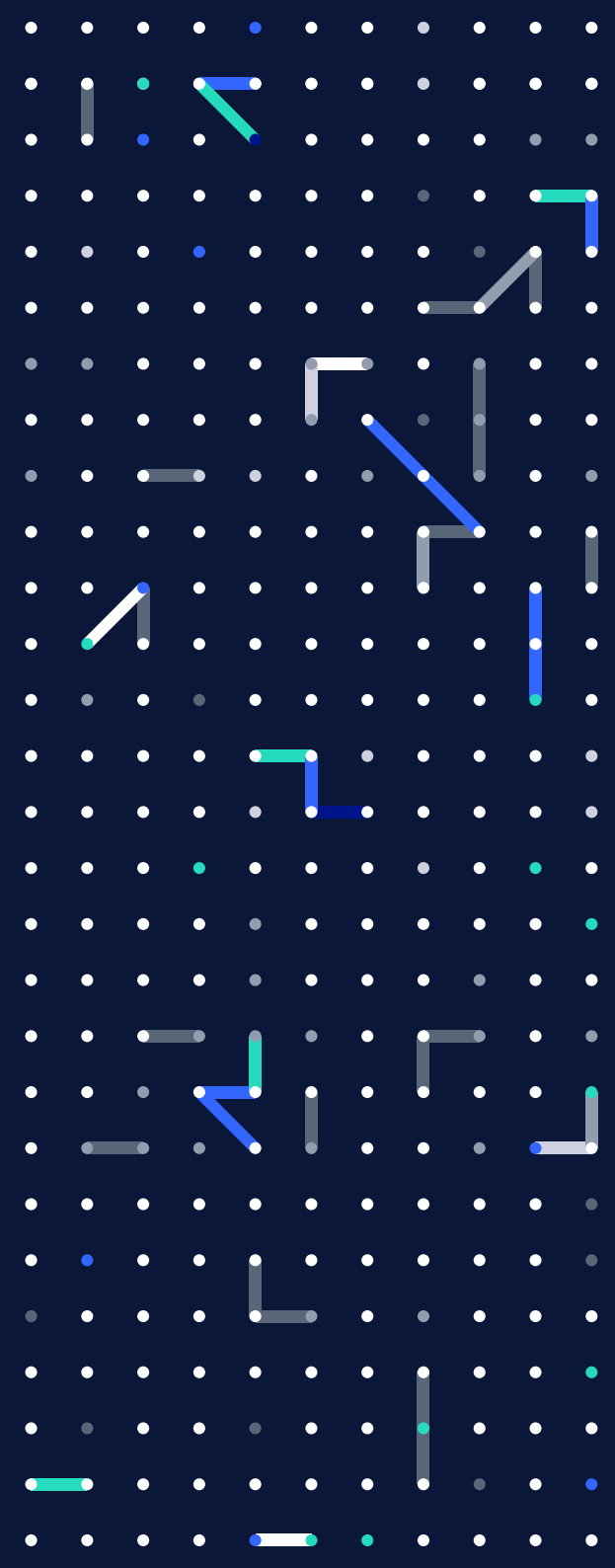


▶ **Creme Global**

Creme Global **Food Safety Expertise** **and Solutions**

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Our Expertise

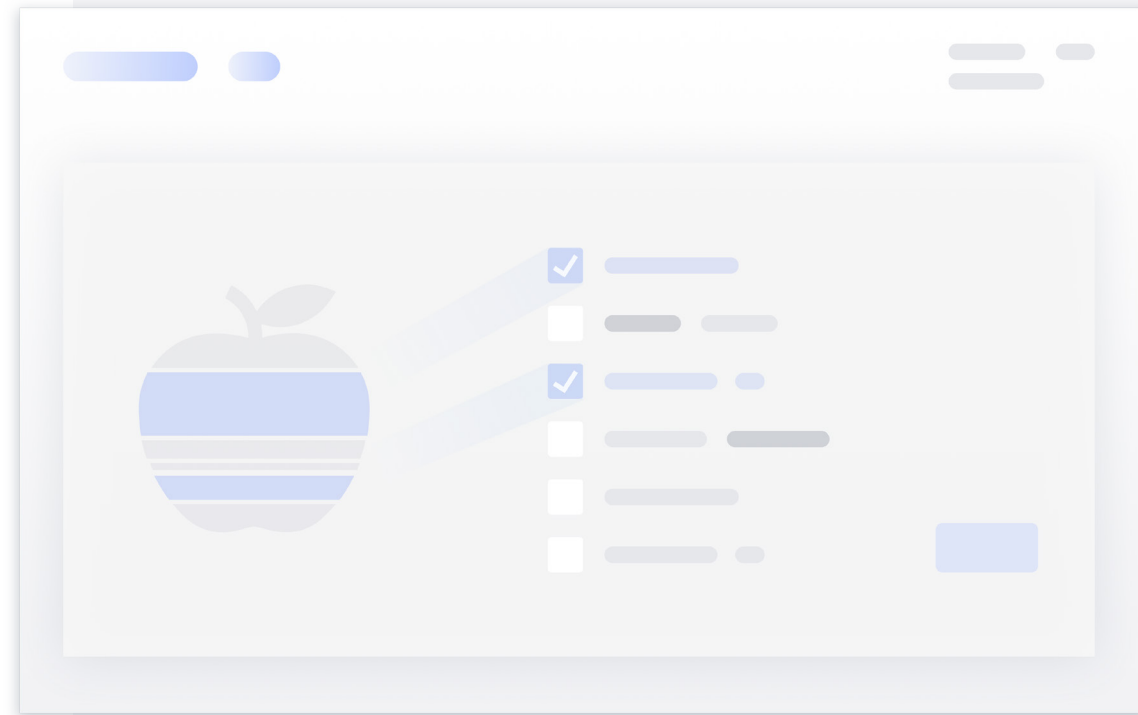
Creme Global has over 15 years of experience in the food safety domain. We have our in house team of nutritionists, microbiologists and mathematicians dedicated to finding new numerical models to better understand and assess risks in food products.

We have developed many models along with curating datasets which help our clients and partners to assess the potential risk in their food supply chain and manufacturing. Our collaborations with leading Universities and research institutes help us define and validate our experimental approaches and validate our predictive models.



Our Model

Creme Food Safety™ is the leading software service that can quantify total aggregate exposure from constituents and ingredients. It uses cutting-edge modelling data and cloud computing to develop safer products faster and more cost-effectively than ever before.



Resources and Insights



Consumer exposure assessments

- Food, chemicals, contaminant, pesticides, additives, flavourings, ingredients exposure
- Key drivers of exposure
- Breakdown by groups of consumers and demographics



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

- Regulatory
- Consumer Safety
- Proposed use levels, maximum concentration levels



Understand the full picture

- Refined distribution of exposure
- Breakdown by age, sex etc to identify the consumers at lowest or highest risk

Unique Solutions



Aggregate Exposure

Food safety exposure and intake assessments



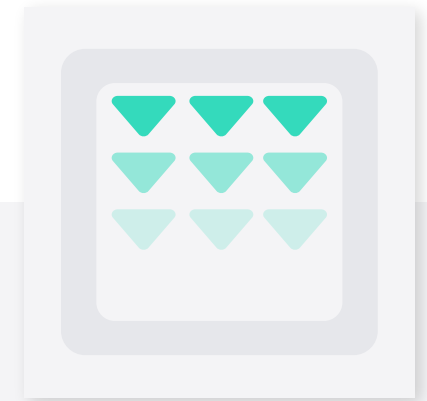
Any Substance

Additives, flavourings, contaminants, pesticides, novel foods and ingredients, other substances



Microbial Modelling

Bespoke predictive microbial modelling and tools



Packaging Migration

Cutting-edge food packaging migration modelling and exposure

Survey Data Map

Creme Food Safety™ 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

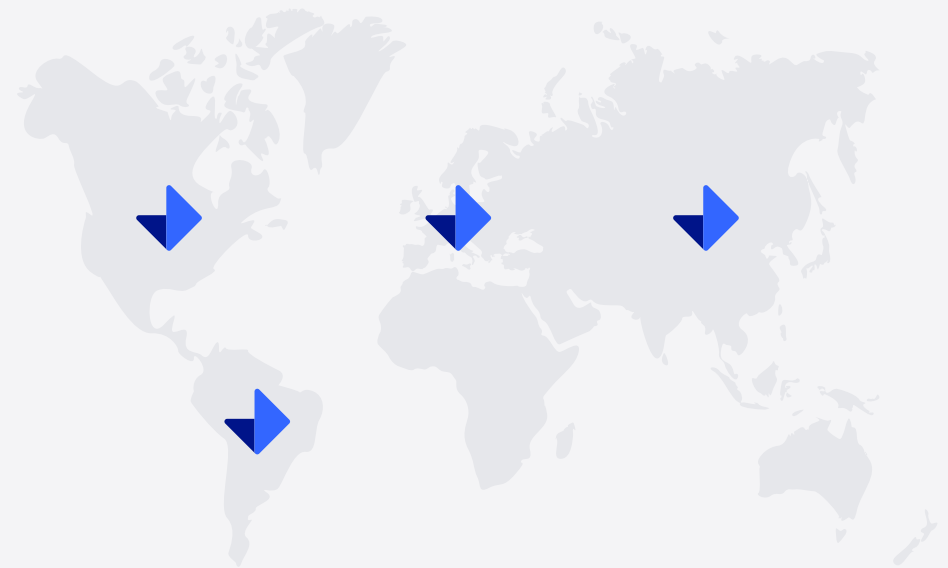
Belgium*

Italy*

Spain*

Denmark*

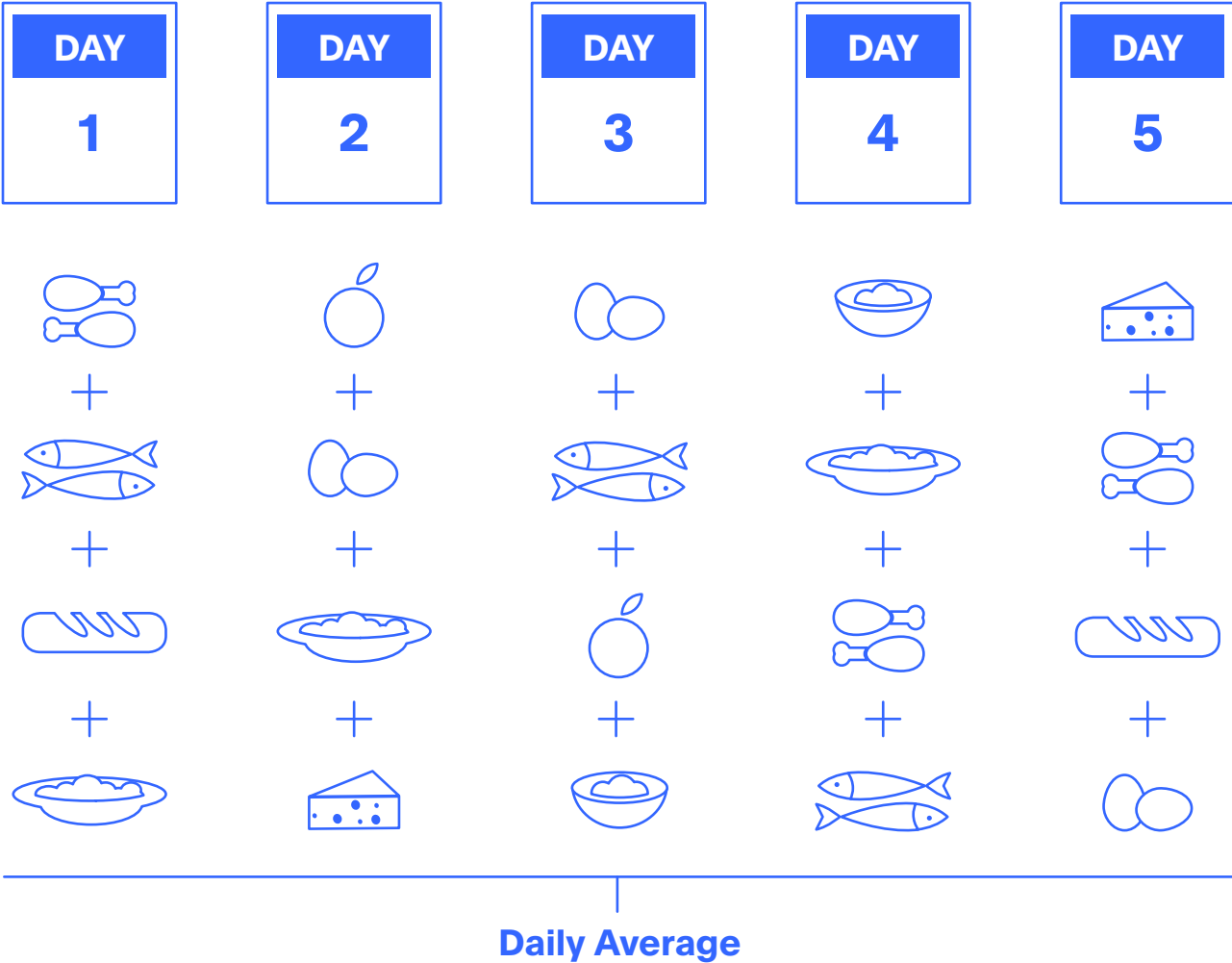
* Require Permission



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

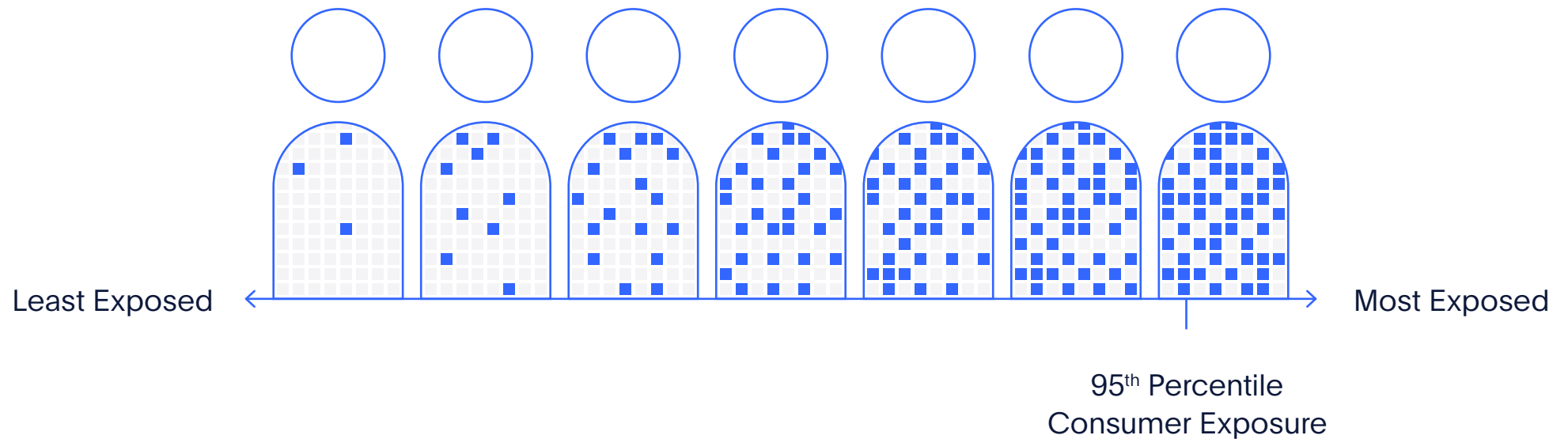
Probabilistic Exposure Model

This methodology is applied to all subjects in the food consumption survey. By multiplying the amounts by concentrations and summing the exposure from each consumption event at a subject level, we obtain the daily average exposure for each subject.

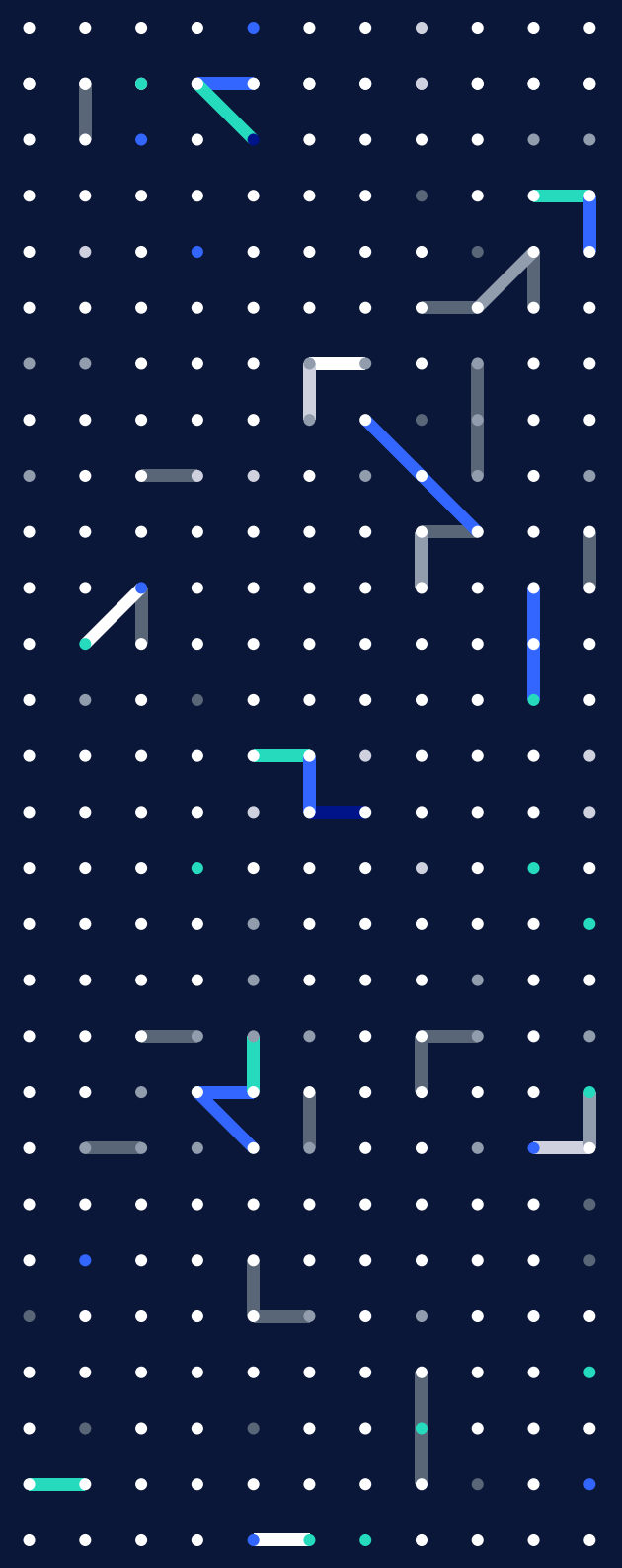


Population Exposure

We can rank the consumers from least to the most exposed. This gives us a total overview of exposure levels in the population. Depending on the needs, we can then look at the mean or median consumer exposure, or the 95th percentile exposure and compare it to health-based threshold such as the Acceptable Daily Intake.



Case Studies and Project Overviews



FACET

FACET is a publicly available exposure assessment software system which estimates exposure to flavours and additives from foods, beverages, and food contact materials across Europe.

FACET, standing for Flavours, Additives and Food Contact Materials Exposure Tool, The FACET software is the culmination of over five years' work in collaboration with partners from industry, government and academia across Europe. This was the first time that so many stakeholders across numerous areas have come together to develop a harmonised methodology to monitor consumer exposure to these chemical groups in Europe.



Hawkins

Predictive Models and Software for *Listeria* Monocytogenes in Ready-To-Eat Meats with varying Antimicrobial use.

The goal of this project was to develop a predictive model and software application that will estimate the growth of *Listeria* monocytogenes in ready-to-eat meats with different formulations and anti-microbial concentrations. Upon the successful validation of the models, both were incorporated into a web-based application with an easy-to-use interface. The model allows the user to predict the patterns of microbial growth and death for different combinations of environmental conditions for which experiments were not previously carried out.

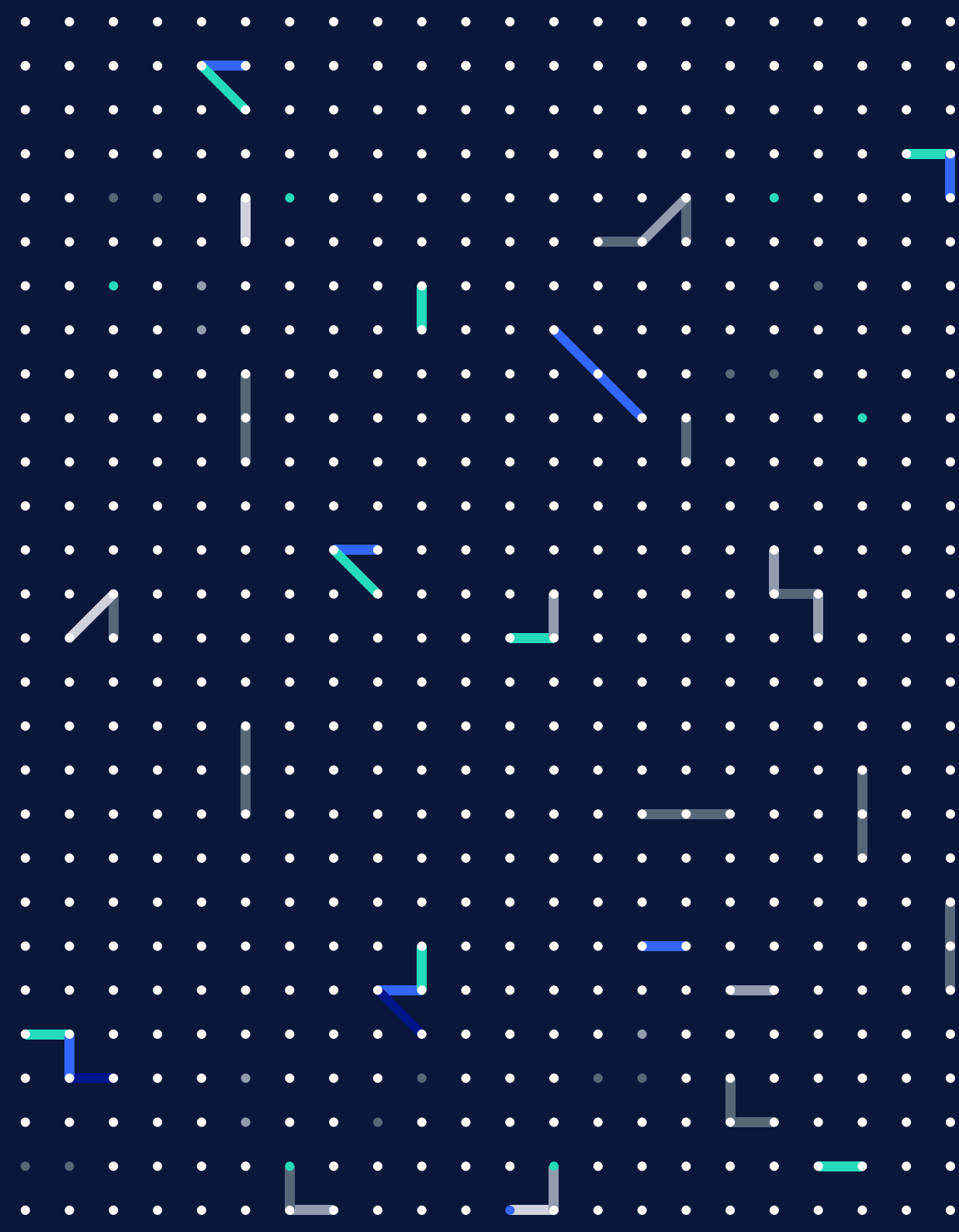


SAFE

Next generation genomic techniques for characterizing the microbiome, coupled with data analytics, machine learning and advanced scientific modelling to predict the likelihood of safety or quality concerns.

SAFE was a partnership between the UCD Centre for Food Safety, Creme Global and six leading food and nutrition companies. The project aimed at proactively reducing the risk of bacterial contamination in the food supply chain and final products.





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