

Bioeconomy Strategy for the future: IRTA's vision



€1,2 trillion (turnover)



€28 billion (trade)



4,2 million (employees)



18% EU exports



safety, security, quality,
availability, affordability

EU food system



7,2 billion people



9,2 billion in 2050



75% urban



↓ biodiversity

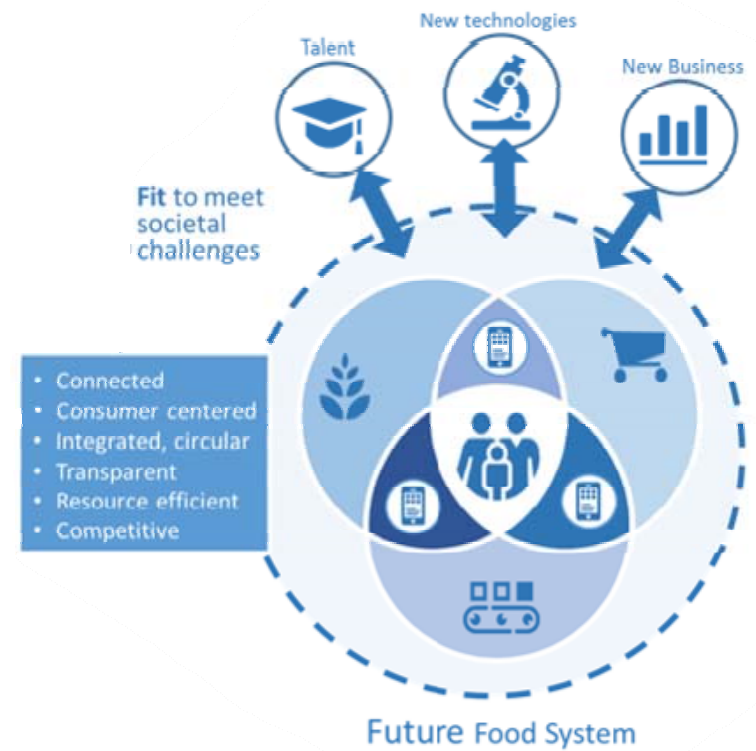
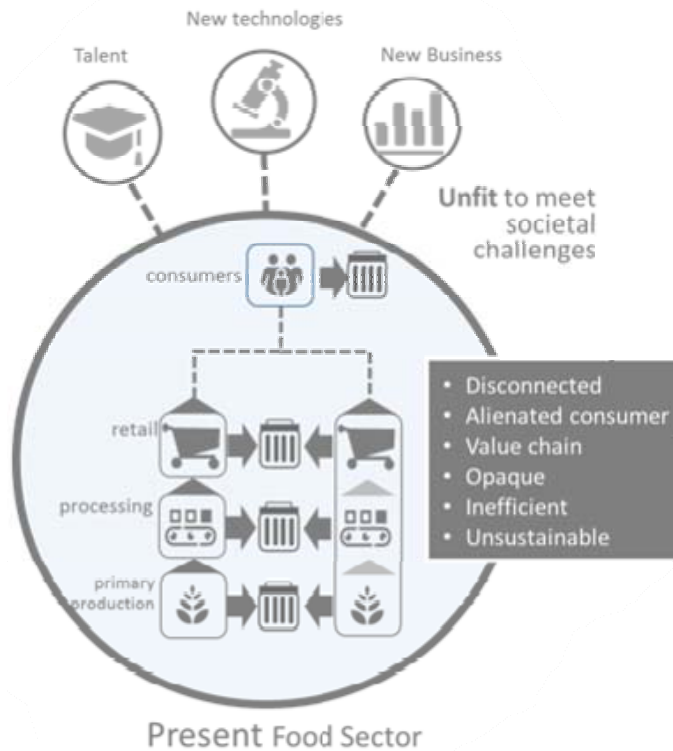


↓ soil resources



3f competition

Our vision





The challenges

Challenge I: Food Security and Sustainability



Objective: To transform the EU Food sector into a globally competitive, robust and sustainable EU Food system that is resource efficient, resilient, acts as a revitaliser of rural communities and support the consumer in making sustainable choices.

Challenge II: Food Quality and Safety



Objective: To transform the EU Food sector into a fully transparent consumer centric Food system that provides safe and nutritionally improved food products that support the responsible consumer in making informed decisions.

Challenge III: Food for Health and Wellbeing



Objective: To transform the EU Food sector into a Food system that produces pleasant food that the consumer trusts as an important solution for health and wellbeing tuned to the specific demands of life stage and lifestyle of the consumer.

I. Food security and sustainability

- Developing more efficient food processes
 - Waste reduction (whole value chain)
 - Alternative protein sources
 - Sustainable food production
 - New food products
- Inputs (water & energy) and processes
 - Revaluation of residues and by-products
 - Boosting circular economy
 - Novel packaging materials
 - Reduction of water and carbon footprint
 - Local production (km 0)
 - Novel food matrixes and

II. Food for health and wellbeing

- Improving nutrition and *personalisation*
- Healthier food matrixes
- Allergens and food intolerance

→ Bioactive ingredients

→ New ingredients (personalization and health)

→ Farm to Fork to Gut: microbiome

→ *Gentle* and safe processing technologies

→ Salt, sugar and fat reduction

→ Allergen detection and reduction

III. Quality, Safety and Consumer

- Shelf-life extension
- Pathogen detection
- Traceability, authenticity and integrity
- Consumer as the food chain main driver
- Integrated systems
- New business models

- Minimal processing technologies
- Smart bioactive packaging
- Quick (in/on-line) pathogen detection
- Traceability solutions and technologies
- Push vs. Pull model for consumer interaction
- IoT integration in the agri-food chain
- Circular economy

The IRTA logo is displayed in a bold, red, sans-serif font. The letters are thick and blocky, with a slight shadow effect. The background of the entire slide is a close-up photograph of dark, rich soil with a small green seedling growing from it. The soil is glistening with water droplets, and the background is a soft, out-of-focus green field under bright light, creating a bokeh effect with many small white highlights.

IRTA

RESEARCH & TECHNOLOGY

FOOD & AGRICULTURE

*We share our science
to feed the future.*

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