FoodDrinkEurope and Innovation
Actions supporting climate change adaptation and mitigation in European agriculture and the food chain.

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25 National Federations

2 OUT OF 25 Observers

25 European Sector Associations

20 Large companies

286,000 companies

4.2 million employees

Eur 1,048 billion turnover

99% SMEs

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1.8% of EU GVA

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Challenges for the Food and Drink Industry (1)

- More complex supply and production
- More elaborated food products
- Longer supply chains
- New constraints imposed by just-in-time requirements
- Increased level of protection
- Financial crisis has criminals looking for new ways to make money and they are increasingly looking at food
Challenges for the Food and Drink Industry (2)

- New emerging science
- Changes in consumer behaviour
- Demographic trends
- Enhanced analytical skills capacity
- Climate change (mycotoxins)
- Evolution (microbiological challenges)
Key challenges for research and innovation in the food sector

- ‘Fatigue’ of the sector (as a result of its maturity)
- Supply of resources
- Perception of food
- Demographics
- Empowerment of the consumers
Challenges for the food sector 2020-2025

- Food, Health and Wellbeing
  - NCDs/obesity
  - Nutritious and safe food for everyone
  - Ageing population
- New sustainable food chains, with a balanced value equation from producers to consumers
- Consumer trust and acceptance
Challenges for the food sector 2030-2040 (1/2)

- New world
  - City growth, geopolitics, corporation ownership
- Raw material scarcity
  - Feed the world population (9 billion)
  - Climate change
New ways of bringing food to consumers

- Individualised nutrition
- (Economic) empowerment of consumers
- Product formulation and food production at the consumer’s home

Food and Health

- Conflicting views: more of the same vs. much of this will have solved by then
Ideal vision for the future of the food sector

- Consumer centred
- Technology based, intelligent innovation
- Sustainable, circularity
- Robust and resilient food chain
- Flexible, dynamic
- Trusted and transparent
- Social responsibility/balanced value equation
Mitigation of climate change via reducing emissions

Global warming is already negatively impacting food production, both in terms of quantity and quality, and; the appearance of emerging and re-emerging pathogens but also and contamination

Food security for the next generations can only be ensured by becoming much more efficient in the use of our resources.
Concrete research issues supported by food industry include (1):

- the identification of precise consequences of climate change scenarios on nutritional composition of existing food and its availability;
- the identification of crop and animal germplasm with superior nutritional traits and those that maintain nutritional quality over a range of edaphic and climatic environments, increasing their tolerance to heat and drought stress and to temporary flooding;
- targeting and modelling of dietary patterns and improvements to those patterns that would have the most impact on health in different populations and improved sustainability through reduced carbon footprints;
- development of novel, improved and integrated crop management and livestock husbandry practices that deliver food of high nutritional quality while simultaneously reducing land use and harmful environmental consequences and maintaining farmer/producer economic sustainability;
Concrete research issues supported by food industry include (2)

- novel insights into the direct use of plant proteins (e.g. pulses) in the human diet;
- integration of production and nutritional data into food chain models to examine resilience and consequences for human nutrition.
- resilience of food systems towards extreme climate events and their impact on food diets and availability
- impact of climate change on zoonosis and food safety;
- modifications of food systems to reduce losses and wastes and their impact on diets
- trade-offs of evolutions of animal and crops traits and farm practices on other challenges, quantity and quality of water, of soils, energy consumption.
Conclusion

- Challenge raw material availability
- Need for integrated safety assessment approaches for holistic food systems and associated monitoring tools (Next generation strategies for food safety assessment)
- Challenge food waste reuse/ bi-products/ side streams - harmonize protocols
  - The New/Novel food chain technologies may increase productivity of the food chain and quality of foods, and could help in addressing a number of societal challenges such as an ageing population, the effects of climate change, and the reduced availability of resources.