



Nutritious by Design

introduces a **data-driven framework** for integrating **nutrition and health principles** across the **New Product Development, processing** in the food industry.

Empowering better food, by design

Developed with funding from



Co-funded by the
European Union

Implemented by



1. Product Analysis

5.099

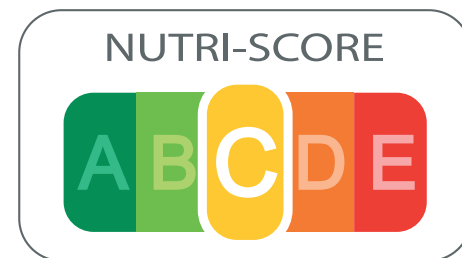
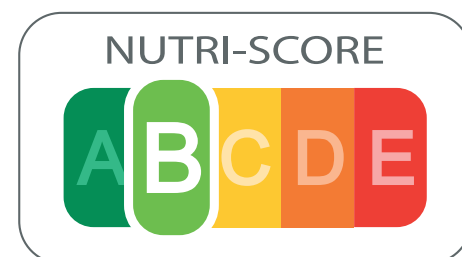
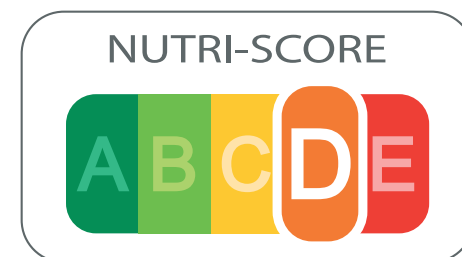
packaged products analyzed (3,688 in Slovenia and 1,411 in Greece).



Products were analysed using

- Nutritional composition
- NutriScore classification
- Ingredient lists
- NOVA processing classification

More than 70% of analysed packaged food products are considered “ultra-processed” foods (UPFs) based on **“NOVA classification”**. Most products belong to **“NOVA group 4”**, meaning they are considered “highly processed” and not because of the processing level but because of the multiple additives and refined ingredients in their recipes. Are these products unhealthy?



Common ingredients link to “ultra-processing”

- Sugars such as glucose-fructose syrup
- Protein for fortification
- Added Fats
- Sweeteners
- Emulsifiers

“Ultra-processing” lowers Nutri-Score for

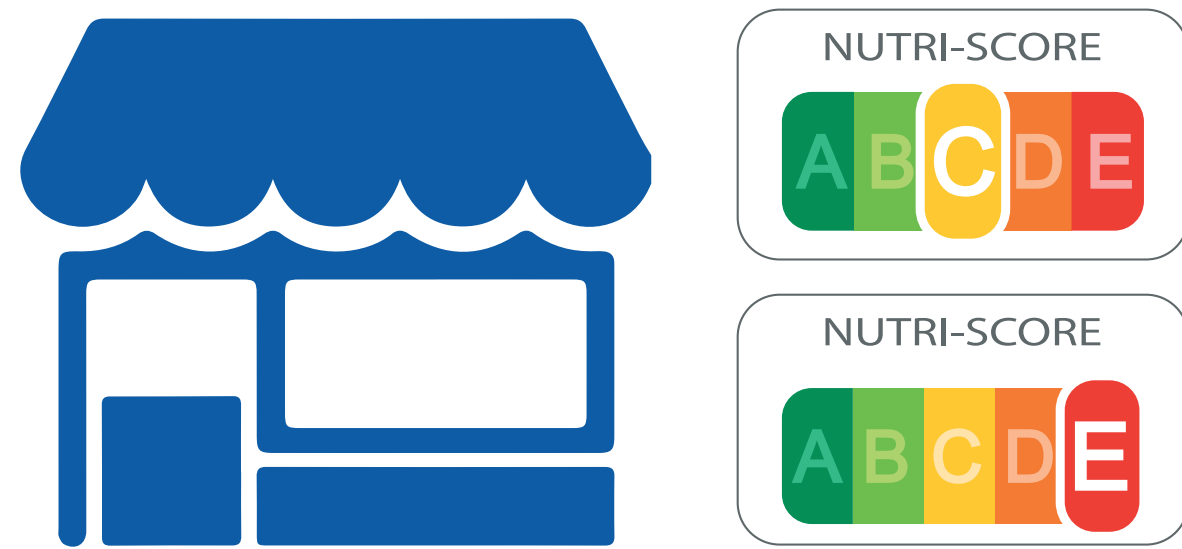
- Breakfast cereals
- Nectars
- Soft drinks
- Flavoured yogurt drinks

BUT may be beneficial for

- Plain yogurts or other dairy products with added protein and vitamins

3. Intention vs Expertise and Competition

The analysis also revealed structural differences between small producers and large food manufacturers.



Small and artisan producers

- Shorter ingredient list and / or with less additives and refined ingredients
- However, products may still show worse NutriScore ratings



Large food manufacturers

- More likely to achieve better NutriScore ratings
- Driven by market competition and reformulation strategies

Based on the research findings, the Nutritious by Design framework was developed.



The framework supports the creation of healthier processed foods through a data-driven process:

1. Market scoping

Identification of product categories with improvement potential.

2. Statistical analysis

Evaluation of formulations, ingredients and nutrition data.

3. Product ideation

Development of new product concepts by multidisciplinary teams using diverse food data.

5. Proof of Concept through Implementation



2
trainings &
hackathons
on food databases &
data-driven new product
development process

3
continents
(Europe, Asia, Africa)

12
countries
(Greece, Romania, Poland,
Germany, Spain, UK, Italy, Malaysia,
Serbia, China, India and Ghana)

42
participants
from industry, research,
and entrepreneurship.

10
novel
product ideas
addressing key
nutritional challenges



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