## **Personalized Nutrition**

Proposals shall deliver innovative solutions for personalized nutrition advice and/or support that will help consumers to achieve their optimal health and well-being and to adopt long-term healthy and sustainable diets. These concepts/tools/products/services shall focus on the consumer benefit and integrate all relevant factors such as health indicators, nutritional requirements, food composition, lifestyle, preferences, environment (i.e. cultural and socio-economic), etc. Moreover, proposals shall address all levels of personalization: from food choice in the shop, to customised production and delivery, to specific advice/warning systems (e.g. new, smart digital/ICT applications). Besides activities such as prototyping, testing, demonstrating, piloting and large-scale products validation in a near to operational environment, proposals may include limited research activities. Assessment and deepening the understanding of the drivers of food choice, the food environment, incentives and other relevant aspects influencing the motivation and behavioural change needed to sustain long term healthy and sustainable diets are essential. Proposals shall also develop and/or validate innovative approaches/methods/technologies for dietary assessment (e.g. measure dietary intake). Proposals shall build on existing knowledge and make use of relevant research infrastructures. To ensure the success of the developed actions, consumer engagement and acceptance, gender differences in patterns of nutrition and ethical issues, particularly on the use of personal data, should be taken into account. When applicable, proposals should address requirements from relevant EU regulatory frameworks, including pre-market approval.

The Commission considers that proposals requesting a contribution from the EU of the order of EUR 7 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

The World Health Organization estimates that about 80% of premature heart disease cases, strokes, type 2 diabetes and 40% of cancers could be avoided if the major risk factors for non-communicable diseases, such as unhealthy diets, were eliminated[[http://www.who.int/features/factfiles/noncommunicable\_diseases/facts/en

/index9.html]]. Whereas a one-size-fits-all approach may fail, personalized nutrition can empower consumers to adhere to a long-lasting, healthy, pleasurable, nutritional and sustainable diet when tailored to individual parameters such as: the physical and psychological characteristics (health status, phenotype, genotype, microbiome configuration), the needs and preferences, behaviour, lifestyle, and budget; alongside to general economic factors (e.g. market prices) and socio-cultural aspects. Personalised nutrition can be used for different target groups from healthy people to patients such as malnourished people, vulnerable groups, people with allergies or non-communicable diseases, including cancer. Specific dietary and behavioural advice and/or support should be based on robust scientific evidence and knowledge from nutritional, medical, biological and social sciences and the humanities. Tackling this challenge requires a combined inter- and transdisciplinary approach engaging academics, policy makers, civil society, relevant industry and market actors.

In the framework of SDG no 1, 2, 3, 9, 12 and 15, the EU's Bioeconomy Strategy 2012, and the FOOD 2030 Staff Working Document[[European Research and Innovation for Food and Nutrition Security, SWD(2016)319. http://ec.europa.eu/transparency/regdoc/rep/10102/2016/EN/SWD-2016-319-F1-EN-MAIN.PDF]], proposals should explain how activities included contribute to:

- Empowered consumers able to make healthy and sustainable dietary choices;
- Personalized diets upon scientific-based dietary assessment and advice, by 2025;
- Increased consumer trust in personalized nutrition advice and/or support;
- Prevention of diet-related and non-communicable diseases;
- Increased/optimal health and well-being of individuals adopting long-lasting healthy and sustainable dietary behaviour;
- New market opportunities for novel concepts/tools/products, or services in personalized advice and/or support;
- New market opportunities for novel approaches/methods/technologies for dietary assessment.
- Move available solutions from TRL 5 to TRL 6/7

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