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***High Level Group on the competitiveness  
of the Agro-Food Industry  
Working Group  
on Research and Innovation***

*September 4, 2008-Conference Centre Albert Borschette, Brussels*

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**F**ood, **A**griculture and **F**isheries, and **B**iotechnology

Knowledge - Based Bio - Economy ( K B B E )

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***DEFINE global research needs  
along the food chain***

***ALIGN food research centres Universities priorities  
with food industry needs***

***IMPROVE SMEs involvement in  
R&D projects***

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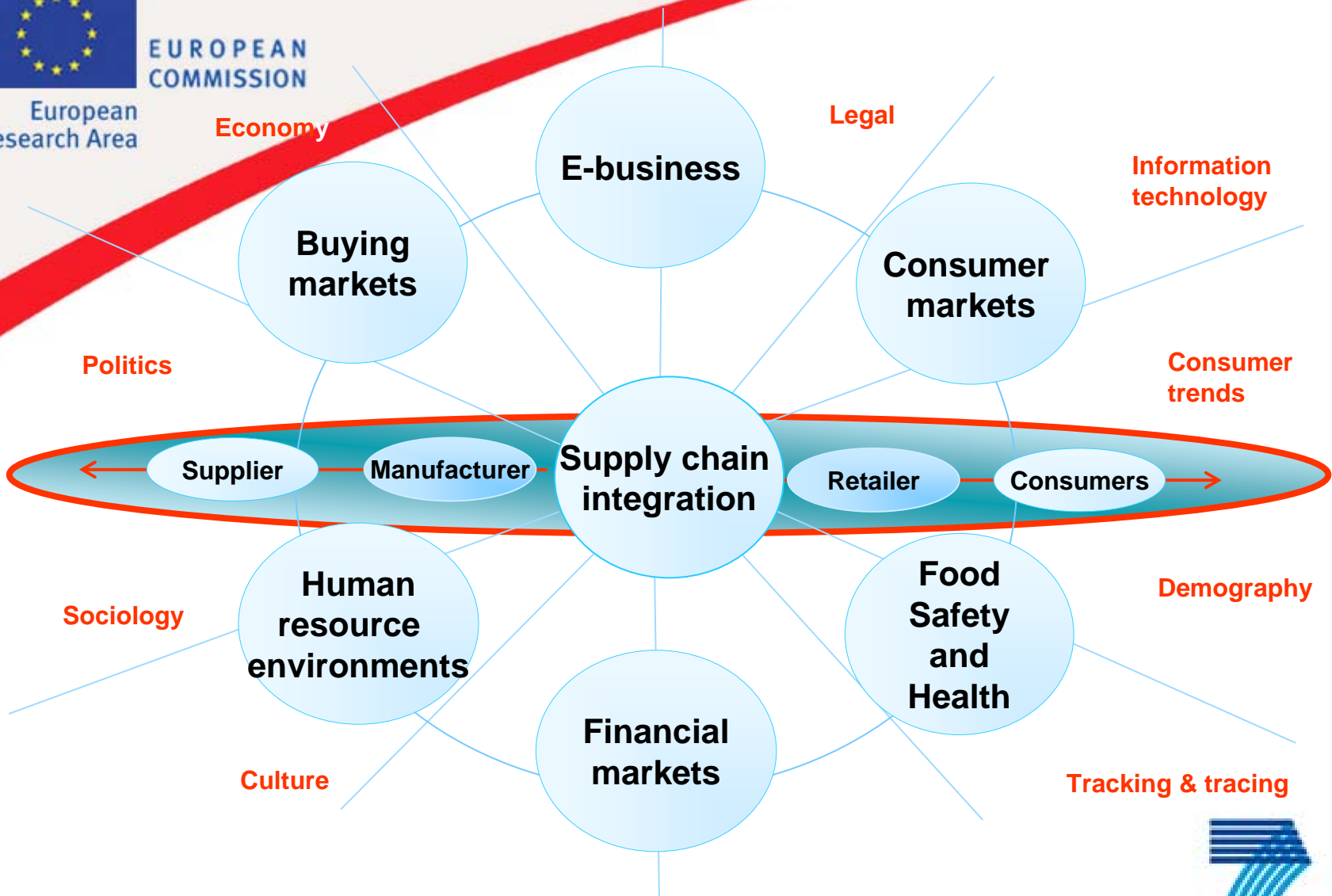
SEVENTH FRAMEWORK  
PROGRAMME

# The Food System



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Define global research needs along the food chain



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***FOOD INNOVATION NEEDS***

**Population change**

**Bioenergy**

**Safety**

**COMPLEXITY**

**Health**

**Globalisation**

**Well Being and life-style**

**Sustainability**

**(Climate change, Energy, Ethics, Prices)**

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# Define global research needs along the food chain



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« **DE-COMMODITISATION** »

**Most of the value is in the processing rather than in the commodity itself .**

**Farmer**

custodian of land and water resources and an applier of technologies that provide for long-term sustainability.

**Assembler**

ensures origins and safety at all levels of the food chain

**Processor**

developer of branded and own-label products that now provide not only caloric content but also health and nutrition alternatives

**Distributor**

to provide unique foods for people to manage the health and nutrition of the general population.

*Adapted from Goldberg R. Nature Biotechnology 17 suppl. 1999*

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**K**nowledge - **B**ased **B**io - **E**conomy ( **K B B E** )

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Define global research needs along the food chain



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## R A T I O N A L E

- Build a European **Knowledge-Based Bio-Economy (KBBE)**
- Respond to social and economic challenges:
  - **Product markets- Productivity gains (Agriculture)**
  - **Enhancement effects (Nutrition & Health)**
  - **Eco-efficient and sustainable use of natural resources Substitution- (Biotechnologies)**
  - **Support Lisbon Strategy – Growth and Employment**
- **Provide goods and services to a growing population**



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Align food research with Industry needs



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# Technology Platforms in the KBBE sector

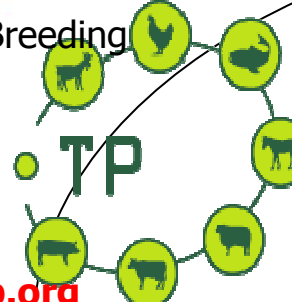


European Technology Platform  
**Food for Life**  
<http://etp.ciaa.be>

[www.suschem.org](http://www.suschem.org)  
**Industrial biotechnology**  
**SusChem**

**European Biofuels TP**

Farm Animal Breeding



**FABRE • TP**  
[www.fabretp.org](http://www.fabretp.org)

**KBBE**



ETP Global Animal Health

[www.ifah.be/Europe/EUPIatform/Platform.htm](http://www.ifah.be/Europe/EUPIatform/Platform.htm)



ETP Plants for the Future  
[www.epsoweb.org](http://www.epsoweb.org)

[www.forestplatform.org](http://www.forestplatform.org)



Forest-Based Sector  
Technology Platform

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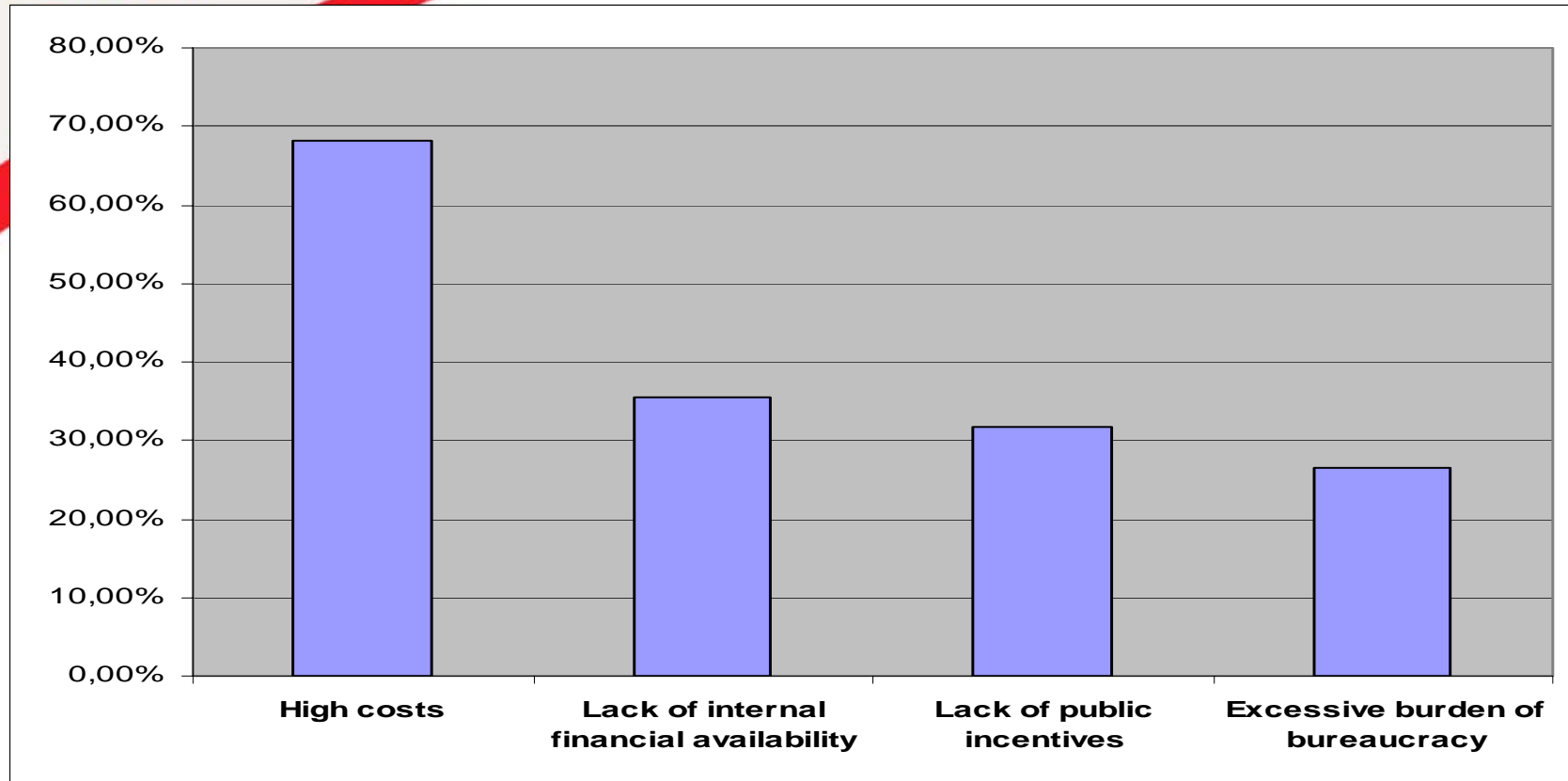




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## Obstacles to Innovation



Adapted from A. Sebok., SMEs-NET Vision paper

Food, Agriculture and Fisheries, and Biotechnology

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# Identify and tackle barriers of innovation



## Lead Markets

**European Technology Platforms**  
Knowledge for growth

How can we help?

Identify barriers & opportunities

Public procurement

Standards

Regulations

IPR

to develop  
**LEAD MARKETS**

+

to create  
**INNOVATION-FRIENDLY EUROPE**

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stimulate innovation specifically in SMEs



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## Risk-Sharing Finance Facility: Objectives and Added Value

- **Innovative financing instrument Developed jointly by the European Investment Bank (EIB) and the Commission**

### Beneficiaries

**All legal entities, irrespective of size**

- SMEs and larger companies
  - Public and private research organisations (including universities)
  - Joint legal entities set up by a consortium including Public-Private-Partnerships

FP7 Contribution:  
Up to 1 billion€

+

EIB Contribution:  
Up to 1 billion€

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## Joint Technology Initiatives

- **Pooling private and public investment on a programme-level -Art. 171 of the Treaty**
- **Identification criteria include:**
- Added value of European-level intervention
  - Strength of commitment from industry
  - Capacity to attract additional national support and leverage industry funding
  - Inability of existing instruments to achieve objective

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# The FP6 experience

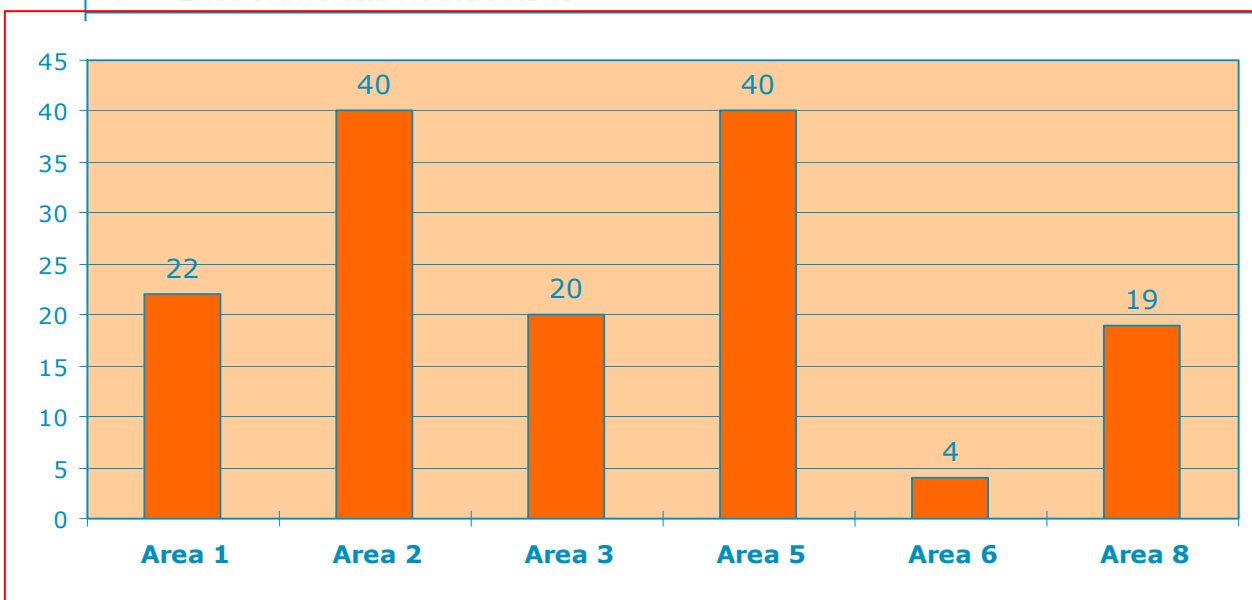


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## SMEs PARTICIPATION per area

AREAS	PROJECTS	SMEs
A1 - Total food chain	7	22
A2 - Epidemiology of food-related diseases and allergies	11	40
A3 - Impact of food on health	10	20
A5 - Methods of analysis, detection and control	11	40
A6 - Safer and environmentally friendly production methods and healthier food stuffs	2	4
A7 - Environmental health risks	14	19
<b>TOTAL</b>	<b>55</b>	<b>145</b>



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stimulate innovation specifically in SMEs



## FP7- SME's

- **Strong support: up to 75% of total R&D costs for research and up to 100% for management and training**
- **Optimal protection of IPR rules -Attentive to SME's needs**
- **Reduced need for financial checks and bank guarantees**



[www.cordis.europa.eu/fp7/kbbe/home\\_en.htm](http://www.cordis.europa.eu/fp7/kbbe/home_en.htm)

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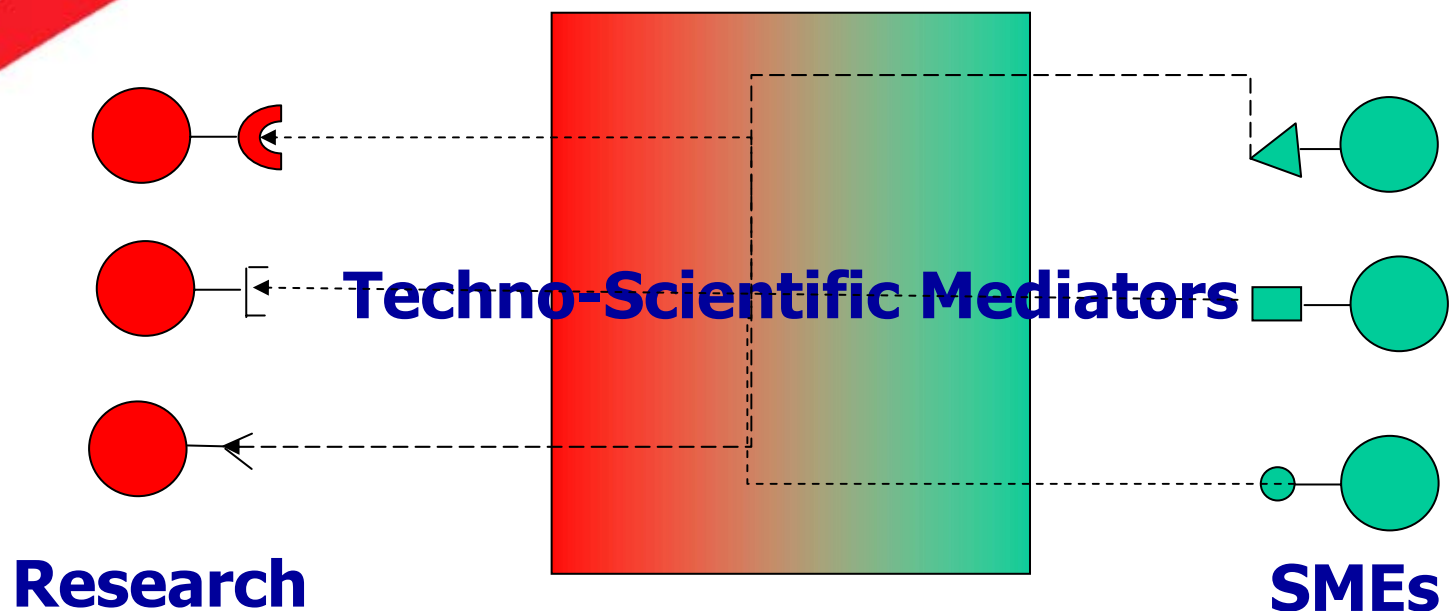
Identify and tackle barriers of innovation



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**Establish an effective and sustainable system of technology transfer**



Adapted from A. Sebok., ETP Food for Life SME Task Force

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**Packaging + Sensoring  
(intelligent packaging)**

**Nanosensor** **Integrate technologies**  
**Immunosensors**

**Lab-on-a-chip**

**'Omics'**

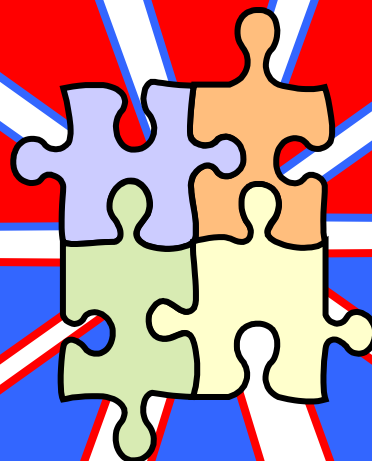
**TECHNOLOGY**

**E-nose**

**NMR**

**MS**

**New Materials  
(Smart Packaging)**



*Increase safety*

*Identify origin  
e.g. by genomic approach*

**STRATEGY**

*Identify processes  
e.g. by Proteomic/Metabolomic  
approach*

*Maintain quality*

*Avoid  
counterfeit*

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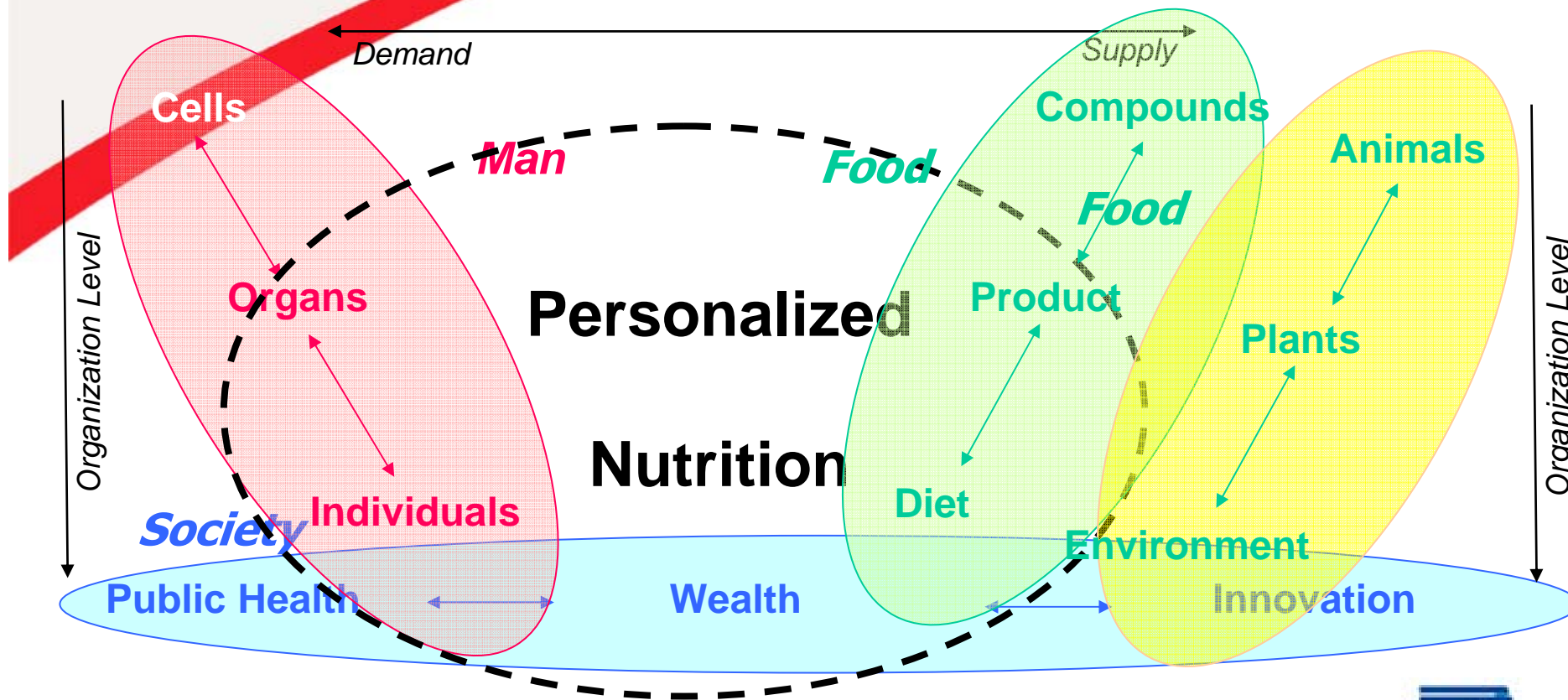




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# Innovation: Radical vs Incremental



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## Innovation: Radical *vs* Incremental

# The next generation of functional foods BEVERAGES

- Broader nutrient & speciality ingredient fortification
- Condition specific marketing
- Lifestyle enhancers
- Sports market
- Childrens' health
- Gender, age & ethnic products
- Weight, satiety & appetite suppression
- Functional snacks
- Natural foods
- Non-traditional food markets
- Drug/medication delivery



*\*adapted from Brian McKenna, President EFFoST, The third SNS Congress:  
- FOOD PROCESSING-INNOVATION-NUTRITION HEALTHY CONSUMERS  
Radenci, September 22nd to September 26th, 2007*

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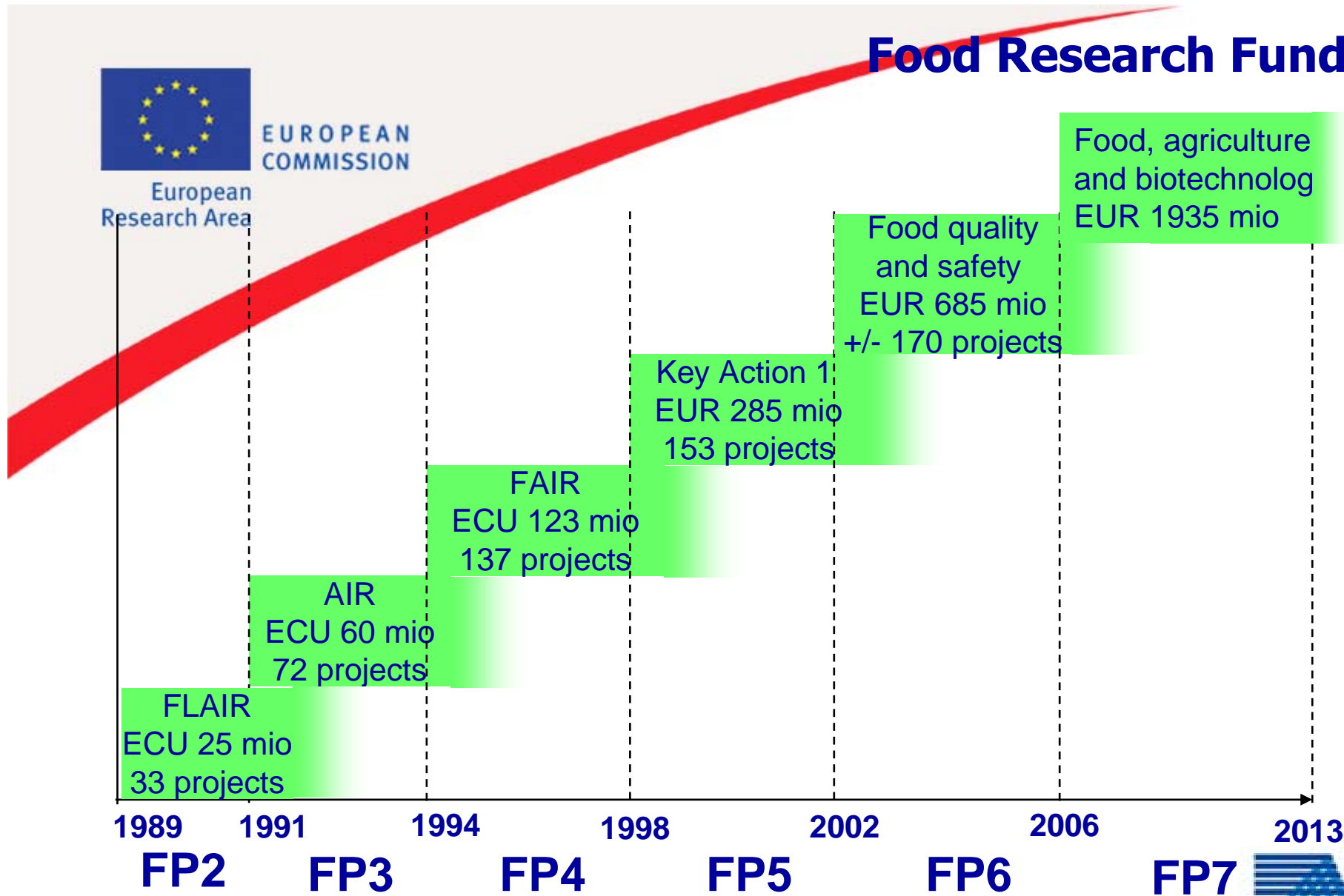
SEVENTH FRAMEWORK  
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# Food Research Funding



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# Main messages

- **Define global research needs**, by continuous and extensive consultation with all key stakeholders, the consumers, the ETP's, member states etc.)
- **Align research priorities with Industry needs** by fostering competitiveness: technological transfer, demonstration activities and training
- **Improve SMEs involvement** by adjusting the Research Work Programme and by application of SMEs-dedicated tools (reduce of administrative burden, facilitating financing, etc.)

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Economy

# Food does not just happens, it must be produced



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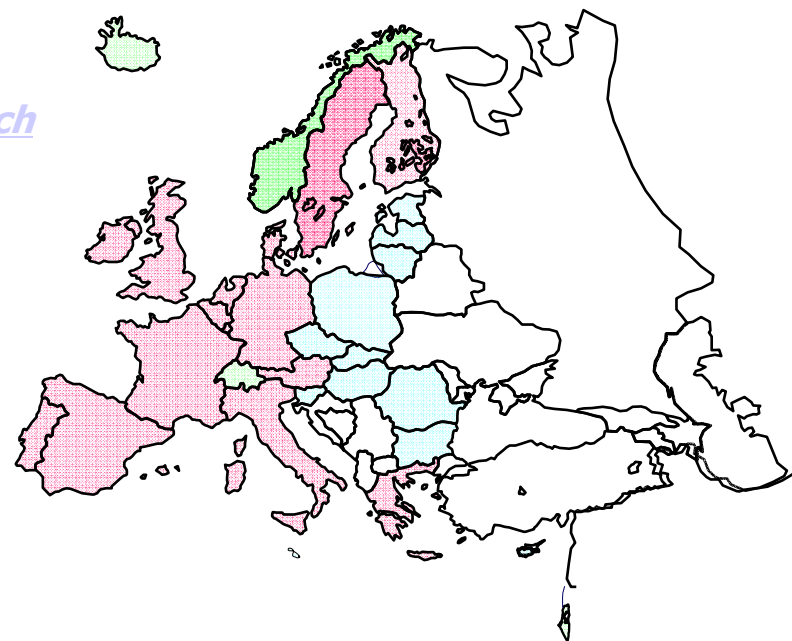


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## Useful links

- **EU research:** <http://europa.eu.int/comm/research>
- **Knowledge Based Bio-economy:**  
<http://cordis.europa.eu/fp7/kbbe>
- **Seventh Framework Programme:**  
[http://cordis.europa.eu/fp7/home\\_en.html](http://cordis.europa.eu/fp7/home_en.html)
- **Sixth Framework Programme:**  
<http://www.cordis.lu/fp6/home.html>  
<http://www.cordis.lu/fp6/food.htm>
- **Research DG Site:**  
[http://europa.eu.int/comm/research/index\\_en.html](http://europa.eu.int/comm/research/index_en.html)
- **RTD Food Quality and Safety Site:**  
<http://cordis.europa.eu/food/home.html>



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PR