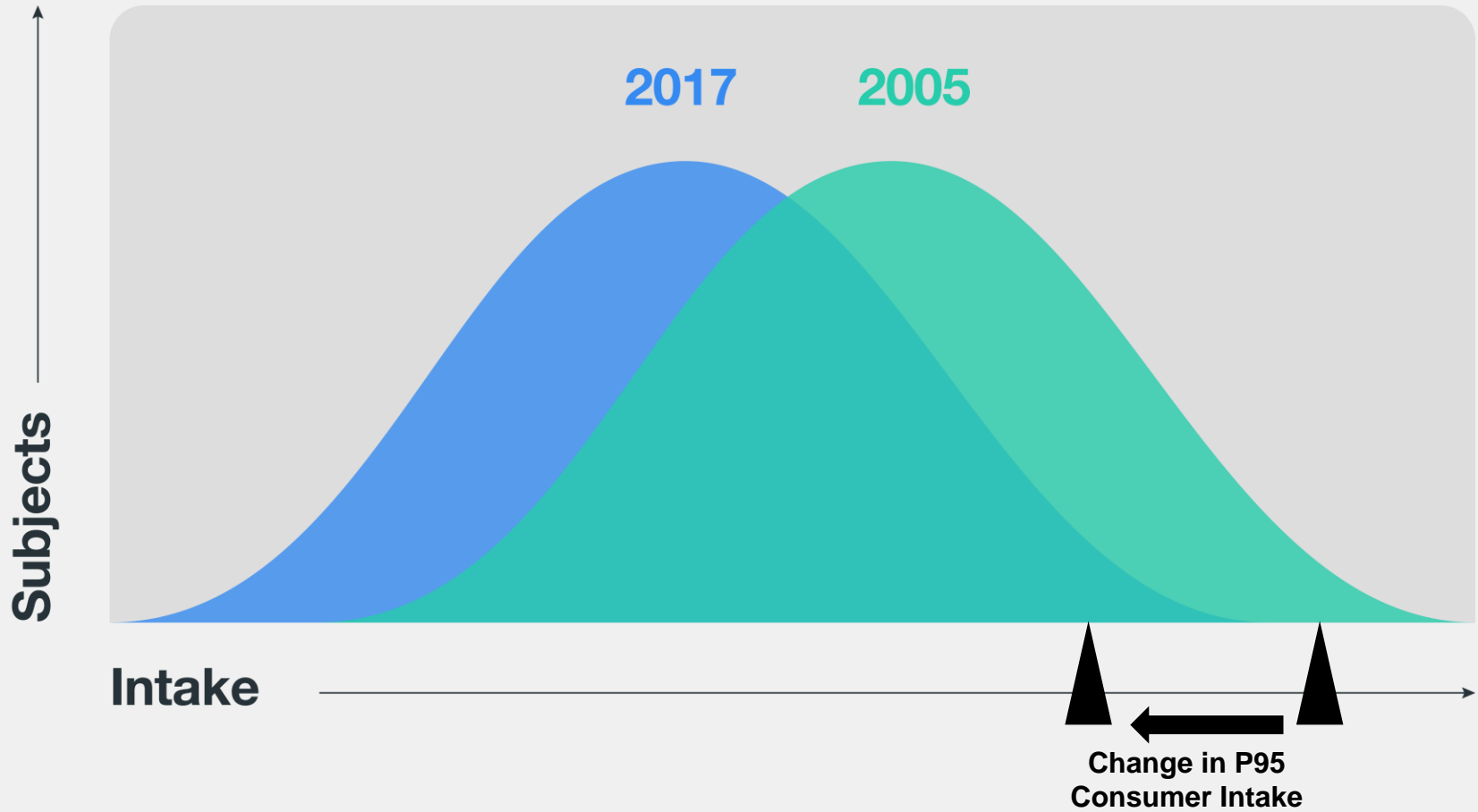
2005



2017







# Key Results

Direct reformulation of products on the market in both 2005 and 2017

These figures show the percentage reduction in nutrients from 235 products that were on the market in 2005 and remained on the market in 2017.

Total Fat

0.3%



Saturated Fat

10.1%



Energy

1.6%



Sodium

28.0%



Sugar

8.0%



# Key Results

## Intakes

### Sugar

Sugar intake has decreased for all age groups since 2005



### Saturated fat

0.5g/day &  
0.2g/day



decrease in Irish adult and teen diets respectively, as a result of food and drink industry efforts

### Total fat

Stable  
2005-2017



### Sodium

Minimal impact  
on sodium levels



from food changes in Irish diets between 2005-2017

### Energy

Stable  
2005-2017



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**Thank You**

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