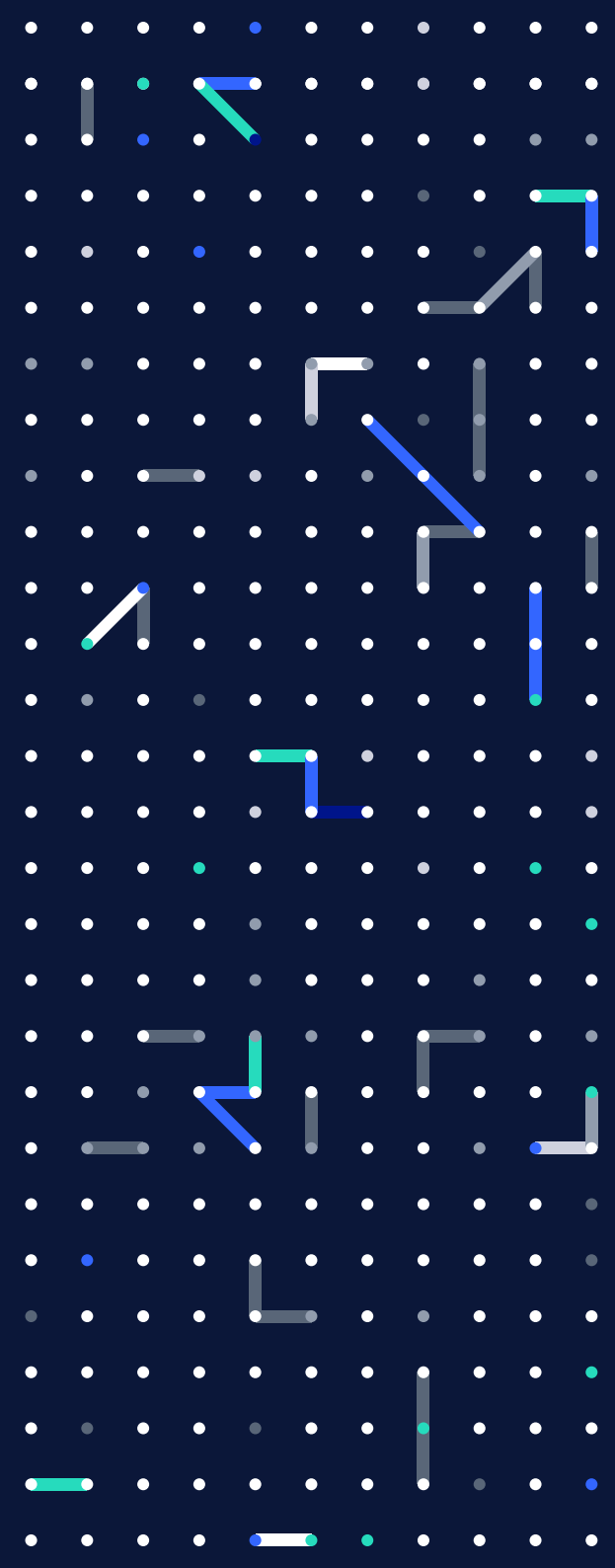


▶ **Creme Global**

# **Creme Global** **Nutrition Expertise** **and Solutions**

4<sup>th</sup> Floor, The Design Tower  
Trinity Technology & Enterprise Campus  
Grand Canal Quay, Dublin 2  
Ireland, D02 P956

+353 (1) 677 0071  
info@cremeglobal.com  
www.cremeglobal.com



# Our Expertise

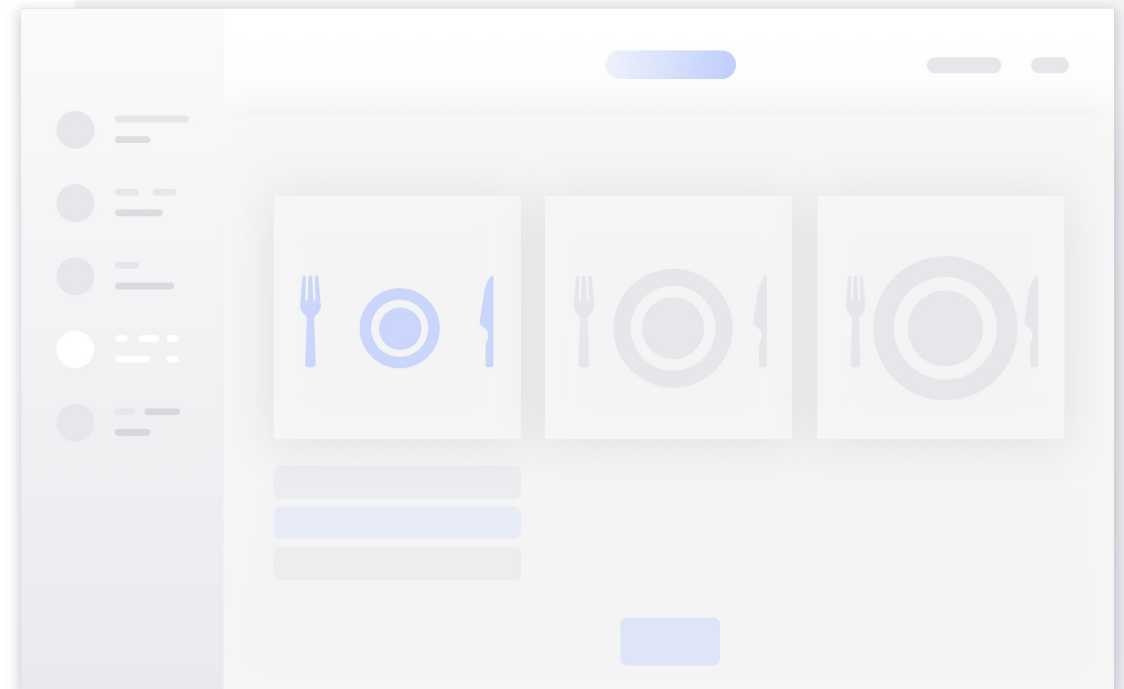
Creme Global has more than 15 years experience in the food and nutrition domain and our own in-house team of Nutrition and Food Science experts.

We help our customers gain nutritional insights in specific populations. We simulate behavioural changes and food and beverage compositional changes in detailed food consumption survey data. The results of these what-if scenarios can provide evidence to support businesses decisions in their organisation. We have developed many models and curated datasets which help our clients and partners to make sense of the complexity of nutritional issues.



# Our Model

Creme Nutrition® is a unique online dietary intake analysis tool which utilises pre-installed or user's own data to assess and understand nutrient and food intakes, the impact of changes in formulation, portion sizes, food replacement in populations across the globe in a fast, streamlined, easy to use manner.



# Resources and Insights



## Consumer intake analysis and nutritional adequacies

- Food intakes
- Nutrient intakes
- Key intake drivers
- Breakdown by consumers and demographics of interest



## Global data sets

- Nationally representative and readily installed data from the US, EU, China, Brazil, Mexico, etc.
- Use own data, i.e. formulation data, market share data



## Use data to make decisions on

- New product development
- Optimal product formulation
- Product market fit
- Portion size



## Understand the full picture

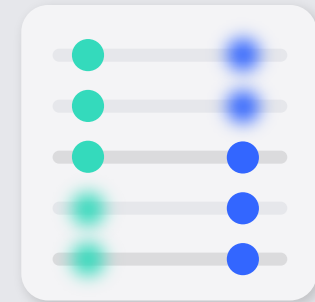
Intake distribution to understand low and high consumers. Our bespoke analysis can determine intakes per age, sex, health status to identify the consumers at lowest or highest risk.

# Food Data

We source data from various national databases with varying structure quality levels. Our expert team ensures that data used is curated and optimised for effective use in models. We can pre-emptively highlight any data issues that would affect the results.

Main sources of data are Food Consumption Surveys and Concentration Data, generally food composition data. Consumption surveys contain a record of dietary patterns of all participants of the survey. From the surveys we can obtain the amounts and types of foods consumed, as well as body weights of every subject. The Concentration data can either be provided in the form of point estimates or distribution of values. Such data can come directly from the survey, or other databases.

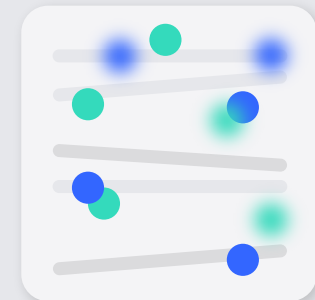
**Well Structured Data**



**Unstructured Data**



**Messy Data**



# Food Consumption Surveys

Food consumption surveys contain detailed information about participants of the survey, as well as a record of foods consumed by each participant every day covered by the survey. This includes a description of individual foods, together with the amounts of these products consumed per consumption event. Also, the concentration of each nutrient is provided for each individual food consumed in the survey. Finally, the foods are grouped in order to conveniently assess dietary nutrient intakes per food group.

## Structure of Data



### Subject Data

	Individual Food	Food Group	Nutrient Concentration
	Orange	Citrus Fruits	Calcium: 0.05 g/100g
	Soda	Carbonated Drinks	Energy: 51 kcal Sugars: 13.3 g/100g
	White Bread	White Bread and Rolls	Carbohydrates: 49.4 g/100g

# Concentration Data



## Focus on

- Point estimates, i.e. average at food or food group level
- Known ranges
- Empirical distributions (e.g. a set of analytical determinations)
- Parametric distributions (derived from a set of data)
- Occurrence



## Many types of data we can use

- Publications and reports
- Proprietary data
- Databases (structured, unstructured)

# Survey Data Map

Creme Nutrition® can carry out detailed consumer exposure assessments for populations in Europe, North America, South America and Asia.

United States

Brazil

United Kingdom

Israel

France

Mexico

China

Ireland

The Netherlands

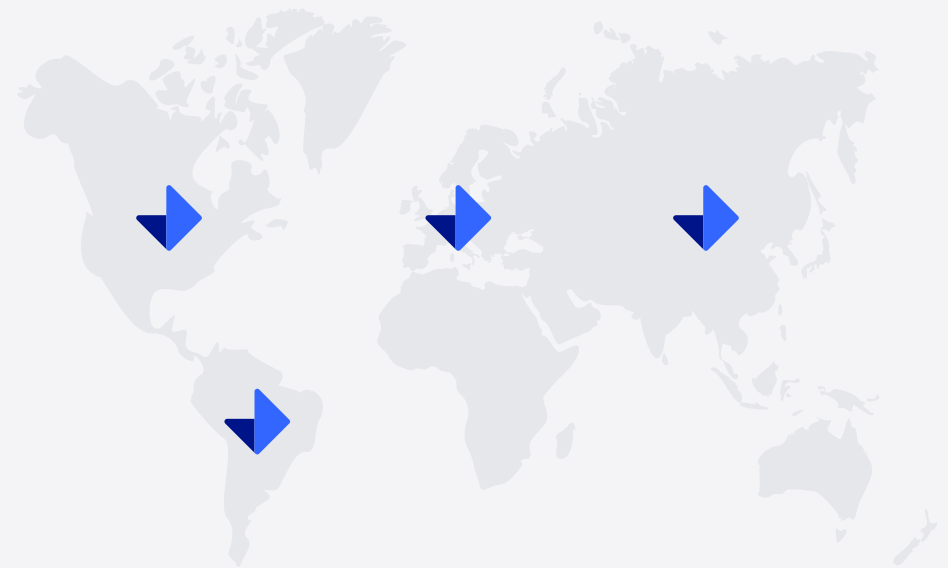
Belgium\*

Italy\*

Spain\*

Denmark\*

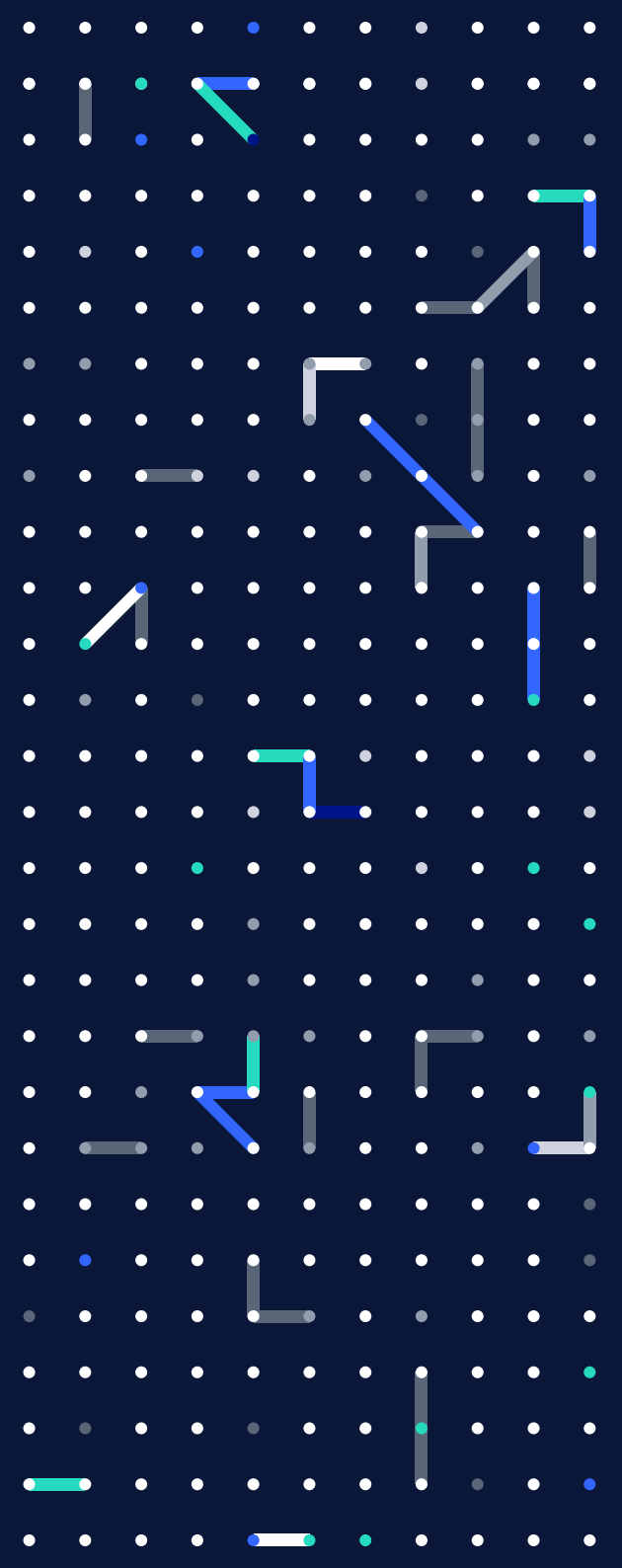
\* Require Permission



We can also provide data from alternative sources such as market research, crowd sourced platforms and online data gathering tools like Foodbook 24.



# Case Studies and Project Overviews



# Foodbook 24

Along with researchers at University College Dublin Creme Global have designed an online tool that will record the nutritional habits of the Irish population.

Foodbook24 is Ireland's first online dietary assessment tool that has been specifically designed for the Irish population. It was designed to capture the dietary intake of individuals using a cost-effective approach.

The online tool allows users to list their various meals of the day and any snacks in between. They will then provide more detailed information about the food and drink items they consumed that comprised the meals using portion size pictures to assist them in quantifying how much they ate.

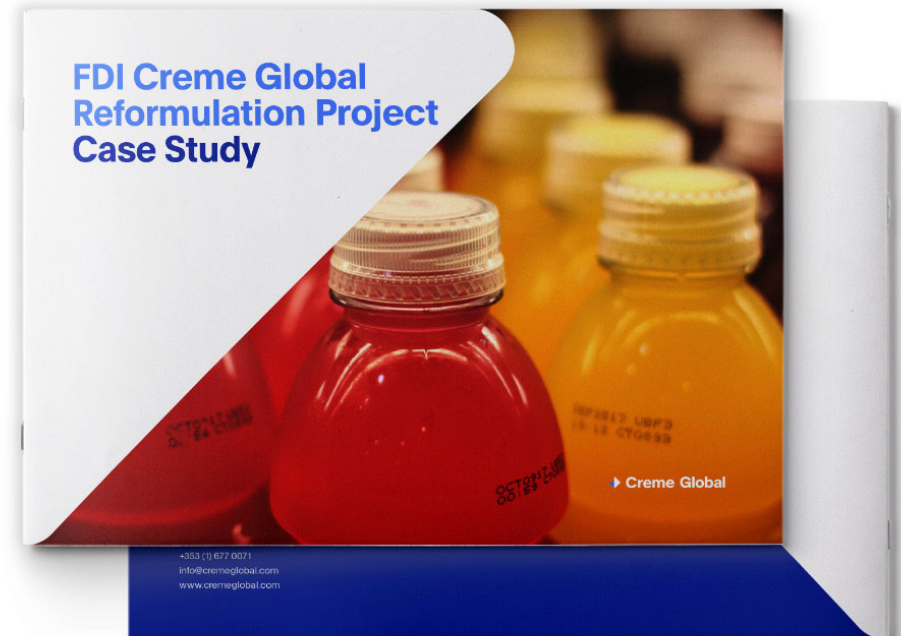


# FDI Creme Global Reformulation Project

When industry leaders act collectively to improve their products, the results can be very impactful, yet difficult to quantify.

Food Drink Ireland (FDI), formerly Food and Drink Industry Ireland (FDII), is the main trade association for the food and drink industry in Ireland. Reformulation of foods and beverages by the food industry in Ireland is not new. It is done to achieve several corporate objectives, including to improve the nutritional content of their products.

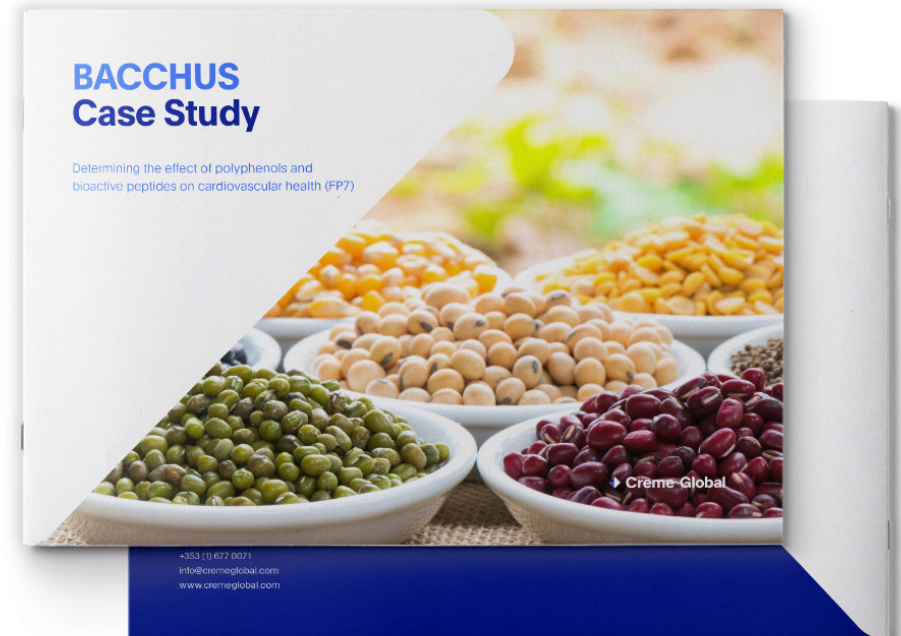
Nutrition information related to salt, sugar, fat, saturated fat, and calories of the affected foods over time were collected from the FDI members. Nationally representative Irish food consumption data was altered to reflect these nutritional changes over time. Nutritional intakes in the Irish population were calculated before and after reformulation in order to quantify the impact of these changes.



# BACCHUS

Creme Global was a partner in the European Framework project called BACCHUS. The main objective within the BACCHUS project involved setting in place best practice guidelines for reviewing EFSA's (European Food Safety Authority) approach to health claims and establishing solid guidelines for the project partners which consisted of 26 EU partners, including Creme Global as the technology partner.

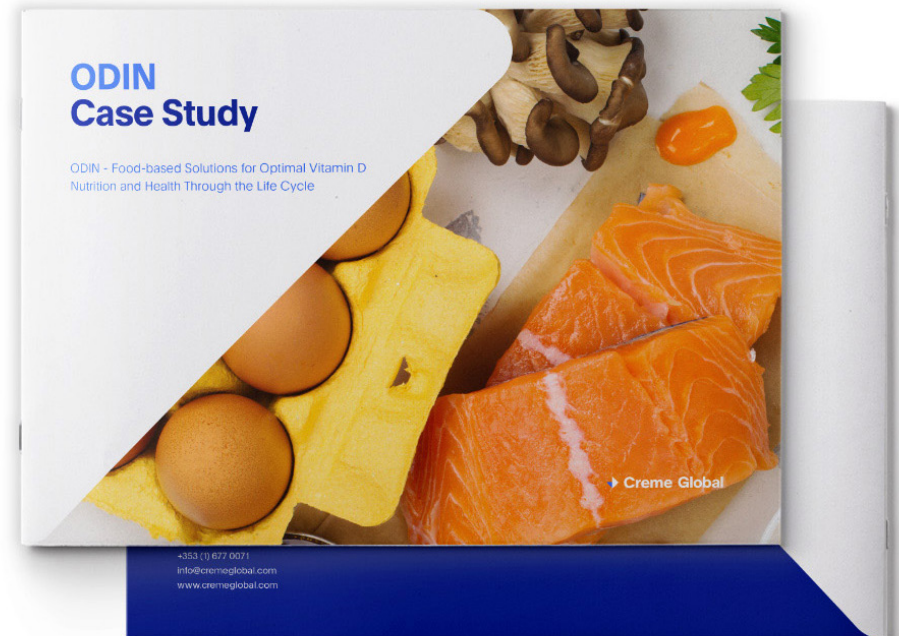
The health claim focus for this project concentrated on the effect of polyphenols and bioactive peptides on cardiovascular health. Furthermore a tool was built to assess current intakes of polyphenols and bioactives in Europe using food consumption survey data from Norway, the UK, Ireland and Spain.



# ODIN FP7

ODIN was an EU funded project that involved a multi-disciplinary team of 30 partners from 18 countries, which commenced a 4-year program of research in November 2013. ODIN aimed to provide high quality scientific evidence to prevent vitamin D deficiency among European citizens and improve nutrition and public health through food.

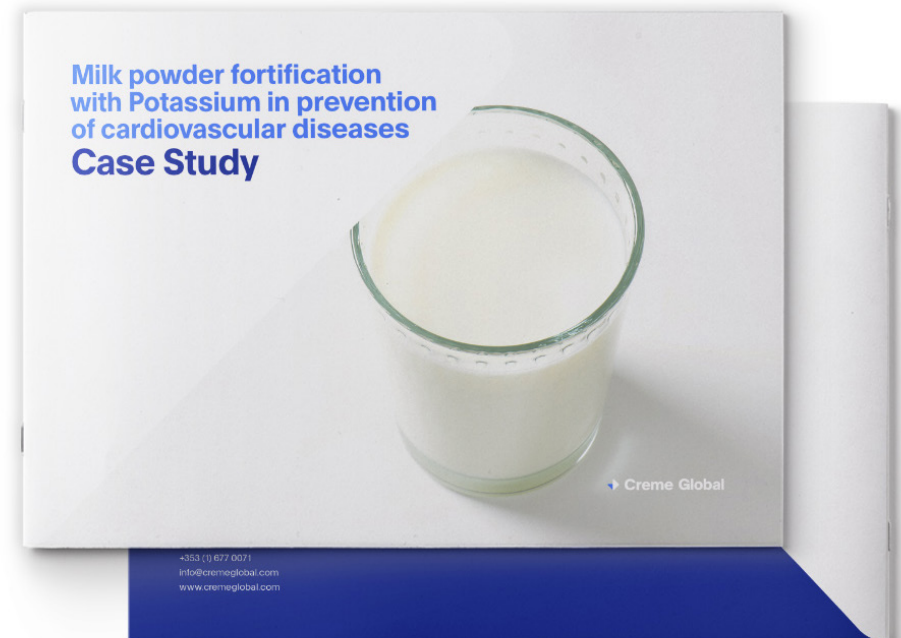
In the ODIN project, Creme Global was involved in investigating dermal (sunshine) and dietary exposure to vitamin D. Within ODIN, innovative food-based solutions to increase vitamin D intake were developed through the bio-fortification of meats, fish, eggs, and dairy products. This data was used within Creme Global's dietary models to assess the impact of multiple scenarios optimising vitamin D intakes via biofortification of selected food products. This involved assessing the changes in vitamin D content of the food supply on vitamin D intakes accounting for diversity across the European latitude (~34-70°N). As part of the study, Creme Global investigated the consumer safety of the incorporation of fortification and dietary supplementation in Europe.

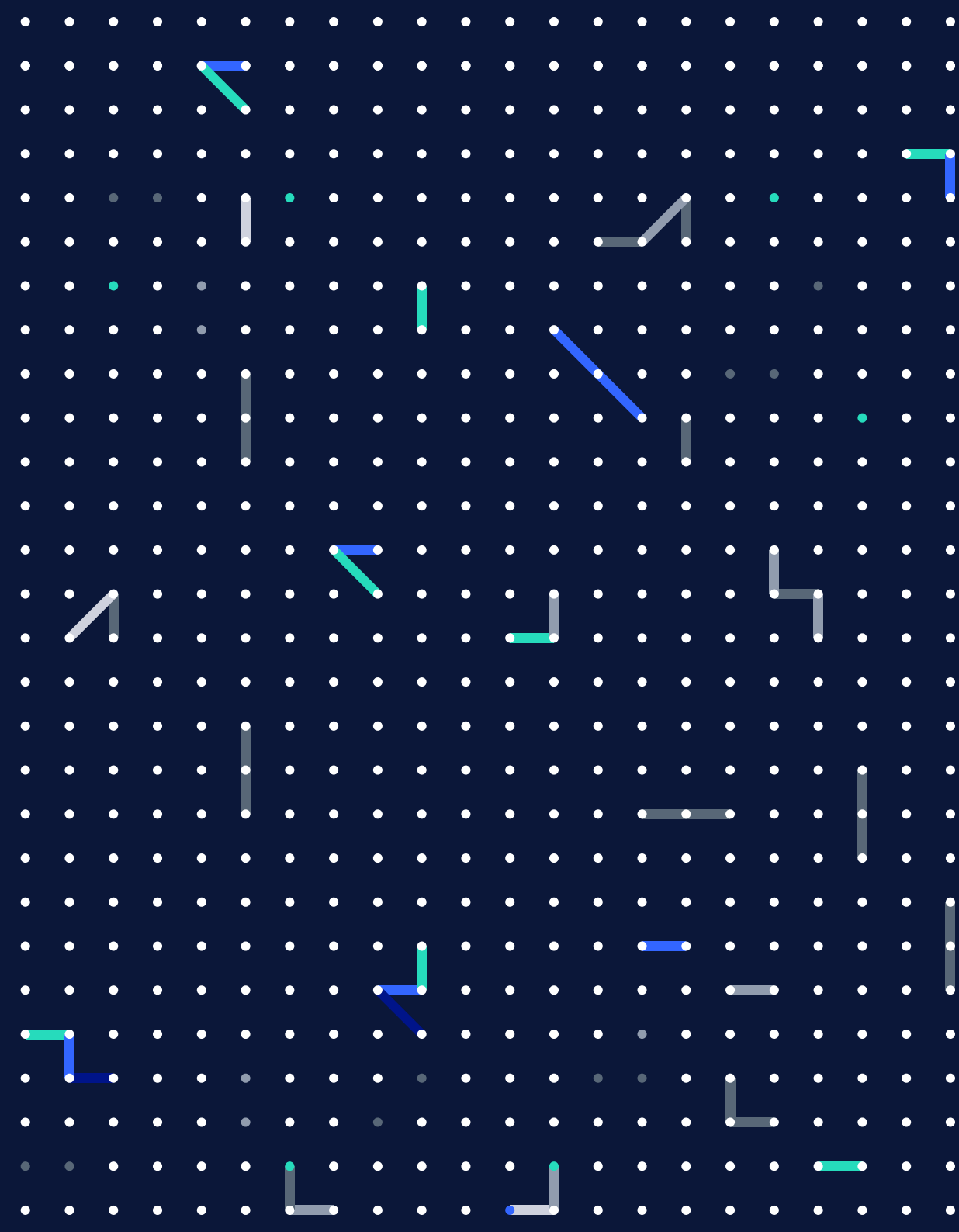


# Milk powder fortification with Potassium in prevention of cardiovascular diseases

Our client wanted to look at the effect of nutritional intervention products, with a focus on functional dairy products, in reducing the risk of cardiovascular diseases in China. The population of interest were adults above 45 years of age with a predisposition to hypertension.

Creme Global work in data preparation and dietary intake modelling enabled the detailed analysis of the dairy product fortification with Potassium on hypertension and cardiovascular diseases.





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