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Technology Platforms:

Central Concept

New Instrument to strengthen the European-wide innovation process

(Industry led) Framework to unite stakeholders around:

- a common “VISION” for the technology concerned
- definition of a STRATEGIC RESEARCH AGENDA
- develop and execute an IMPLEMENTATION PLAN

European Agro-Food Industry

- Largest manufacturing sector in EU (13.6 % in EU15)
- Turnover EU25 was € 840 billion in 2005; limited growth at 1.9 %
- Total exports in 2005 amounted € 45 billion with a positive trade balance of € 5.8 billion
- Major employer with 4.1 million workers of which 61.3 % in SMEs

but…..

- Our share of food & drink exports in the world is reducing!

European Agro-Food Industry

- It has relatively few big players and is largely SME-based,
- Female employment is high and includes significant part/time working,
- There is little investment in training,
- It contributes directly to the economies of all European countries,
- Products are highly diverse and often craft-based as a result of which trans-national differences are fewer than elsewhere,
- Products are difficult, if not impossible, to patent and can only be marketed for a short time before similar products appear,
- Technological/production issues impact directly on public health and safety,
- The SME sector is not research-aware and resources to implement innovation are highly restricted, especially in new EU MS,
- Timescale by which investment must produce a return is small,
- The European market faces limited growth,
- There are similarities with the pharmaceutical sector.

Consumers – we must listen to what they say and act accordingly

- Consumers seek clear messages,
- Consumers are seeking foods that enhance their health and wellbeing, but are inundated with information and advice,
- Convenience, affordability and ethical production are key societal drivers,
- Safety and sustainability are not options,
- Many consumers are suspicious of the food industry and of “science”,
- Consumers from ethnic minorities are generally poorly served by healthy eating advice,
- There will be a move from population nutrition to individual nutrition.

Europe must strengthen and deepen its overall consumer science competency if it is to successfully address the opportunities highlighted in the SSRA.

Links with the Humanities

- With few exceptions in Europe, the natural and engineering sciences interact only poorly with the social, economic and human sciences. *Inputs from the humanities are often confined to the social impact of new technologies*.
- As a consequence of this lack of full engagement, market opportunities are lost, informed inputs into public policy debates are denied and the impact of innovation is lessened.

Links with the Humanities

- ETP Food for Life is uniquely positioned to demonstrate what can be achieved when *all these disciplines are harnessed to address a common goal*. This demonstration will benefit not just the stakeholders in the food chain, but also those involved in other industry sectors, as well as the wider science and engineering community.
- Such interactions will contribute directly to *delivering the true potential of the ERA* by removing barriers, widening discussion and debate, and promoting new areas of frontier research in the socio-economic sciences that impact on the innovation process.

The Global Challenge - Improvement is needed

- Food and drink investment 0.32% [2003], lagging behind Japan, US and Australia, and below the European manufacturing average.
- European growth in production value over the last decade was similar to that of US, but lower than many competitors, especially Brazil.
- Europe performs slightly better in value-addition that US but worse than Australia, Canada and Brazil.
- Since 2002, Europe labour productivity has decreased relative to the US and between 2000-2004 increased by 16% compared with Brazil [27%].

Data: Benchmarking Report on Food and Drink Industry Competitiveness, CIAA, 20.06

ETP Food for Life

Vision

An **effective integration** of strategically-focussed, trans-national, concerted research in the **nutritional-, food- and consumer sciences and food chain management** will deliver ***innovative, novel and improved food products*** *for, and to, national, regional and global markets in line with* ***consumer needs and expectations***.

These products, **together with recommended changes in dietary regimes and lifestyles**, will have a ***positive impact on public health and overall quality of life*** (‘adding life to years’).

Such targeted activities will support **a successful and competitive pan-European agro-food industry** having *global business leadership securely based on economic growth, technology transfer, sustainable food production and consumer confidence*.

Current Situation & Plans

Current situation

- ETP Food for Life launched July 2005 on basis of Vision Paper
- Board, Operational Committee & Working Groups formed
- Two step-Strategic Research Agenda (SRA) process defined and agreed:
  - **"Stakeholders" proposal for a SRA** submitted to EC in **April 2006**; so as to input into FP7
  - **Final SRA & IP** to be published Before end of **2007**
- First Consultation **February 2, 2006**, in Brussels
- Web-, regional and national stakeholder consultations, **April-December 2006**
- Formation of Mirror Groups before end **2007**

Plans

- Final SRA and Implementation Plan to be published before end of **2007 (major stakeholder meeting, Brussels, September 13th)**
- Investigation into the possibilities of Public Private Partnerships **2007**

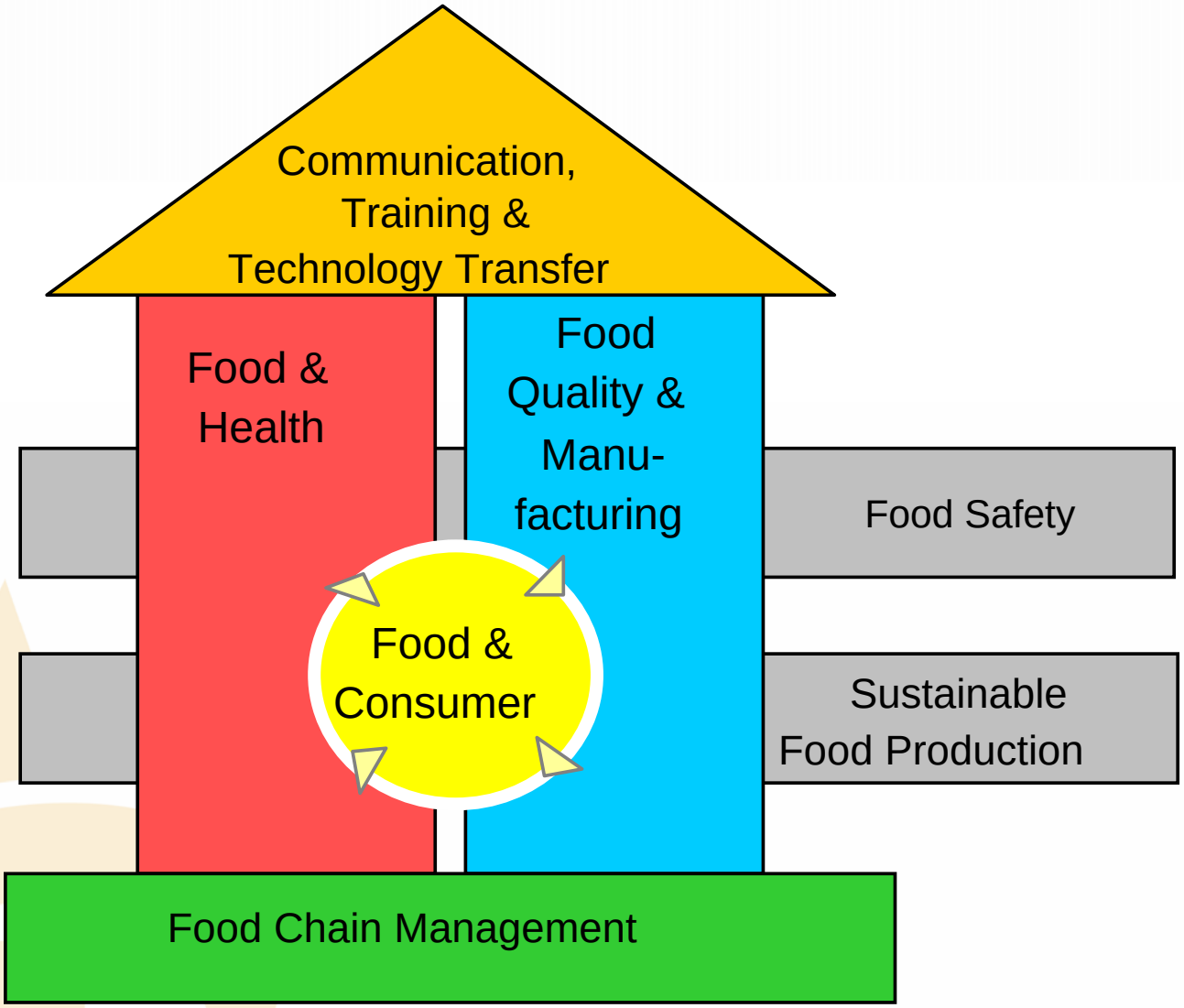
The key innovation challenges.

- The development of this ETP has been driven by the activities of its eight **Working Groups**.
- To optimize the synergy of its internal interactions, the Stakeholders' Strategic Research Agenda, SSRA, has been drafted according to the seven **Key Challenges for Innovation** facing the European agri-food sector.
- These Challenges map closely with the goals and deliverables of the individual Working Groups.

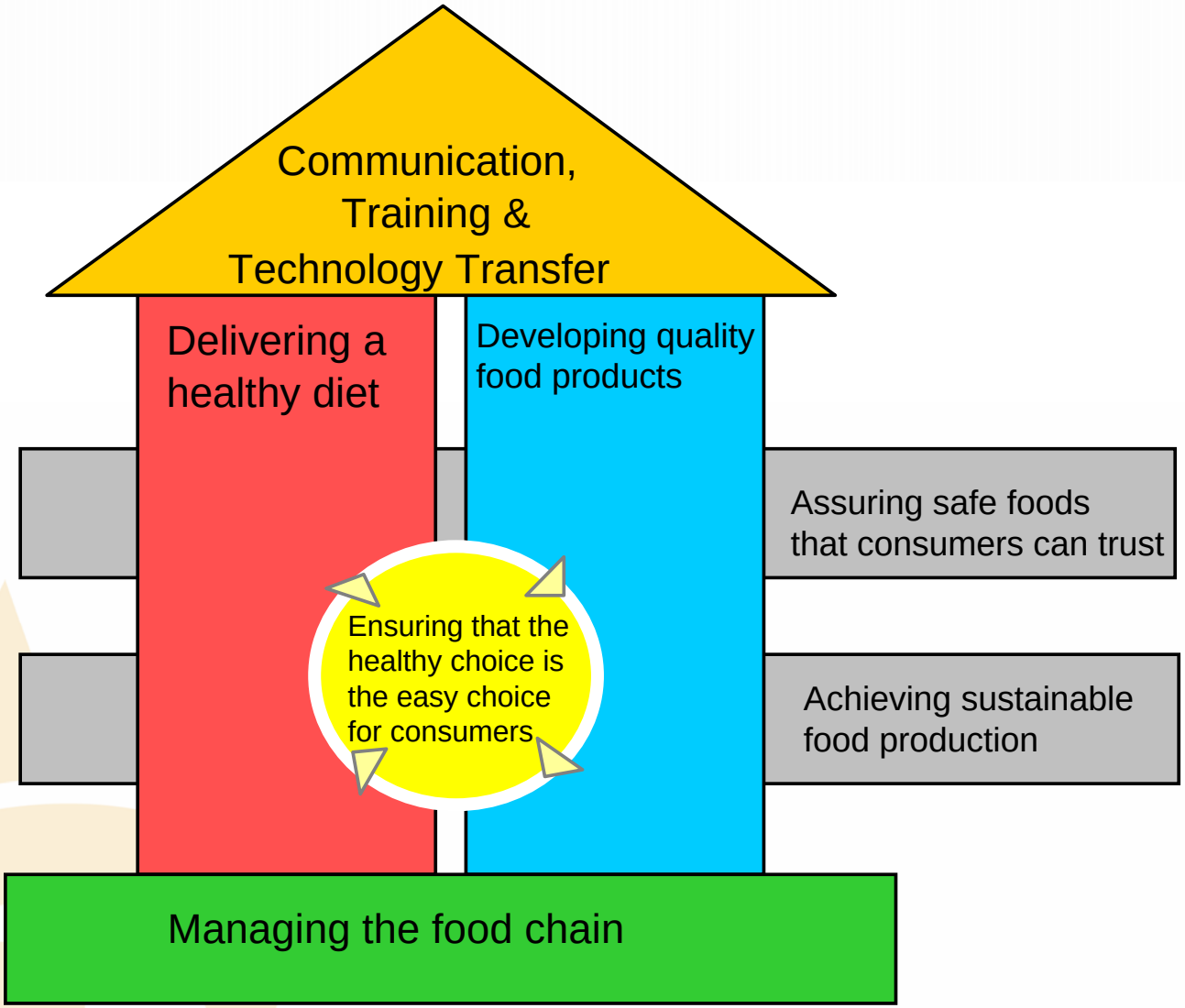
Stakeholders' proposal for a Strategic Research Agenda

September 2007

European Technology Platform Food for Life



European Technology Platform Food for Life



Food & Consumer

Key Success Factors re position European Food Industry 2020

- responsive to consumer needs and preferences
  → differentiated and cross-culturally sensitive

- consumer (re-) connect through active participation
  → transparency, trust and confidence

- balanced towards health and sustainability
  → corporate social responsibility

- through added value products
  → instead of commodities

Food & Consumer

Ensuring that the healthy choice is the easy choice for consumers

- Measuring consumer behaviour in relation to food - improved methods, wider data collection, better analysis
- Developing comprehensive models of consumer food choice processes - at a European level, with cultural considerations.
- 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)
  - The Consumer Research Cycle

Food & Health

Delivering a healthy diet

Food & Health

Delivering a healthier diet

- Understanding brain function in relation to diet
- Understanding dietary effects on immune and intestinal function
- Understanding the link between diet and metabolic function (obesity and associated metabolic disorders)
- Understanding consumer behaviour in relation to health and nutrition

The KEY research needs

life stage	METABOLIC-FUNCTIONS	IMMUNE- & INTES-TINAL FUNCTIONS	BRAIN-FUNCTIONS
infants, children	optimizing development minimizing disease risk	diet & imprinting of immmune systems allergies	Nutrition and cognitive function „brain conditioning“
adolescents/adults	reprogramming of energy-balance optimising cardio-vascular health	improve resistance to common infections improve gut functions cancer prevention	reprogramming of satiety control
elderly	preventing sarcopenia optimizing bone health slow aging processes	preventing of immune function decline	preventing cognitive decline target degenerative diseases

Food Quality & Manufacturing

Developing quality food products

Food Quality & Manufacturing

Developing quality food products

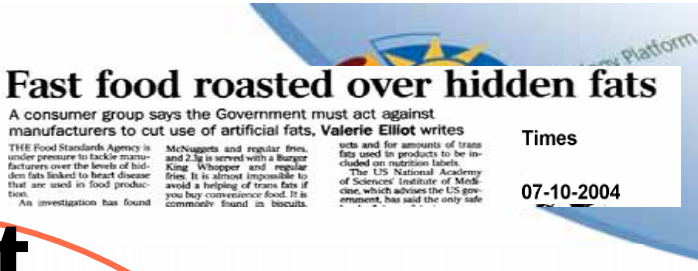
value-added food products with superior quality,convenience, availability and affordability

- Producing tailor-made food products - with and from PAN model
- Improving process- and packaging design and process control
- Improving understanding of process-structure-property relationships

- Understanding consumer behaviour in relation to food quality and manufacturing

Assuring safe foods that consumers can trust

Consumer Needs


Fast food roasted over hidden fats

A consumer group says the Government must act against manufacturers to cut use of artificial fats, Valerie Elliot writes

Times

07-10-2004


Food recalls on the rise

Allergy fears add to contamination list

Trust

Can I trust this company?

Is it good for me?

Honesty

Can I trust this brand?

Is it fresh?

Does it do what the advertising claims?

Is it natural?

Familiarity

Naturalness

What was added?

What does the label mean?

Food Safety

Is it safe to eat?

Quality

Does it taste good?

Trust


School meals fail salt and fat tests

Guardian (F

Lucy Ward

Education correspondent

28-10-2004

Primary schoolchildren in England and Wales are being served school dinners containing much higher levels of fat, sugar and salt than nutritionists recommend, according to a detailed analysis of the meals.

needed and 709 recommended level

The association, number of voic higher quality scho improve health a child obesity, analy primary school me a cheese fritter, p potatoes and flapjac shape, spaghetti ho faces and an iced b

It compared the r nutritional guide children aged seve by the Caroline Wa which campaigns t public health thre food and says scho should provide on third of a child

mended daily i nutrients. The a then came up wit meal recommendat

Despite governme to improve school guidelines for prim


First case of BSE found in goat

Confirmation that the fatal brain disease has jumped species from cows has alarmed sheep farmers, Valerie Elliott reports

Times

02-11-2004


Food poisoning alert over salmonella in Spanish eggs

Guardian

15-10-2004

James Meikle and Giles Tremlett in Madrid

Thousands of Britons have got food poisoning from salmonella in imported Spanish eggs, health officials said yesterday as they demanded that Madrid and the European commission took firmer action on safety.

people. More than 80 outbreaks of salmonella from the strains have been investigated since 2002 and "use by the catering trade of Spanish eggs" is said to be "a major source of this infection".

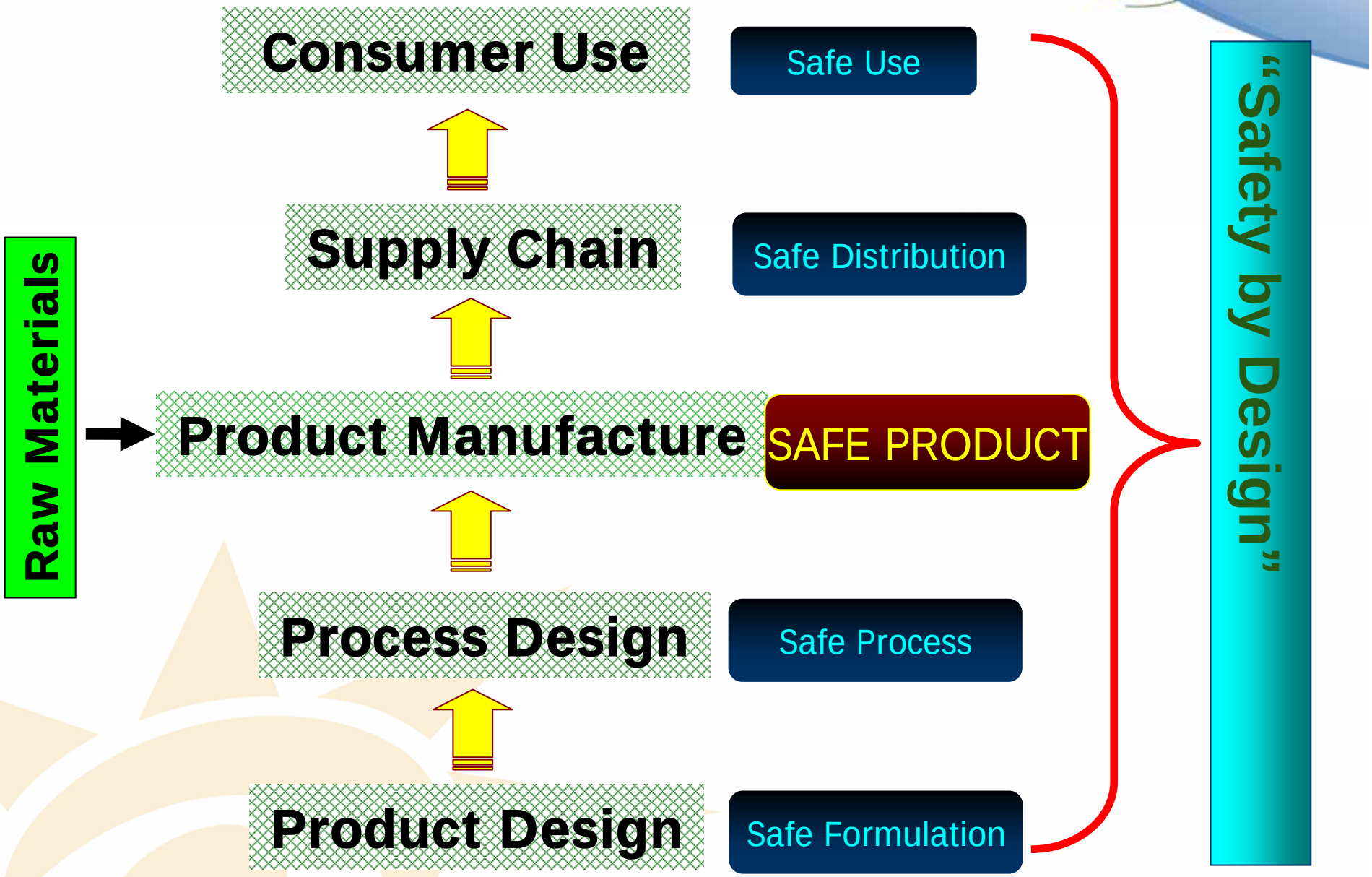
Health agencies have not pressed for an EU embargo,

sion of feet dragging. Andrew Parker, the chairman of the British Egg Industry Council, said: "It is ridiculous that two years after the problem with Spanish eggs became apparent no action has been taken. It is now time for the British government to ban Spanish eggs."


Alarming gastro increase put down to fast foods

Takeaway troubles

Food Safety by Design



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

Achieving Sustainable Food Production

Core Challenge

To develop sustainable food production by establishing synergies between

- economic growth,
- environmental protection and
- fair social conditions

Sustainable food production

Achieving sustainable food production

- Understanding of the sustainability of food production and supply in Europe
- Research on scenarios of future European food production and supply
- Developing sustainable processing, packaging and distribution
- Developing and implementing sustainable primary food production

- Understanding consumers and their behaviour regarding sustainable food production

Managing the Food Chain

Core challenge

To achieve a competitive, high level of food chain performance through implementation of new technologies and business practices that address all aspects of economic efficiency, marketing and environmental control.

Managing the food chain

- Identification of relevant possible future scenarios
- Stabilizing markets and supporting food chain dynamics
- Improving the innovation potential of the food chain
- Supporting competitiveness through integration
- Participation of small producers in the emerging complex food chain operations

- Integrating food chain management and the consumer

Food for Life - Strategic Research Agenda

Relevant points of contact, animal production directly referenced:

Food Quality and Safety -

controlling hazards as early as possible in the food chain, predicting new hazards, new health and sensory tributes from breeding. Animal welfare as an element of trust building.

Sustainability-

key challenge for primary production.

Communication, Training and Technology Transfer

Effective communication within the ETP and between the ETP and all its stakeholders will be crucial for its overall success.

In relation to *optimising technology transfer* to both industry and SMEs, it will:

- identify best practice and adapt this for optimal impact within the ETP
- develop and exploit effective communication strategies (for research and industry stakeholders)
- promote technology transfer and innovation.

Key roles are proposed for National Technology Platforms, led mostly by National Food Federations.

The ETP Food for Life will:

- ***Drive European competitiveness*** based on the size of the F&D sector and the transition foreseen to a high value-added product portfolio (incl. services) with a major impact on **well-being and welfare,**
- ***Impact positively on Community policies*** (research integration, increased R&D expenditure, greater involvement of 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 Implementation Plan for a Strategic Research Agenda.

Effective public-private partnerships

will be essential to fulfil this Vision.

Strategic Research Agenda, SSRA

http://etp.ciaa.be

Stakeholder Meeting 13/09 Brussels