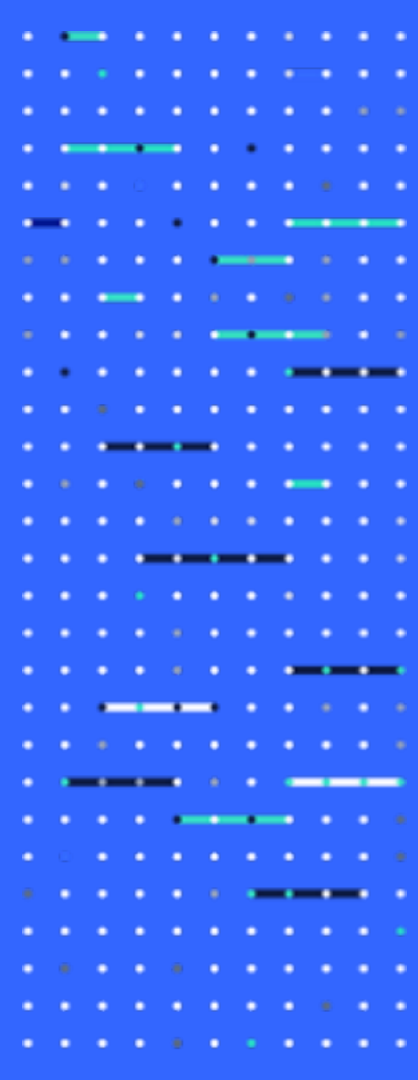


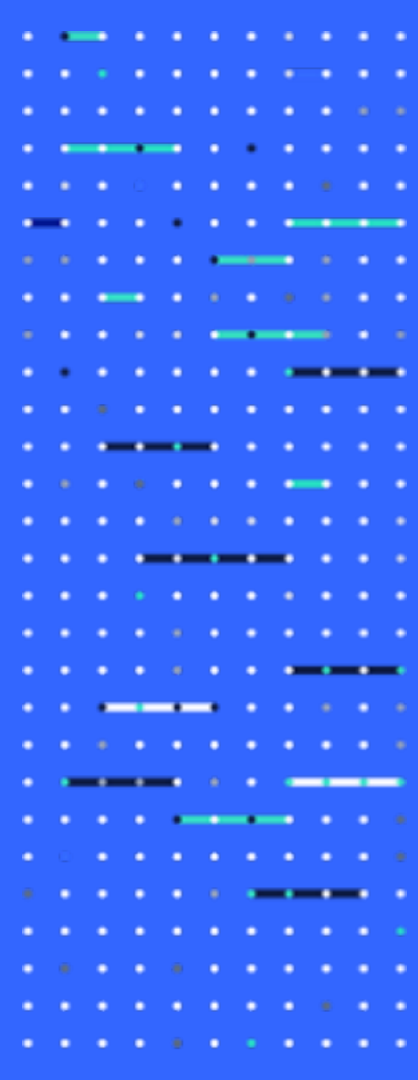
Data, Technology and Personalised Nutrition

Rebecca Barron, MSc
Creme Global



Content

About Creme Global
Nutrition Intake Modelling
Food4Me Project
Foodbook24 Project
Learnings & Challenges



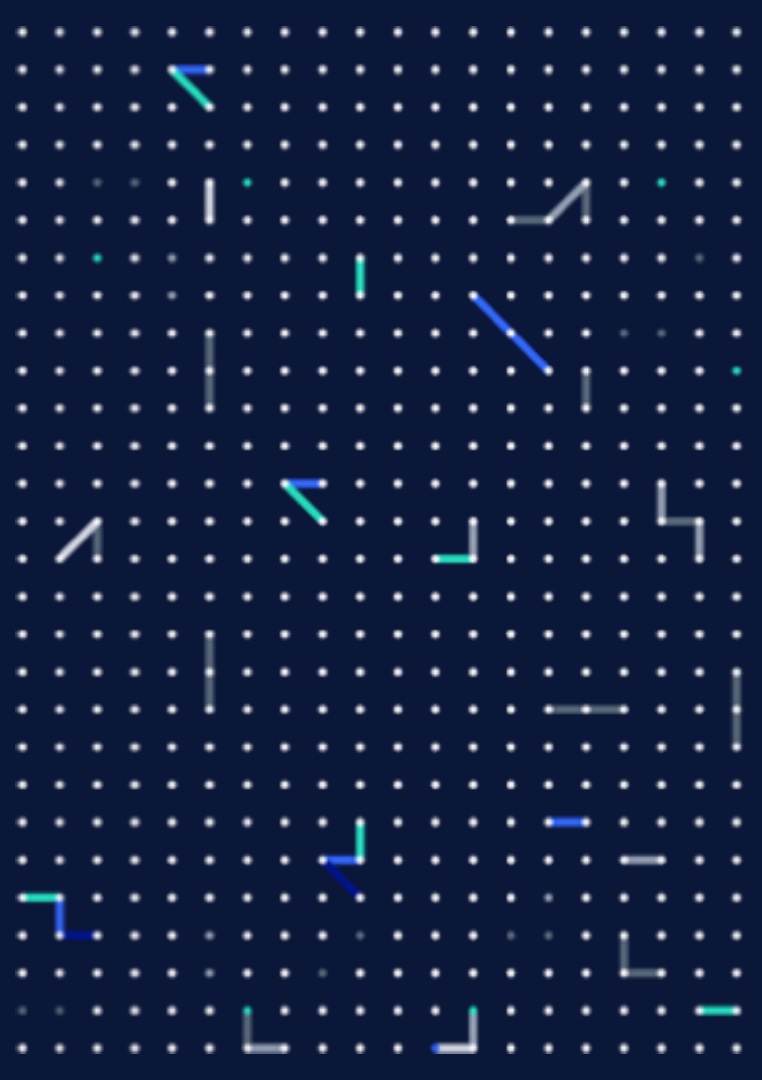
cremeglobal

Creme Global is a data science and technology company.



We are building a world where everyone can make better decisions, based on real data.

Our teams of experts in mathematical modelling, statistics, software development, food science and nutrition develop and deploy our software models for consumer intake modelling, product safety assessment, regulatory affairs and innovation projects.



Our Services include



Technical Services
& Scientific Projects



Data Science Tools
& Patents



Data Management



Predictive
Modelling

Personalised Nutrition

Global rise of diet-related non-communicable diseases

- Most interventions to alter behaviour and improve health have limited impact
- Individualising nutritional advice, products and services- more effective than generic “one-size-fits-all approach”



Nutrition Intake Modelling



Nutrition Intake Modelling

Use data science to understand food intakes, nutrition and health in consumer populations

- Inform NPD, reformulation, public health policies etc.
- Generally use data from national food consumption surveys
- Combine with data from other sources



New Products and Predicting Health Outcomes

Model the effects of a product on blood pressure in China

Target Group: Chinese adults (45+), milk consumers,

Product: Milk fortified with potassium

Baseline Population Intakes: Determine nutritional intake

Impact on Population Intakes: Determine change in nutritional intake

Impact of Intervention on Health Parameter: Blood Pressure

Carry out Intervention: Food replacement, introduction of product into the diet



Nutrition Intake Modelling

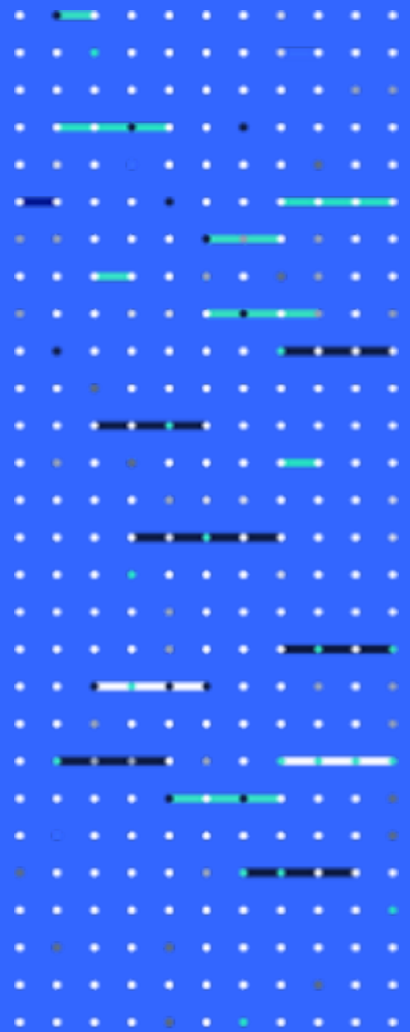
How can we use better define this modeling?

- Use of genomics data to identify appropriate populations/ risk groups and to improve modelling
- Move towards personalised nutrition



cremeglobal

Food4Me



Food4Me

Changing the way we eat through personalized nutrition

Food4Me was an EU FP7 funded project designed to investigate the potentials of a web-based personalised nutrition service

1. Personalised dietary analysis
2. + Personalised phenotype analysis
3. + Personalised genomic analysis
4. Control (general guidelines)



Food4Me

Creme Global Involvement

Science and Technology Partner

Online Tool

- Volunteer information
- FFQ
- Volunteer communications
- Researcher dashboard

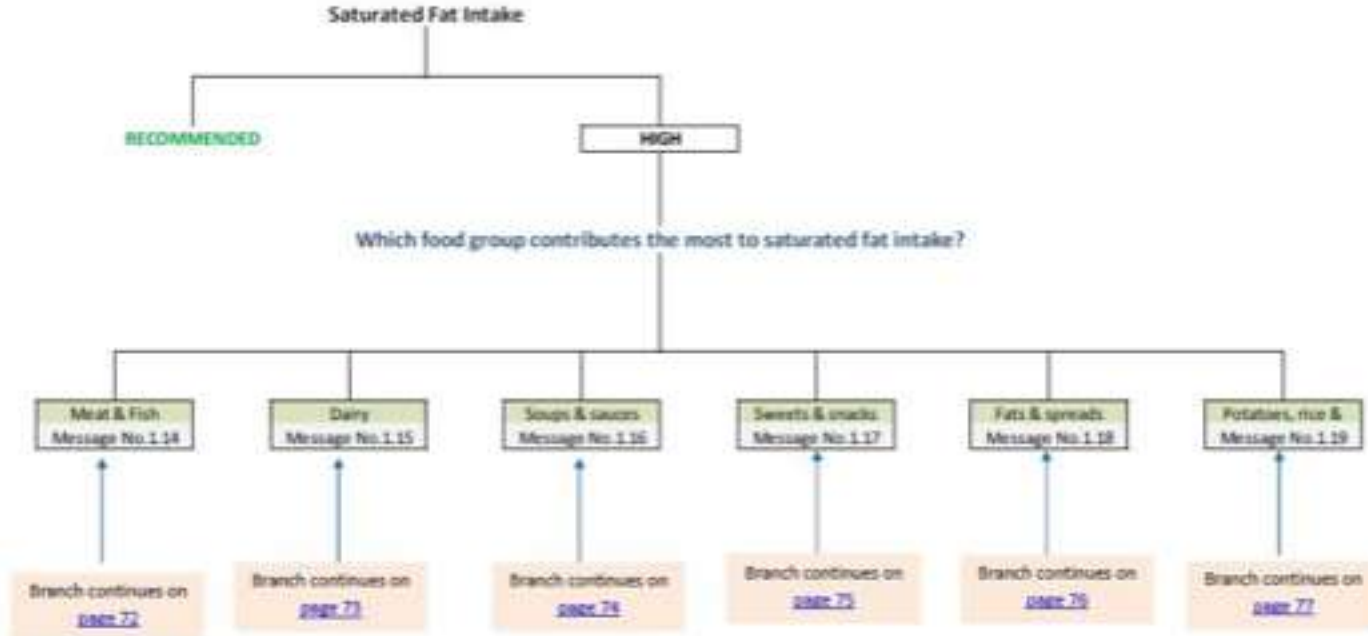
Personalised Dietary Feedback

- Collaborated on algorithms for personalised nutritional recommendations
- Maintained the platform for survey data capture, analysis and reporting.



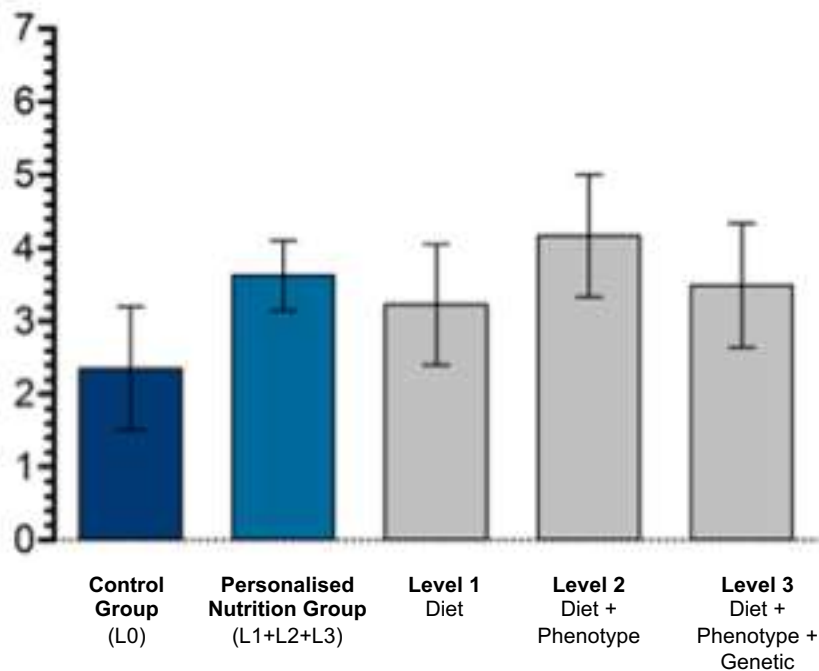
Researcher Decision Trees

Food4Me Saturated Fat intake



Food4Me Results

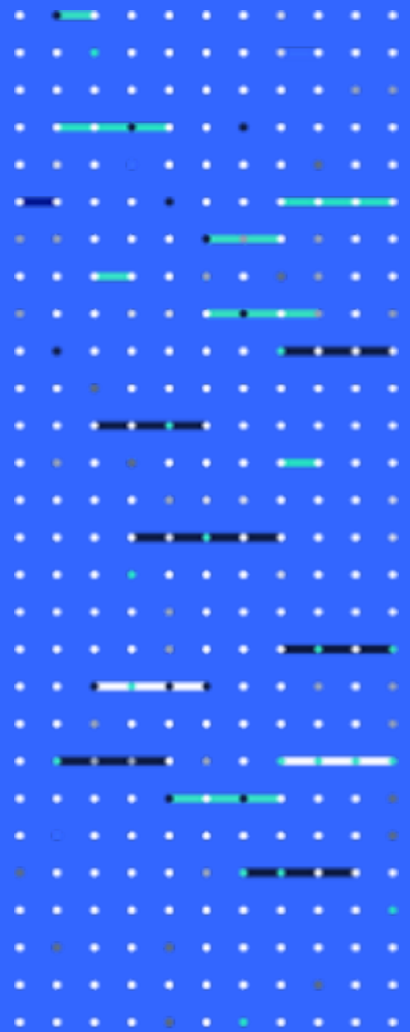
Healthy Eating Index



Celis-Morales, C., et al, 2016. Effect of personalized nutrition on health-related behaviour change: evidence from the Food4me European randomized controlled trial. *International journal of epidemiology*, 46(2), pp.578-588.

cremeglobal

Foodbook24 and Creme Diet



Foodbook24 and Creme Diet Better Way of Gathering Food Consumption Data for Populations

Developed in partnership with UCD School of Agriculture and Food Science, Foodbook24 is designed to capture the nutrient intakes and dietary habits of the Irish population.

- Collect 24-hr recall data
- USDA Multiple Pass Method
- Validated



Foodbook24 and Creme Diet

Better Way of Gathering Food Consumption Data for Populations

Creme Diet can incorporate your own data as well as offering inbuilt data

- Easily reach large populations across different locations
- Self administered
- Reduce admin/ researcher costs
- Interview bias
- Can be extended to incorporate personalised feedback



Learnings and Challenges

Scientific Learnings and Challenges

- Limited evidence suggesting individuals modify their food intake due to their genotype
- Dietary information gathering and feedback was successful



Learnings & Challenges

Data Collection Challenges

- Tracking diet is still a challenge, however there are more web-based platforms for this available now.
- Taking blood samples is cumbersome and uncomfortable for consumers.
- Data remains a challenge



Learnings & Challenges

Developing a Business in This Sector

- We are a B2B company providing services to industry (not consumers - B2C)
- We have seen a recent growth in interest from industry in this field
- We are interested in collaborating with partners who will deliver products and services to consumers



cremeglobal

Thank you

