



# Activity 2 : 'Fork to farm' Food (including seafood), health and well being

**Dr. Antonio DI GIULIO - *Head of Unit***  
**Unit E.3 : Food – Health – Well-being**  
**Directorate E : Biotechnology, Agriculture and Food**  
**DG Research - European Commission**



- **Challenges**
- **Food innovation**
- **Knowledge integration**
- **Policy support**
- **Work Programme**



# Food, health and well being Challenges



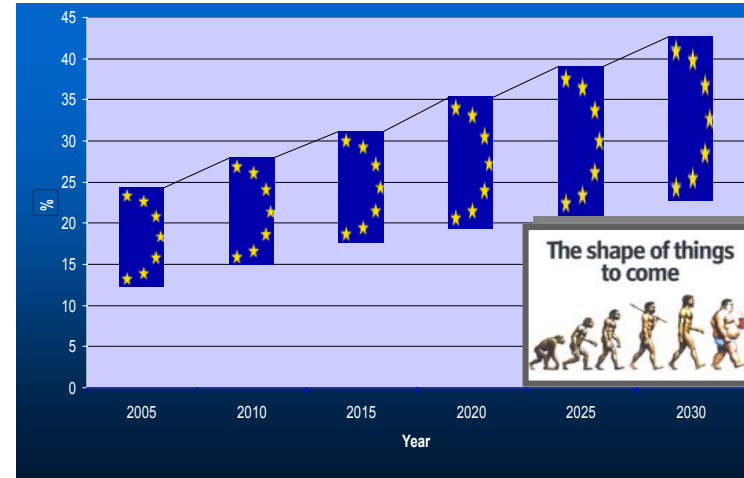
Increasing world population



Ageing population

Metabolic disorders

Projected trend for BMI>30 in EU over 25 years



IOTF projection 2005

Interactive, personalised food

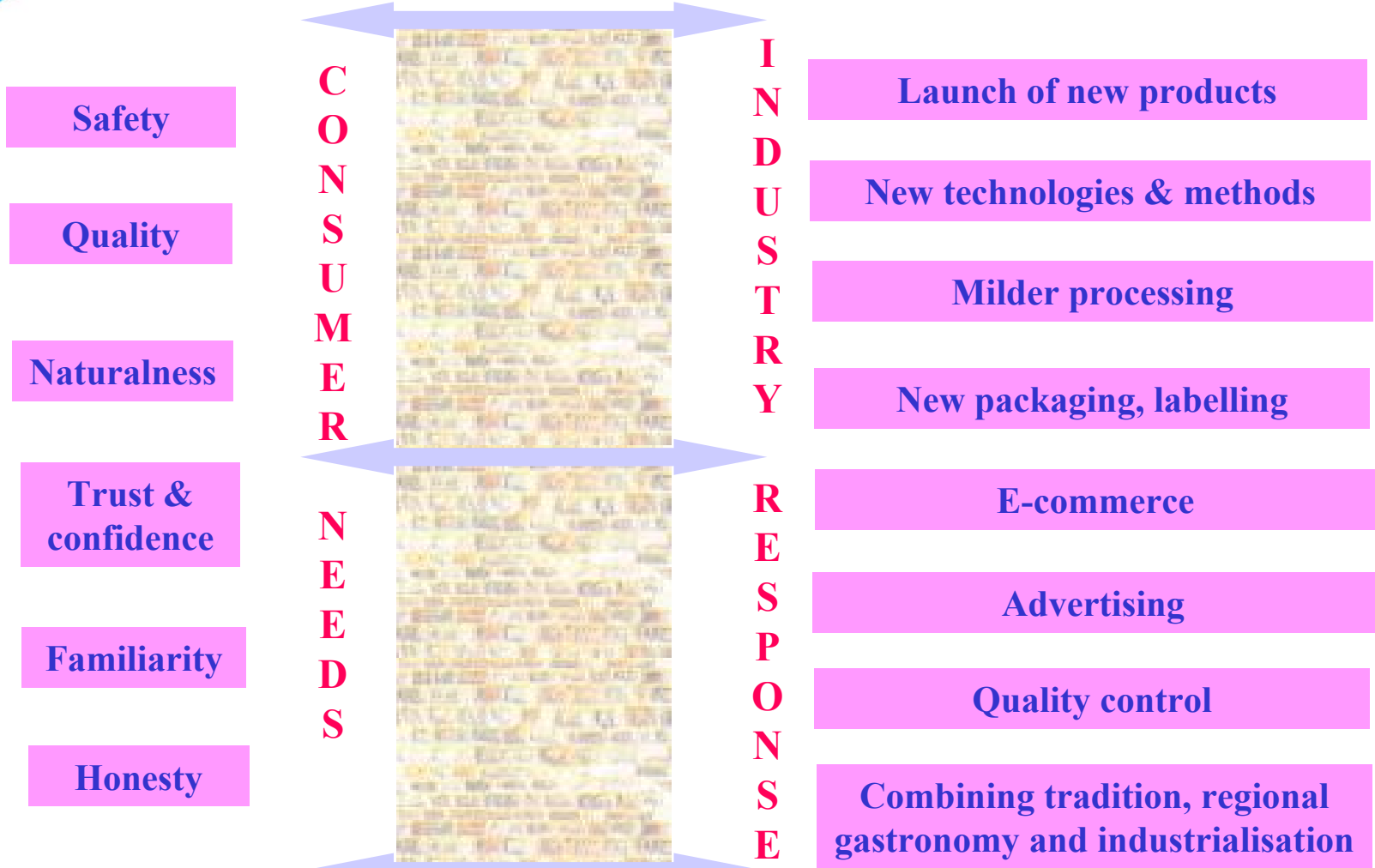


**Fresher, healthier safe foods, lower on fats and others, incorporating new ingredients, bioactive components, with enhanced availability**



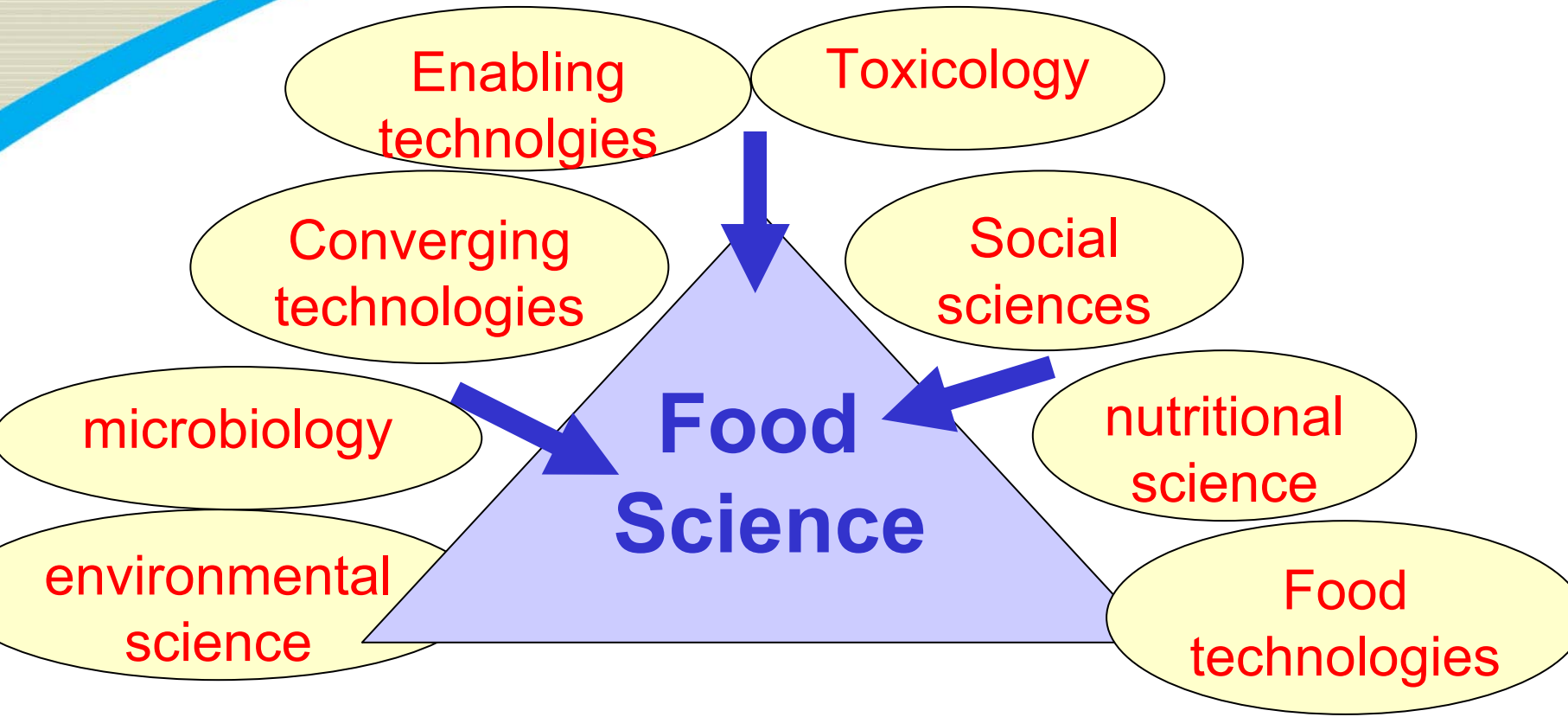
# Consumer – Industry\* pro-actions

\*in the food processing and retail sectors





# Knowledge integration





# Food, health and well being

## Policy support

- **EU policies** in the fields of **health, nutrition and food safety**:
  - obesity
  - nutritional claims
  - supplementation
  - new food technologies
  - consumer
  - food labelling and health claims
  - food additives, flavourings
  - food contact materials
  - contaminants
  - chemical and microbiological safety
- Better informed decisions taken by policy and regulatory bodies  
**‘Better regulation’** strategy of EU
- **EU Platform for Action on Diet, Physical Activity and Health**



# Work Programme

FP7-KBBE-2007-1

FP7-KBBE-2007-2A

&

indicative list of topics for the call

***FP7-KBBE-2008-2B.***

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# Activity 2: “Fork to farm”- Food, health and well being

CONSUMER

Consumer, societal, industrial and health aspects of food and feed

NUTRITION

Nutrition, diet related diseases and disorders, including obesity.

TECHNOLOGIES

Innovative food and feed technologies, including packaging

ENVIRONMENT

Food and feed safety and environmental impact

FOOD CHAIN INTEGRITY

Control of the food chain

TOTAL FOOD CHAIN

Traceability and chain management



# Area 2.2.1 | Consumers

## FP7-KBBE-2007-1

- Networking of food consumer science in Europe and development and application of **social and behavioural sciences** to food research
- **Food labelling** and consumer behaviour

## Indicative topics of 2008 work programme

- *Taste, cognitive perception and mood*
- *Assessment of intervention measures aimed at promoting healthy eating habits*
- *Risk perception and communication in the food chain and the role of the media*
- *Applying behavioural models for the prevention of obesity, with a particular focus on children*





# Area 2.2.1 | Consumers

## Expected impact



- Development of a critical mass in food consumer science
- Increased dialogue between consumers and food producers, including industry
- Enhanced cooperation in the area of consumer science with EU and neighbouring countries
- Assessment of inter-relationship between food labelling information and its 'attractiveness'
- Knowledge on consumer habits with respect to established food-related health issues



## Area 2.2.2 | Nutrition

### FP7-KBBE-2007-1

- Effect of diet on **mental performance of children ageing**
- Malnutrition in **developing countries**
- **Optical technologies** for monitoring the human nutrition status
- Diet for patients in hospitals and at home: **disease-related malnutrition**
- Impact of exogenous factors in the development of **allergy**



### FP7-KBBE-2007-2A

- Diet and its effect on the development of intestinal microflora and on the **immune system** through the entire life span
- Systems Biology and **bioanalytical tools** for nutrition research



### Indicative topics of 2008 work programme

- *Optimal cell function and nutrition*



## Area 2.2.2 | Nutrition

### Expected impact



- Harmonised dietary recommendations for specific population groups
- Increase the excellence and innovation potentials of the European nutrition research communities by means of stronger links to **cognitive-** and **neuro-sciences**
- Promoting health and quality of life of allergy sufferers by addressing health determinants such as diet and lifestyle conditions
- Development of **nutrigenomics** and **personalised nutrition concepts**



# Area 2.2.3 | Food processing

## FP7-KBBE-2007-1

- **Smart control** for improved food and feed
- **Assessment and improvement** of existing food and feed technologies
- (Bio-)Technologies for the production of **food additives, colorants, and flavours**
- **Nano-devices** for quality assurance, food safety and product properties

## FP7-KBBE-2007-2A

- Harmonising and integrating research on food technology, safety and nutrition through commonly shared **food models**
- Network for facilitating the **implementation** of high-tech processing at industrial scale

### Indicative topics of 2008 work programme

- *New solutions for improving refrigeration technologies along the food chain*
- *Sustainable processin, water and and energy savings*
- *Observing and understanding the micro-structure of foods*
- *Alternatives for SO<sub>2</sub> for food preservation*





## Area 2.2.3 | Food processing

### Expected impact



- Sustainable processes:
  - Reduce energy and waste,
  - performance improvement
  - reduce production costs
  -
- Supporting the competitiveness of European food, in particular SMEs
- Sustainable bioprocesses for new and innovative food ingredients from biological sources
- Replacing chemically synthesised additives by natural ones
- Innovative process/product control systems based on robust and reliable sensor technologies compatible with food systems



# Area 2.2.4 | Food Quality and Safety

## FP7-KBBE-2007-1

- Exposure to food additives, flavourings, and migrants coming from food contact materials – **Dietary intake models**
- Detecting **contaminants** in the food and feed chain
- New methods for the monitoring and control of **food-borne viruses**
- Innovative and safe **packaging**

## FP7-KBBE-2007-2A

- Food sampling strategies for **risk analysis**
- Protecting animal and human health from **prions** in food, feed and the environment

## indicative topics of 2008 work programme

- *Biocides and induced risks of antibiotic resistance in food pathogens*
- *Effects of combined exposure to chemicals intentionally added to the food chain*





# Area 2.2.4 | Food Quality and Safety

## Expected impact



- **Risk management tools**
- Improved **toxicological exposure assessments** for key potential hazards
- Assessing the hazard posed by **chemical risks**
- Validated predictive models for behaviour of relevant hazards in foods and feed.
- Prevention and control contamination of food and feed with **new and emerging viruses.**
- Validated models to minimise risks from **food-borne viruses**
- Novel food packaging technologies.
- Improved and harmonised sampling techniques along the food chain
- Estimation of the past and current exposure risk to humans from TSE



# Area 2.2.5 | Environmental impacts and total food chain

## FP7-KBBE-2007-1

- Assessment of short and long term effects of **GMOs** on human and animal health
- **Converging technologies** and their potential for the food area
- Development and application of **computational biology** as a complementary tool to *in vivo* and/or *in vitro* trials

## FP7-KBBE-2007-2A

- **Sustainability** of the food chain
- Reducing **mycotoxin contamination** in the food and feed chain

### Indicative topics of 2008 work programme

- *Assesment of impacts from climate change on food*
- *Food chain management*
- *Assessment of impacts of scenarios affecting food chain management*





# Area 2.2.5 | Environmental impacts and total food chain

## Expected impact

- Techniques for post market monitoring of GMOs
- Converging technologies in the food sector
- Devices and methods for practical and industrial applications in the food sector (e.g. novel structures, processes, and/or systems)
- Computational methods for the massive flow of data emerging from modern experimental approaches in the food sector
- New biological hypotheses for web-lab research on complex biological systems
- Studying simultaneously many variables of the food, nutrition and biology domains (e.g. numeric, sensory and perceptions, structure, biological, chemical and vision food-related data)
- Improving the sustainability of food chains



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Thank you for your attention