European Technology Platform
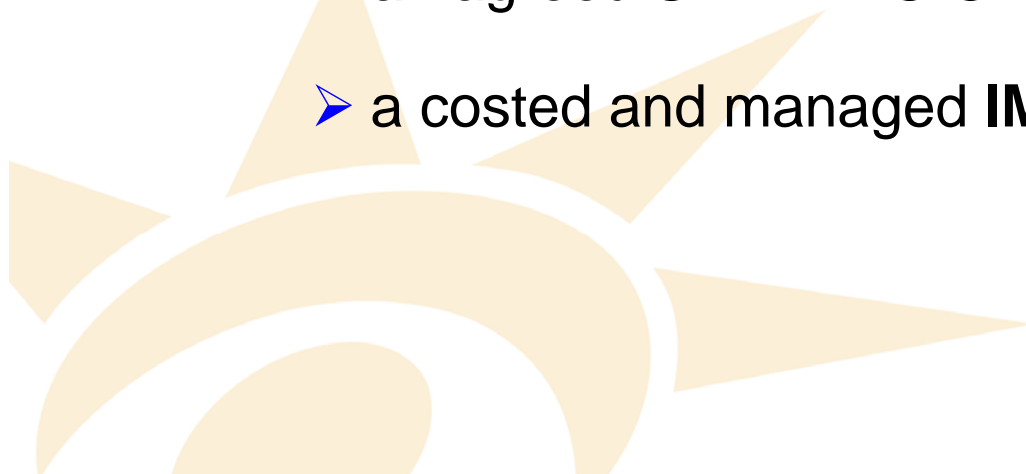Food for Life

http://etp.ciaa.eu

European Technology Platform
Central concept

- A new instrument to strengthen the European-wide innovation challenge (and address the so-called European Paradox),
- An (industry-led) framework to unite stakeholders around:

  ➢ a common **VISION** for the technology concerned,

  ➢ an agreed **STRATEGIC RESEARCH AGENDA,** and

  ➢ a costed and managed **IMPLEMENTATION PLAN.**

The Basis of ETP Food for Life

- *The agro-food sector* is the **largest manufacturing sector** in Europe with a turnover of 836b € and a positive trade balance of 5.2b € (2005), but its share of food & drink exports in the world is reducing!
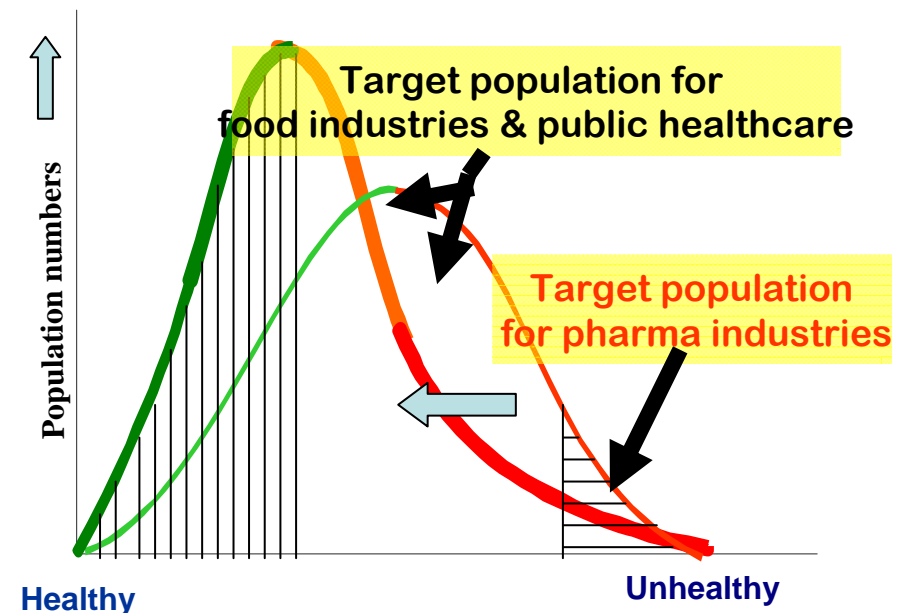
  ➔ *need for more "Added value"*

- *The ageing population* and

- *changes in lifestyle and dietary patterns* have increased the incidence of chronic non-communicable diseases
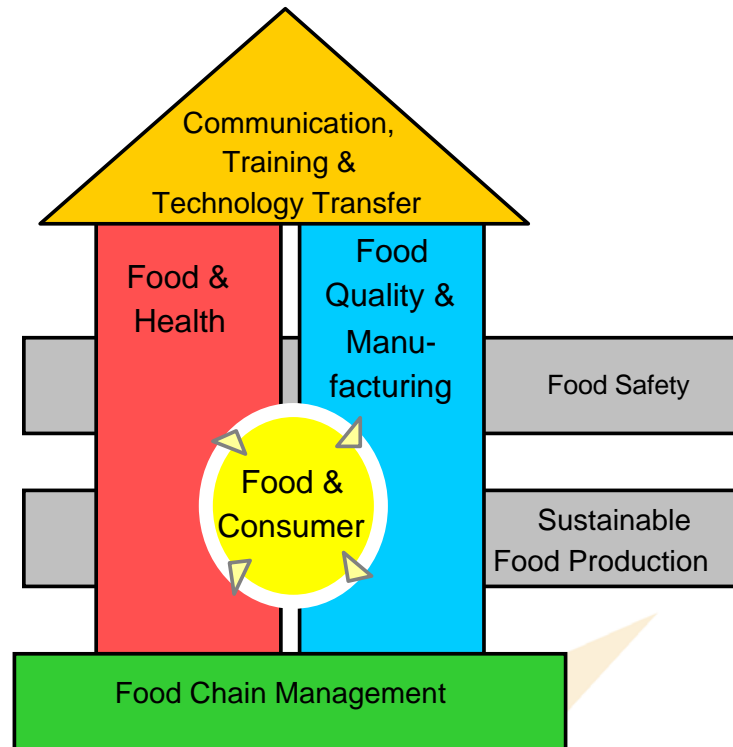
  ➔ *need for "Food & health / Add life to years"*

- *Consumer concerns* over food safety and environmental issues

  ➔ *need for "Food you can trust" and "Sustainable food production"*

A vision for improving population health

Target population for food industries & public healthcare

Target population for pharma industries

Population numbers

Healthy

Unhealthy

Key Challenges of the Strategic Research Agenda

Communication, Training & Technology Transfer

Food & Health

Food Quality & Manufacturing

Food Safety

Food & Consumer

Sustainable Food Production

Food Chain Management

1. Ensuring that the healthy choice is *the easy choice* for consumers,

2. Delivering a healthier diet,

3. Delivering quality food products,

4. Assuring safe foods that consumers can trust,

5. Achieving sustainable food production,

6. Managing the food chain,

Optimising communication, training and technology transfer.

Key Thrusts

improve health, well-being and longevity

New products, processes and tools that….....

build consumer trust in the food chain

derive from sustainable and ethical production

History of ETP Food for Life - 1

- First ideas for an agri-food ETP discussed, October 2004, consultation

- ETP Food for Life launched July 2005 on basis of **Vision Paper**

- Board, Operational Committee and Working Groups formed with good representation of all stakeholders across Europe, December 2005,

- **Stakeholders' Strategic Research Agenda**, February 2006,

  Recognition by the EU of the ETP's programme on the basis of:
  - financial support through a FP6 Specific Support Action (SSA)
  - the inclusion of SSRA-based priorities in calls 1 and 2 of the FP7 KBBE theme

  national, regional and web consultations

- **Strategic Research Agenda** published, September 2007,

- **Implementation Plan.**

History of ETP Food for Life - 2

- Extensive **national, regional and web consultations** held, April 2006 – January 2007, in order to:
  - ensure participants' feedback on the SSRA,
  - develop plans for alignment and integration of national research programmes within trans-national or European programmes

- Development of 30 **National Food Platforms** and networking these for added-value; Meetings of this network in Rome and Brussels, April 2007 and September 2007, respectively.

- **Workshop on Public/Private Partnerships**, January 2007.

- Creation of **SME Task Force,** April 2007.
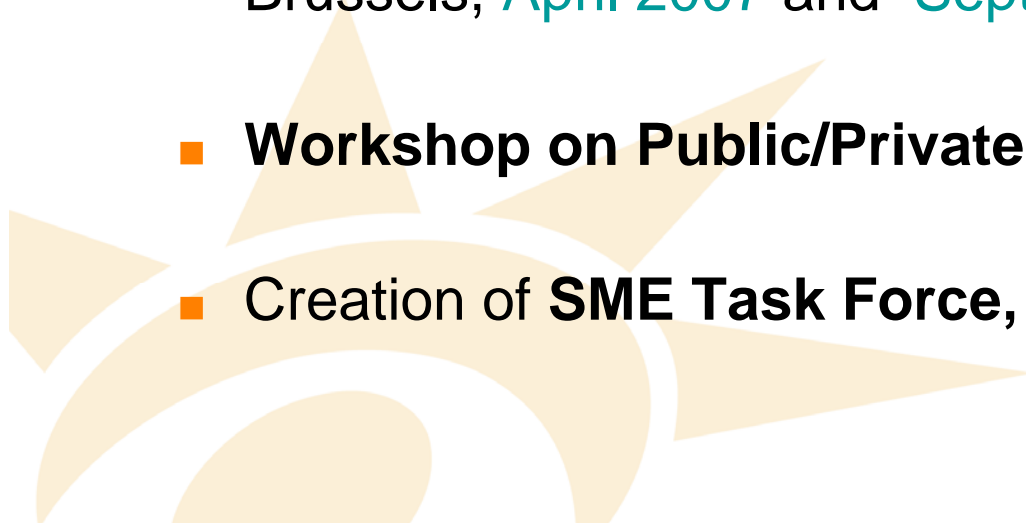
Food and Consumer

Ensuring that the healthy choice is the easy choice for consumers

- *Measuring* consumer behaviour in relation to food.

- Developing *comprehensive models of consumer food choice* processes.

- Promoting *effective interaction* with consumer groups and consumers directly through communication and public participation.

- Developing strategies to *induce behavioural change* in order to improve consumer health and social responsibility (through healthier food choices).
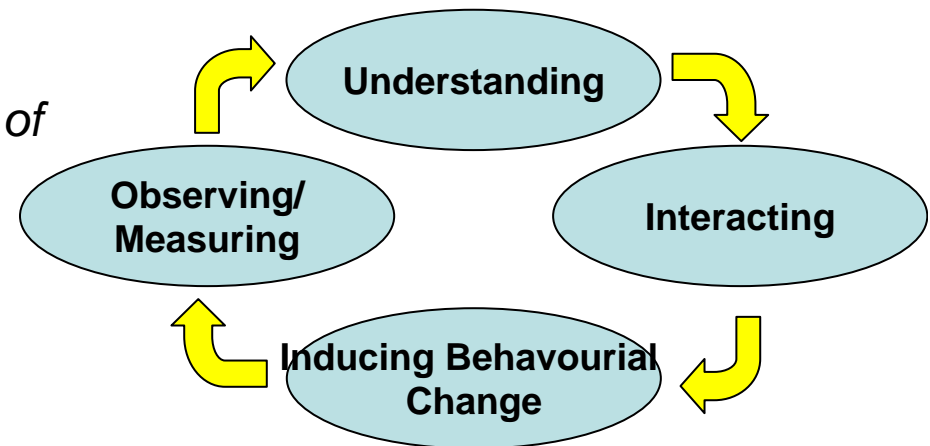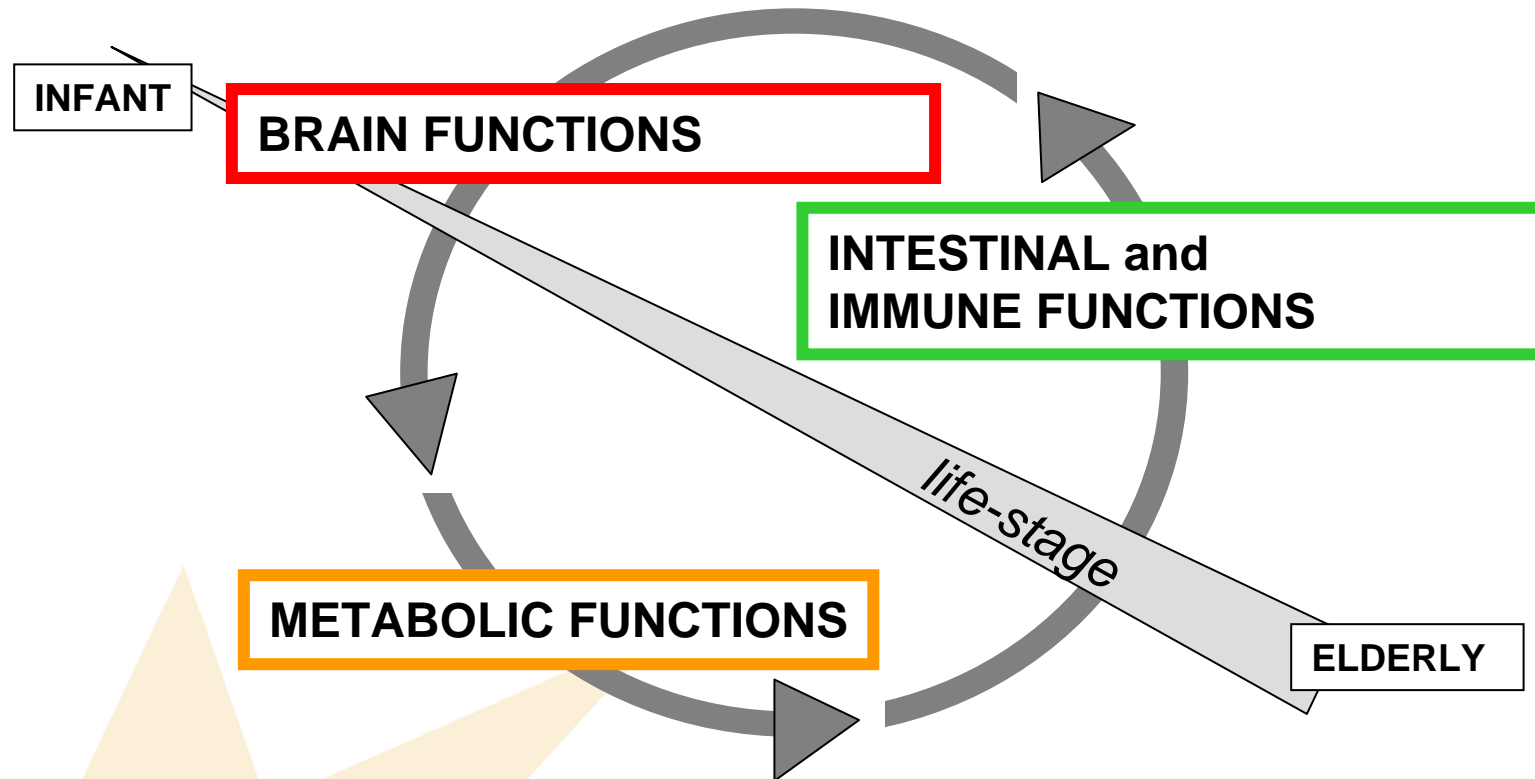
Food and Health

Delivering a healthier diet

- Understanding consumer behaviour and effective communication in relation to health and nutrition.

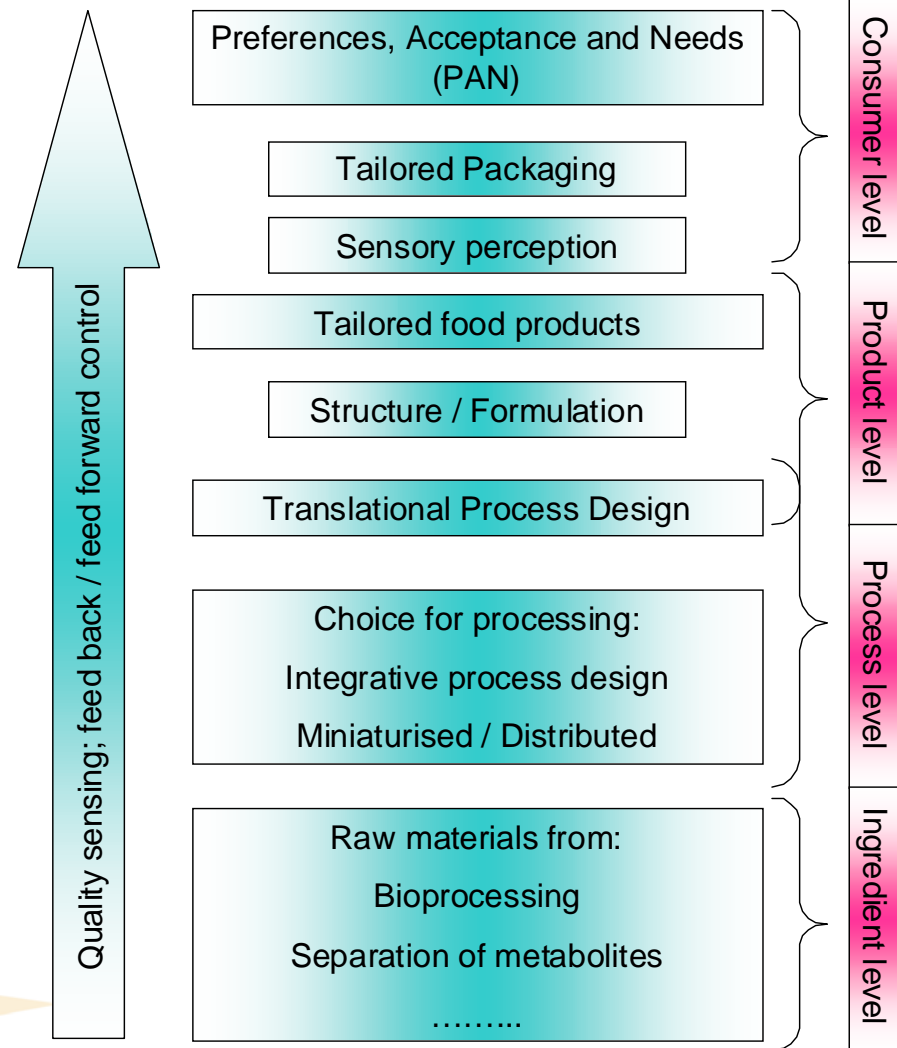# Build research infrastructures and enabling technologies.

- **Establish a European Nutrition Research Council**
  - *integrate nutrition, humanities and social sciences,*
- **Foster cross-disciplinary research centres**
  - *integration and collaboration (including public-private partnerships), dietary surveys, risk-benefit models,*
- **Develop, maintain and exploit facilities**
  - *develop libraries, databases, bio-banks, standardized protocols, networks of facilities, bio-informatics European stable isotope standard repository,*
- **Foster prospective cohort studies (using the EPIC study as an example)**
  - *broaden virtual centre of food epidemiology,*
  - *link to European Clinical Research Infrastructure Network,*
- **Exploit standardized and updated European food tables** (e.g. EuroFIR),
- **Initiate scenario studies.**

Food Quality and Manufacturing

Developing quality food products

- Producing *tailor-made food products.*
- Improving *process design, process control and packaging.*

- Improving understanding of *process-structure-property relationships.*

- Understanding <u>*consumer behaviour*</u> in relation to food quality and manufacturing.

Quality sensing; feed back / feed forward control

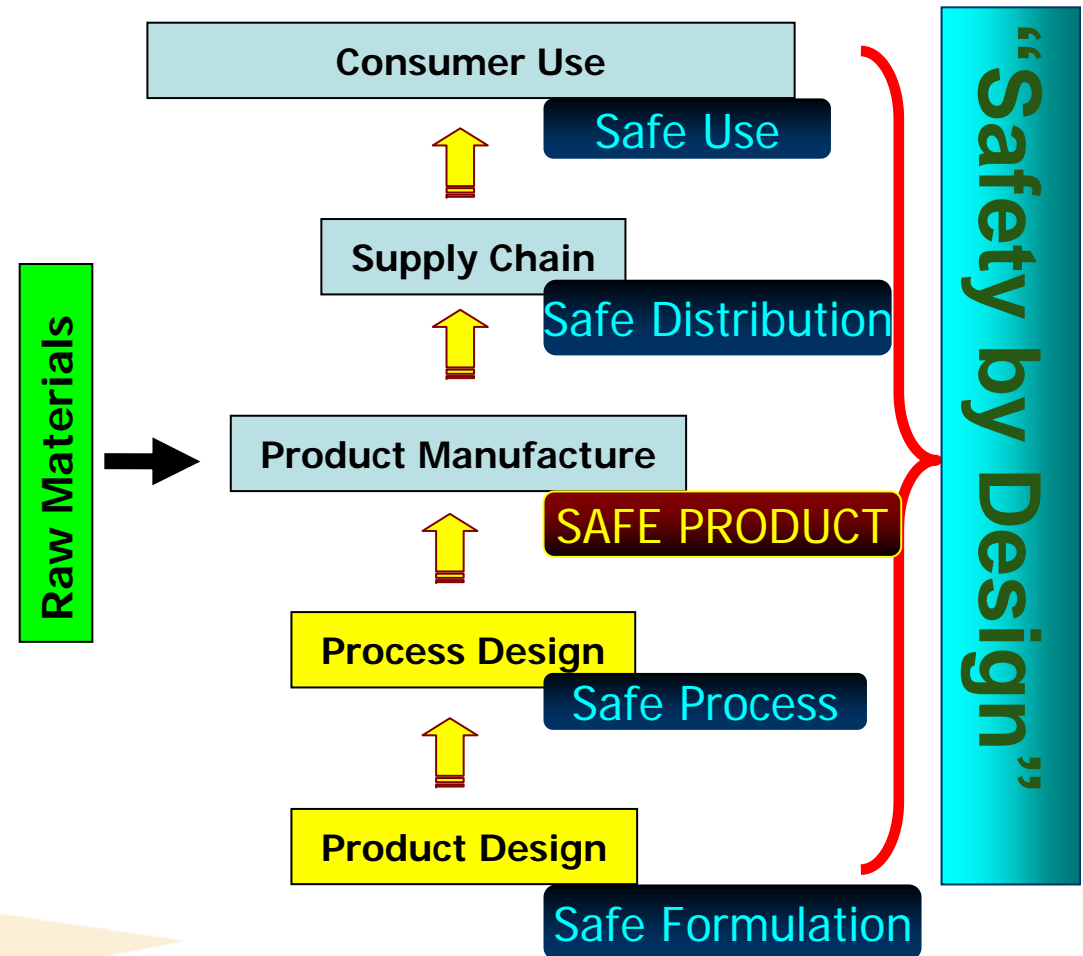| Preferences, Acceptance and Needs (PAN) | Consumer level |
Tailored Packaging	
Sensory perception	
Tailored food products	Product level
Structure / Formulation	
Translational Process Design	
Choice for processing: Integrative process design Miniaturised / Distributed	Process level
Raw materials from: Bioprocessing Separation of metabolites ……...	Ingredient level

Food Quality and Manufacturing

Food safety by design

- **Improved understanding of hazards in the food chain**: e.g.
  - the knowledge base needed to support the rational application of control measures, and
  - the development of new methods and systems.
- **Tools to further secure the food chain**: e.g.
  - development of methods and technologies for continuously improving the safe production and supply of foods.
- **Understanding the human factor:**
 - consumer perception of risks and the need for communication

Raw Materials →

Consumer Use

Safe Use

Supply Chain

Safe Distribution

Product Manufacture

SAFE PRODUCT

Process Design

Safe Process

Product Design

Safe Formulation

"Safety by Design"

Food Safety

Assuring safe foods that consumers can trust

- *Predicting and monitoring* the behaviour and fate of relevant known and emerging *biological hazards,*

- *Predicting and monitoring* the behaviour and fate of relevant known and emerging *chemical hazards* including toxins of biological origin,

- Improving *risk assessment and risk-benefit evaluation,*

- Developing *tools to ensure security* of the food chain,

- Understanding and addressing consumer concerns with food safety issues.
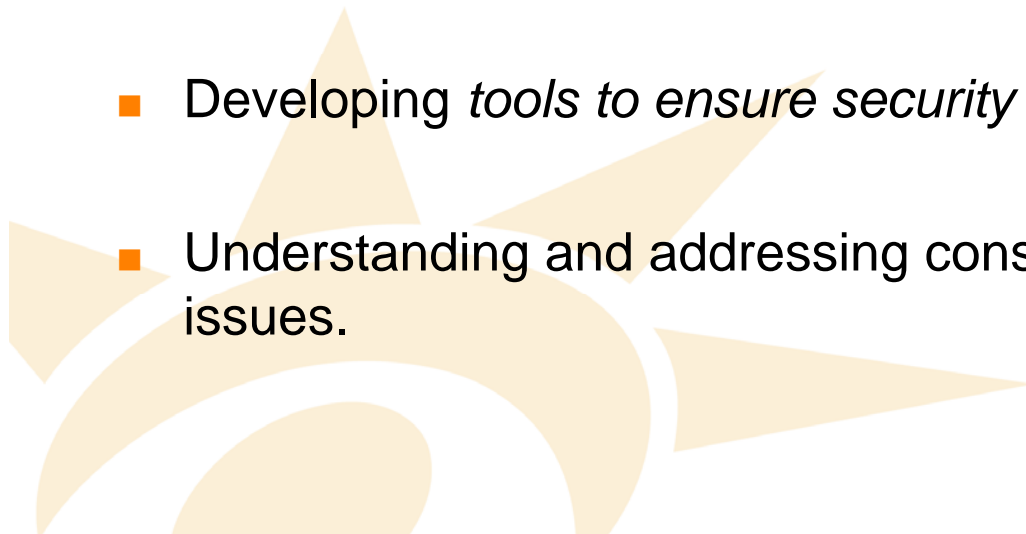
Sustainable Food Production

Achieving sustainable food production

- Progressing the sustainability of food production and supply in Europe.

- Research on *scenarios* of future European food production and supply.

- Developing sustainable *processing, preservation, packaging and logistic systems.*

- Ensuring *sustainable primary food production in Europe.*

- *Understanding consumers and their behaviour* regarding sustainable food production.
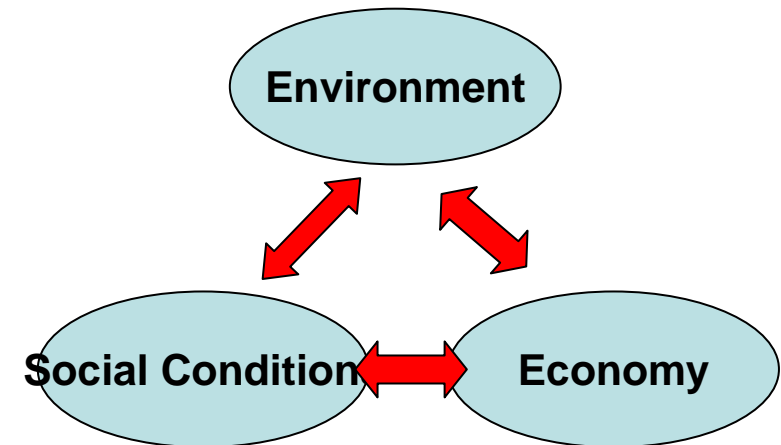
Food Chain Management
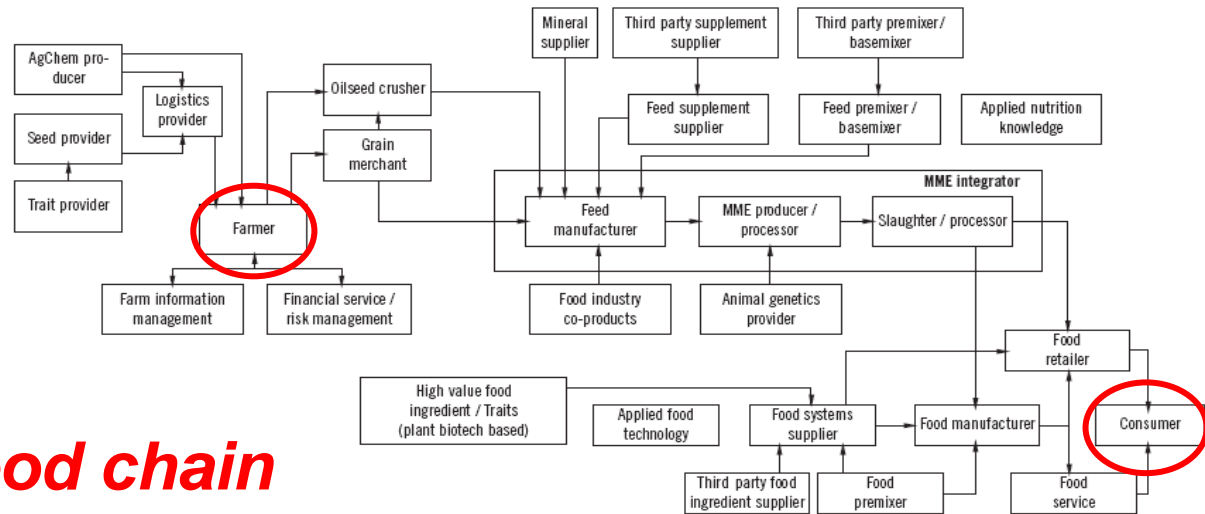
Managing the food chain

- Serving consumer needs for affordable food of quality and diversity.

- Serving transparency needs for advancements in chain governance, efficiency, innovation, dynamics and trust.

- Serving SMEs for better integration into value chain relationships.

- Serving sector needs for better understanding the dynamics in critical success factors for competitive performance and sustainability in times of globalisation and change.

Communication, Training and Technology Transfer

Research and Knowlege → Support andTransfer → Industrial Exploitation (Money)
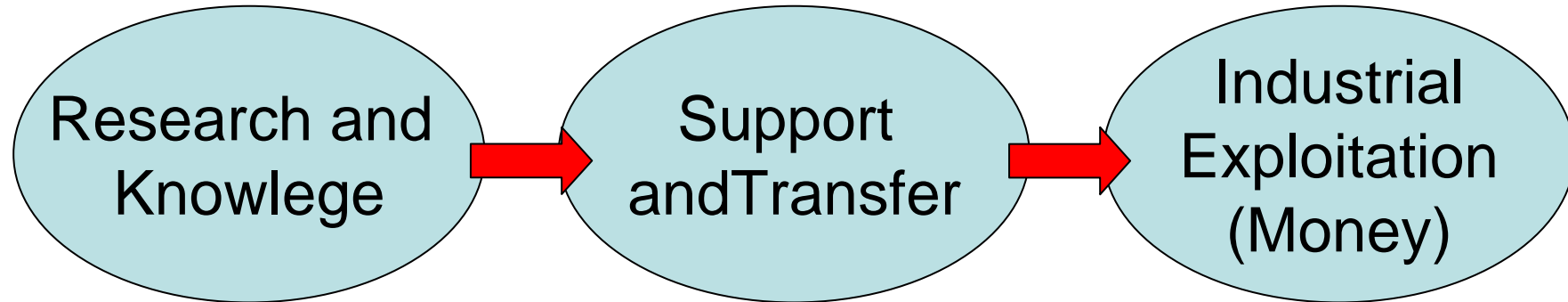
Improved competitiveness through:

- support of research exploitation by best practice transfer models for optimum impact.

- effective and direct communication strategies (between research, industry and consumers).

- promotion of "innovation use" by raising personnel expertise via specific training and education schemes.

- special focus on SMEs

The way ahead

Implementation Plan (target: Spring 2008), which will include:

- formation of **ERA-Nets** on
  - Food, Health, Well-being and Longevity
  - Sustainable Food Production/Food Chain Management.

- working with **SAFEFoodERA-Net** to develop a follow-up activity encouraging consumer trust in the safety of food.

- development of **Lead Market Initiatives** (including pre- and probiotics).

- stimulation of **public-private partnerships** and specific **Eureka themes**

- **Identification of other funding opportunities** (COST, European Institute of Technology, European Investment Bank, Venture Capital, Structural Funds).

- **Food/Pharma Workshop**, February 2008.

- Creation of **ETP Mirror Group**.

Yes, the ETP Food for Life will

- *Drive European competitiveness* based on the size of the European food and drink sector and the transition foreseen to high value- added product portfolio (including services) with a major impact on **well-being and welfare.**

- *Impact positively on Community policies* (Environment, Research integration, Lisbon Council, SMEs).

- *Boost research performance* to effect the transition to high added-value products.

- *Sustain career development* in food R&D in Europe and promote entrepreneurial activity.

- *Prevent fragmentation* by creating a shared **Common Vision** and managing an effective long-term **Implementation Plan** for a **Strategic Research Agenda.**

Effective public-private partnerships **will be essential to achieve this impact.**

If you would like to discuss any aspect of ETP Food for Life, please contact
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