

# **ILSI Europe's contributions to food safety and nutrition**

**Dr. Nico van Belzen**  
**Executive director**  
**ILSI Europe**  
**[www.ils.eu](http://www.ils.eu)**



**European branch** of the worldwide  
International Life Sciences Institute (ILSI)

**To improve  
public health and safety  
through  
advancement of science**



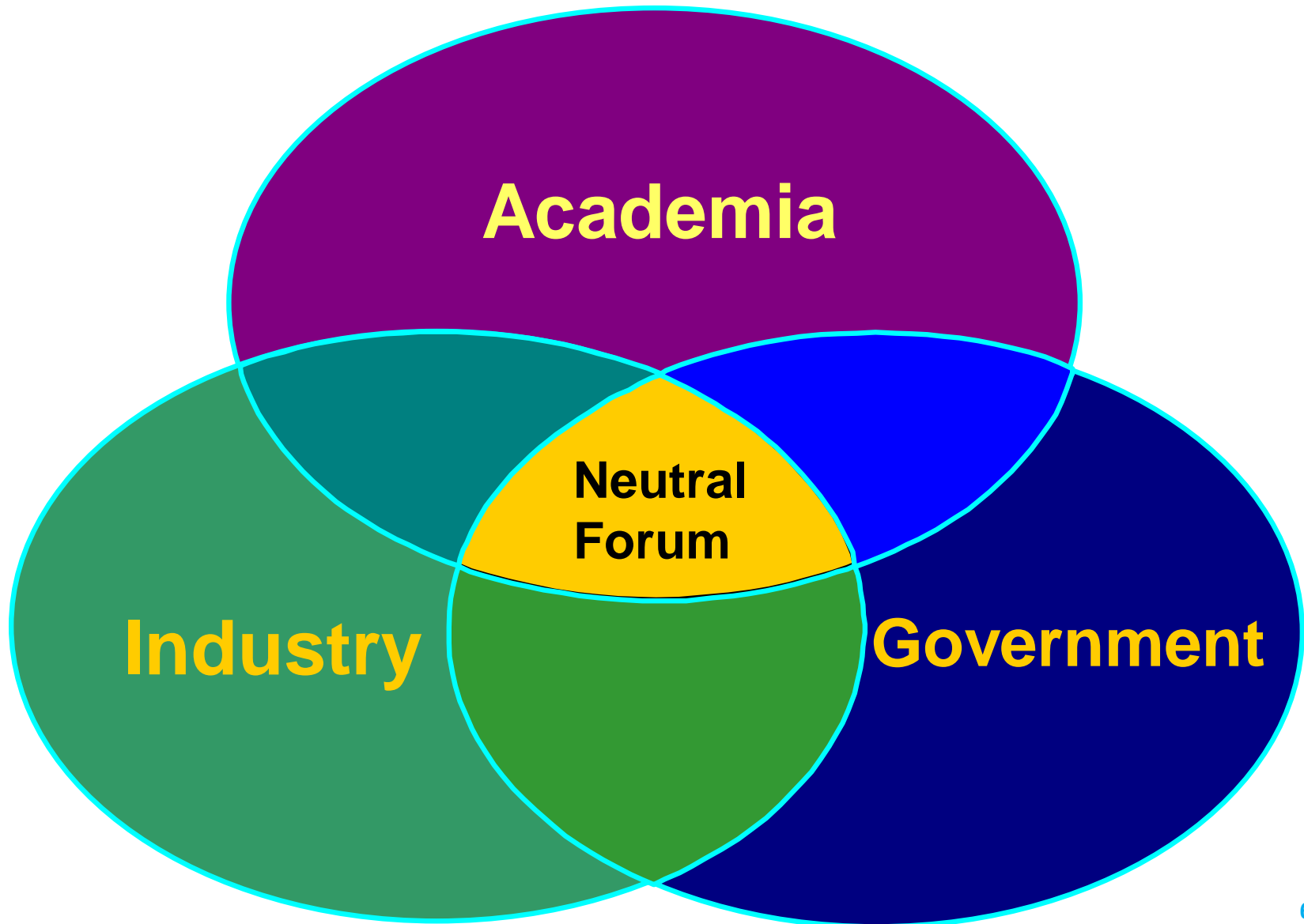
**Food and Agriculture Organization**  
**Grants ILSI**  
**Specialised Consultative Status**



**World Health Organization**  
**Recognises ILSI as a**  
**Nongovernmental Organisation (NGO)**



**ILSI Europe is represented in the  
Stakeholder Consultative Platform of  
the European Food Safety Authority  
(EFSA)**



<b>Abbott Nutrition</b>	<b>Givaudan</b>	<b>Procter &amp; Gamble</b>
<b>Ajinomoto Europe</b>	<b>H J Heinz</b>	<b>Puratos Group</b>
<b>Barilla G. &amp; R. Fratelli</b>	<b>Institut Mérieux</b>	<b>Red Bull</b>
<b>BASF</b>	<b>International Nutrition Company</b>	<b>Roquette Group</b>
<b>Bayer CropScience BioScience</b>	<b>Kellogg Europe</b>	<b>Royal FrieslandCampina</b>
<b>Beverage Partners Worldwide</b>	<b>Kikkoman Foods Europe</b>	<b>Rudolf Wild</b>
<b>Bionov</b>	<b>Kraft Foods Europe</b>	<b>Schwabegroup</b>
<b>Biosearch Life</b>	<b>Lallemand SAS</b>	<b>Sensus</b>
<b>Bunge Europe</b>	<b>Luigi Lavazza</b>	<b>Seven Seas</b>
<b>Campbell Soup Company</b>	<b>Mars</b>	<b>Solae Europe</b>
<b>Cargill</b>	<b>Martek Biosciences Corporation</b>	<b>Soremartec Italia – Ferrero Group</b>
<b>Carlsberg</b>	<b>McDonald's Europe</b>	<b>Südzucker/BENEÓ Group</b>
<b>Chiquita Brands International</b>	<b>McNeil Nutritionals</b>	<b>Syngenta Crop Protection</b>
<b>Clasado</b>	<b>Mead Johnson Nutrition</b>	<b>Swiss Quality Testing Services</b>
<b>Coca-Cola Europe</b>	<b>Merck Consumer Healthcare</b>	<b>Tate &amp; Lyle</b>
<b>Colloïdes Naturels International</b>	<b>Monsanto Europe</b>	<b>Tereos-Syral</b>
<b>Cosucra Groupe Warcoing</b>	<b>National Starch</b>	<b>Tetra Pak Research</b>
<b>Danisco</b>	<b>Naturex</b>	<b>Ülker Bisküvi</b>
<b>Danone</b>	<b>Nestlé</b>	<b>Unilever</b>
<b>Dow Europe</b>	<b>PepsiCo International</b>	<b>Yakult Europe</b>
<b>DSM</b>	<b>Pfizer Consumer Healthcare</b>	
<b>DuPont de Nemours</b>	<b>Premier Foods</b>	
<b>Firmenich</b>		

- To provide a **unique platform** for scientists from **academia, government and industry** to jointly advance the best available fact-based, objective science on public health topics
- To provide **consensus-based scientific information** on food and health, which is widely communicated



## Assessment of Benefits & Risks

- Addition of nutrients to food
- Emerging technologies
- Food intake methodology
- Functional foods
- Novel foods and nanotechnology
- Risk analysis in food microbiology
- Risk assessment of chemicals in food
- Risk assessment of genotoxic carcinogens
- Threshold of toxicological concern

## Food Chain

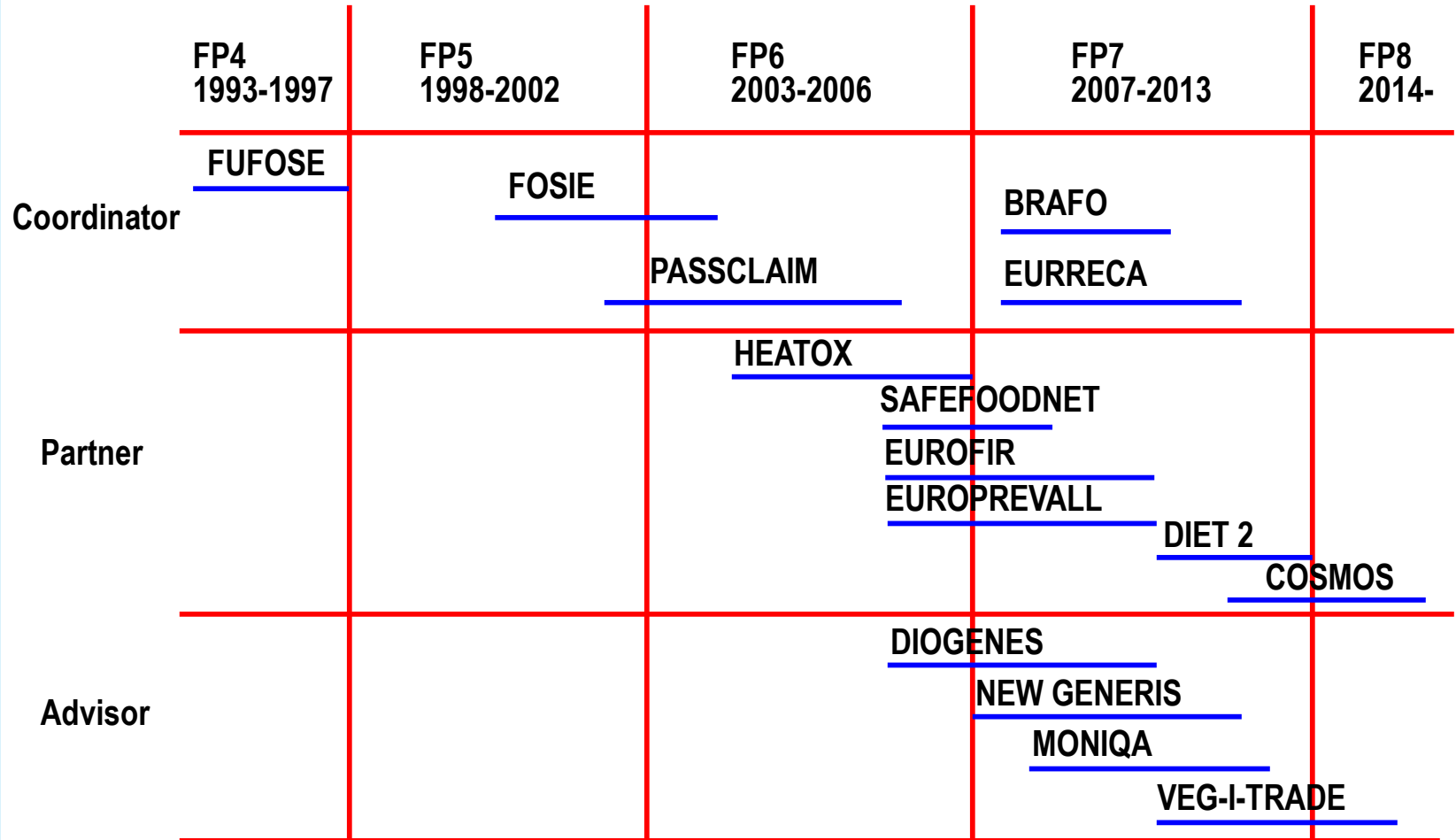
- Emerging microbiological issues
- Environment and health
- Packaging materials
- Process-related compounds and natural toxins

## Societal Aspects

- Consumer science

## Diet, Health & Disease

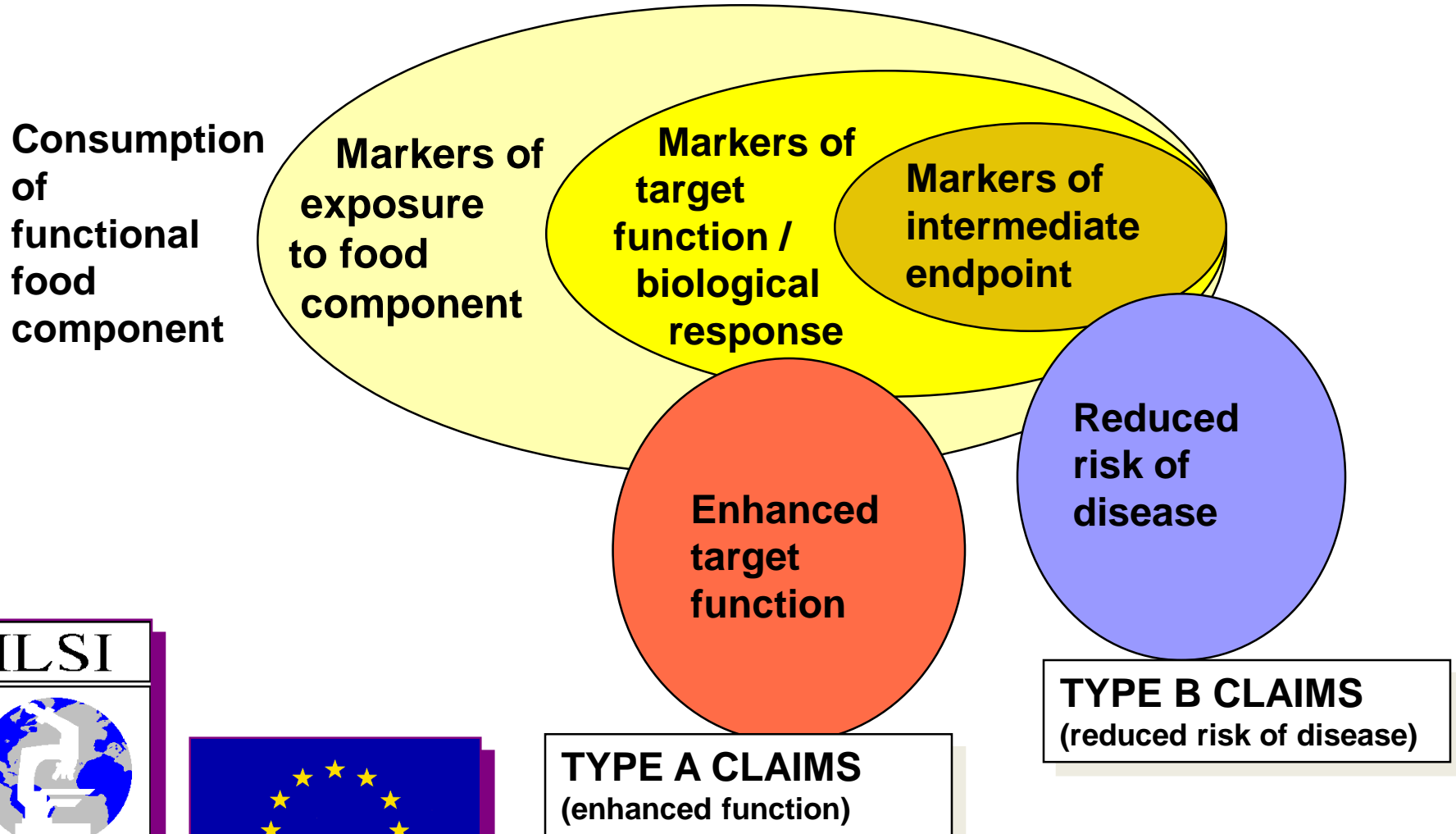
- Dietary carbohydrates
- Eating behaviour and energy balance
- Food allergy
- Metabolic imprinting
- Metabolic syndrome
- Nutrient requirements
- Nutrition and immunity in man
- Nutrition and mental performance
- Prebiotics
- Probiotics
- Weight management in public health



- **Micronutrient requirements (e.g. EURRECA)**
- **Integrated risk-benefit assessment framework (BRAFO)**
- **Risk assessment of chemicals in food (FOSIE)**
- **Margin of Exposure (MoE)**
- **Food allergy risk assessment**
- **Scientific assessment of health claims on food (e.g. FUFOSE, PASSCLAIM)**
- **Threshold of Toxicological Concern (TTC)**
- **Safety evaluation of nanomaterials**
- **Pathogen risk assessment**
- **Safety evaluation of packaging materials**
- **... and much more**

# FUFOSE: from biomarkers to claims

1996-1998



# PASSCLAIM

2001-2005

Human data

Valid markers

Food characteristics

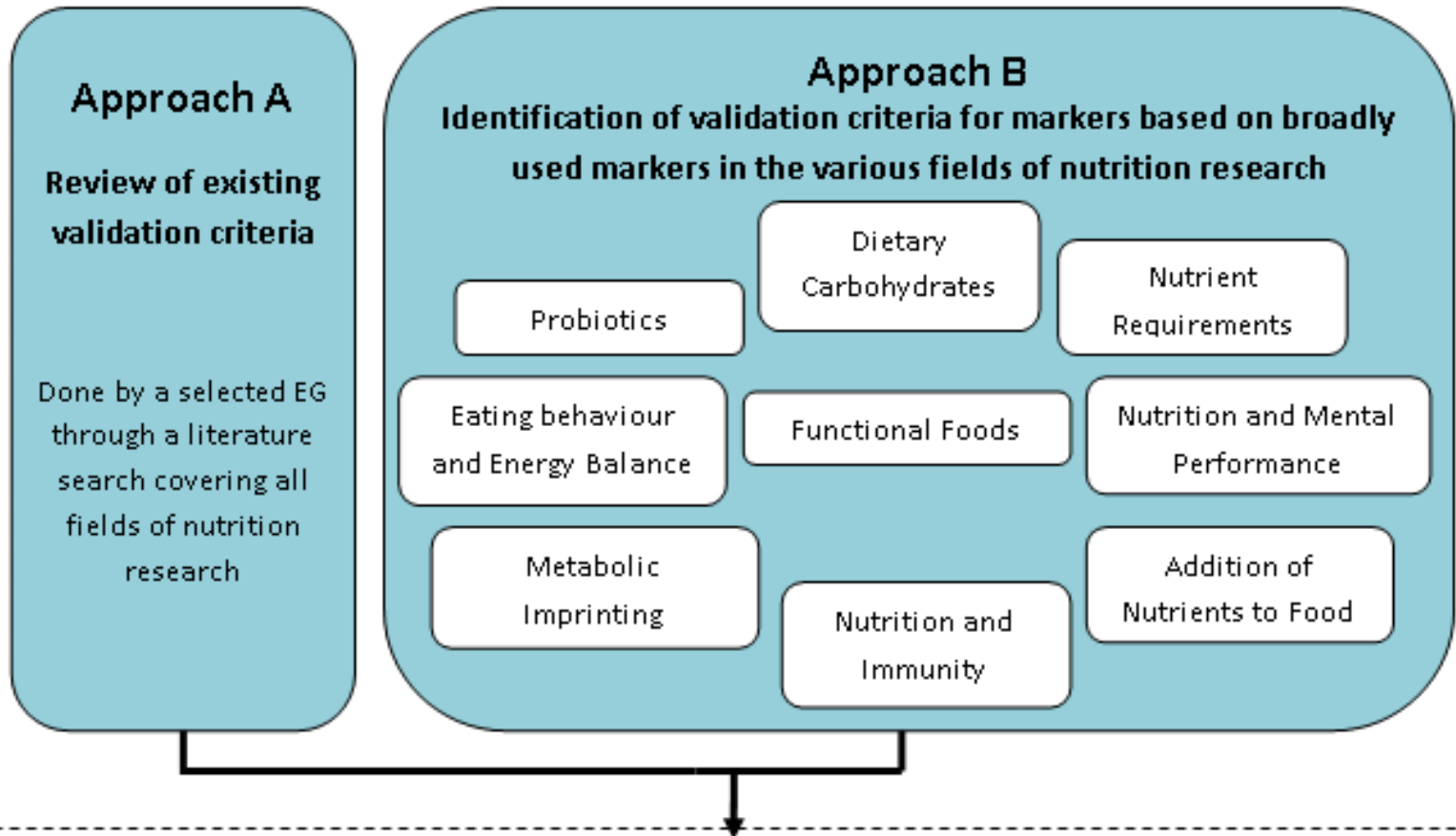
Totality  
and  
weight  
of  
evidence

Substantiated  
claim



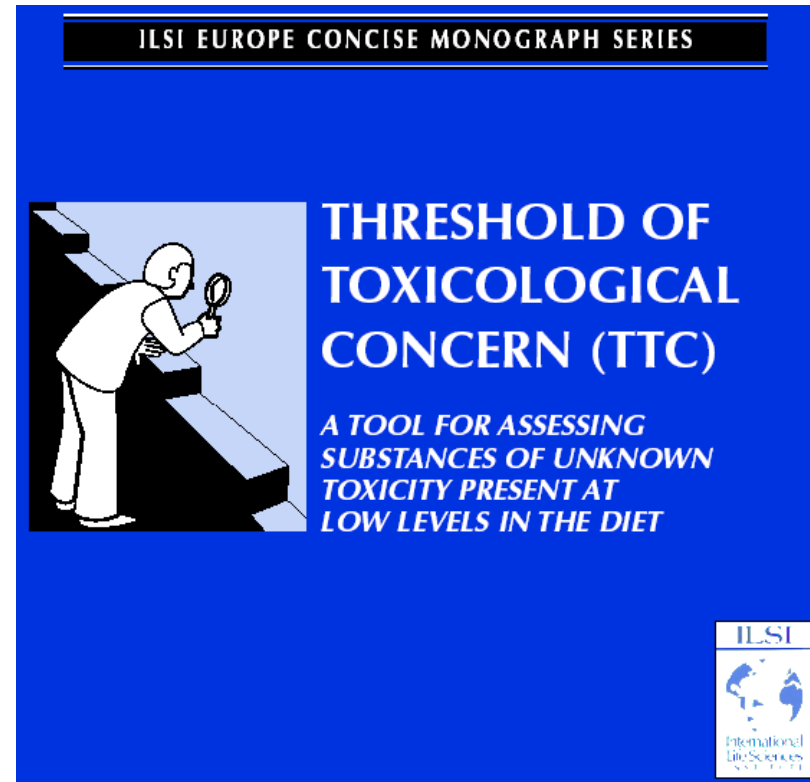
- Further guidance for health claim substantiation
- *Resistance against challenge* as biomarker for health
- **Marker Initiative**

**STEP 1 - 2011**



**Collaboration with EURRECA, BOND, BIOCLAIMS, NUTRITECH, WHO-IARC, ...**

- Exposed to thousands of chemicals
- Increasing analytical sensitivity
- Prioritisation for RA is needed





# TTC decision tree

A “funnel” of questions to select the appropriate TTC value for the chemical

Does the estimated intake exceed the TTC ?

No



Substance would not be expected to be a safety concern

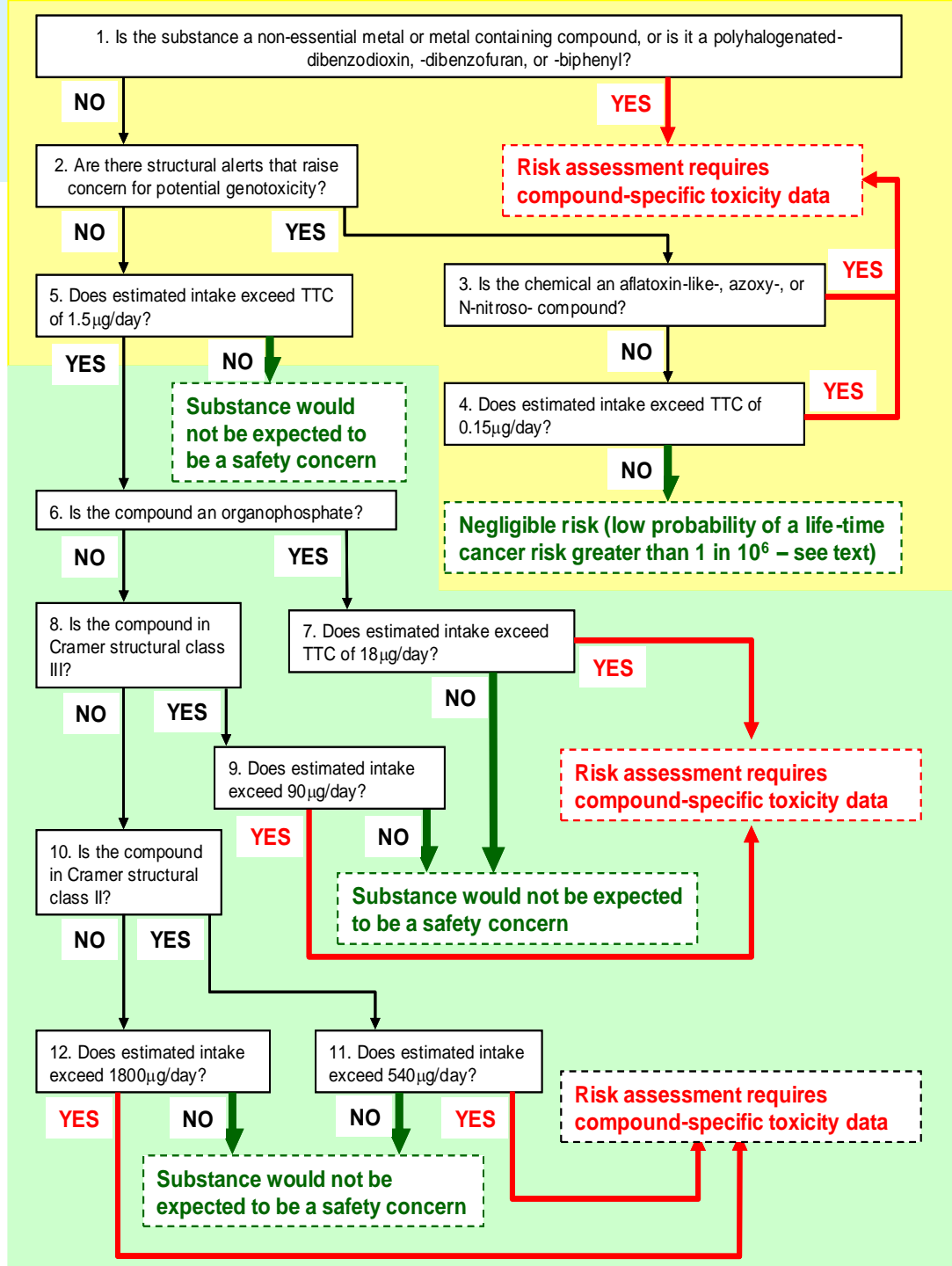
Yes



Risk assessment requires compound-specific toxicity data

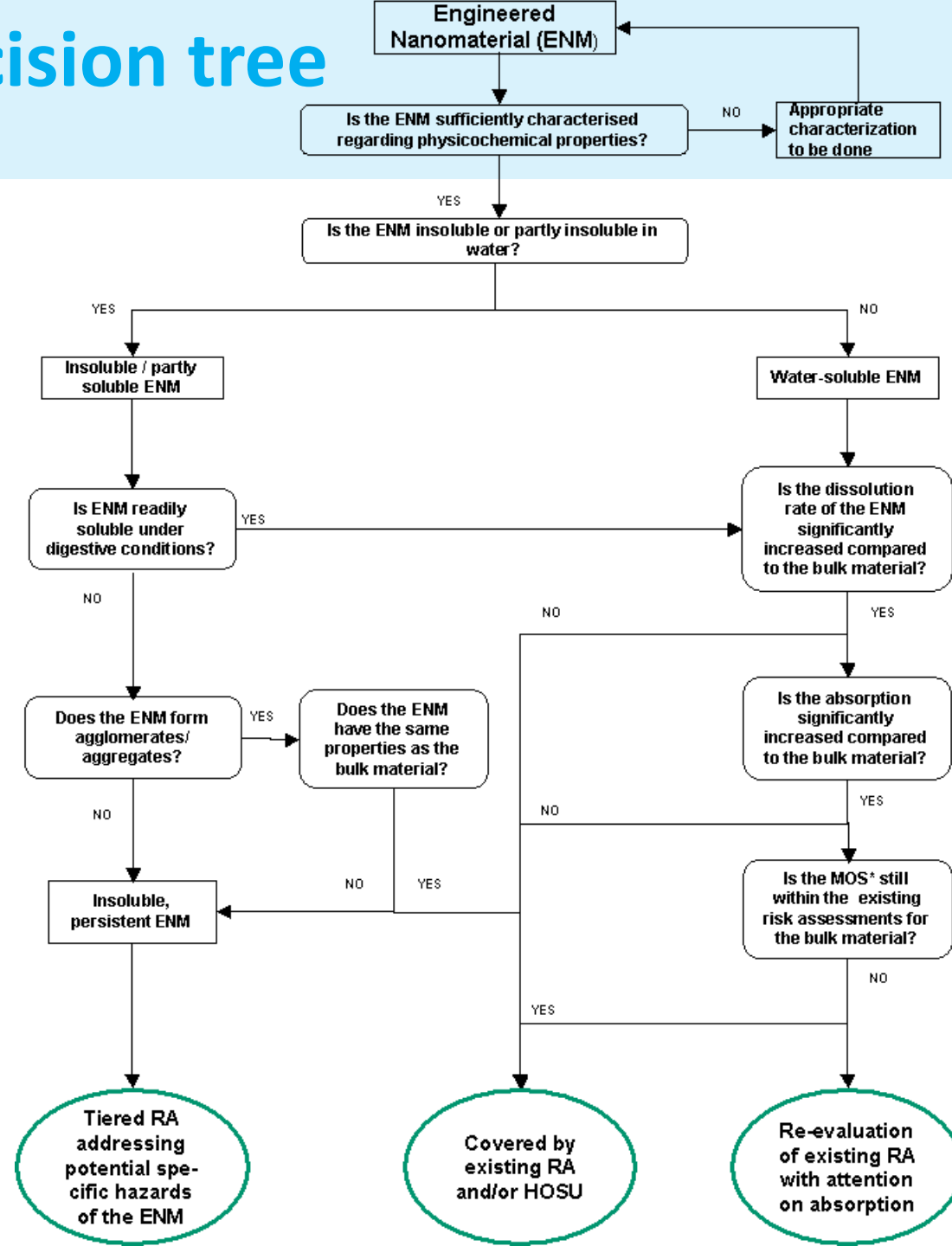
# CANCER

# NON-CANCER



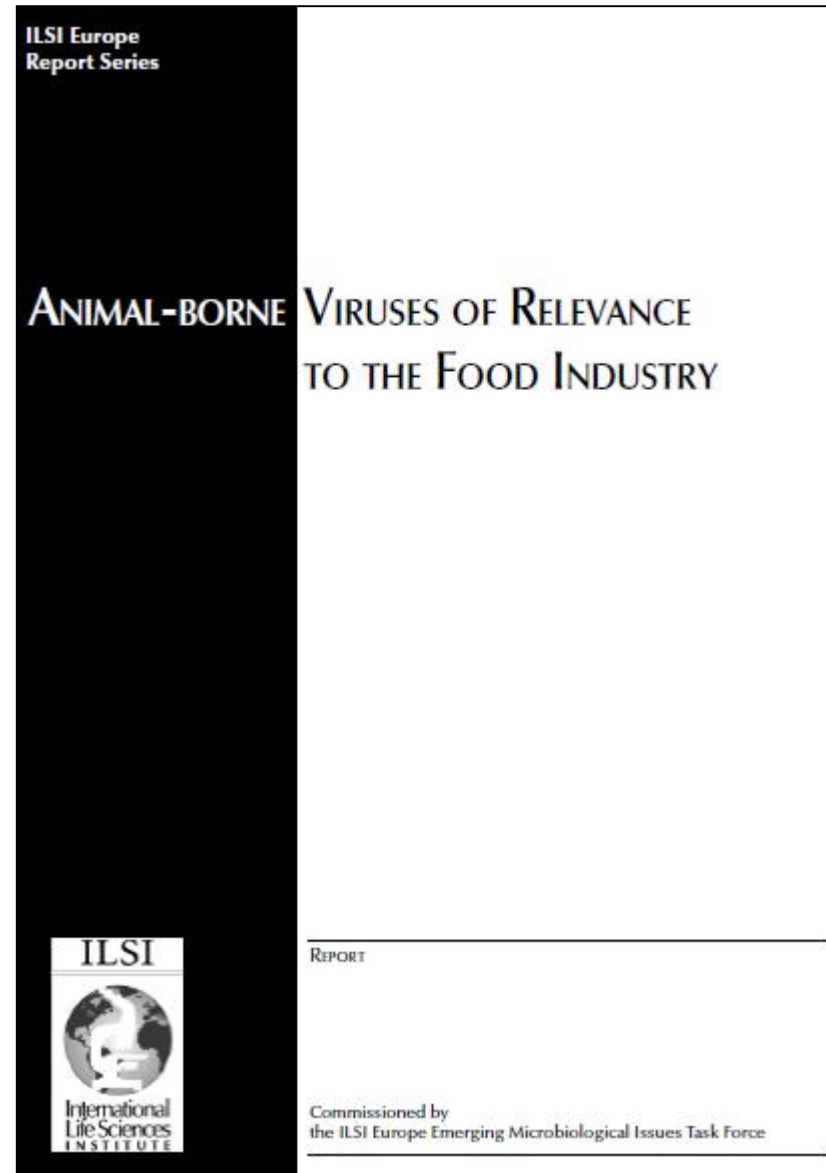
# Nano decision tree

- Characterisation
- Solubility
- Agglomeration
- Absorption



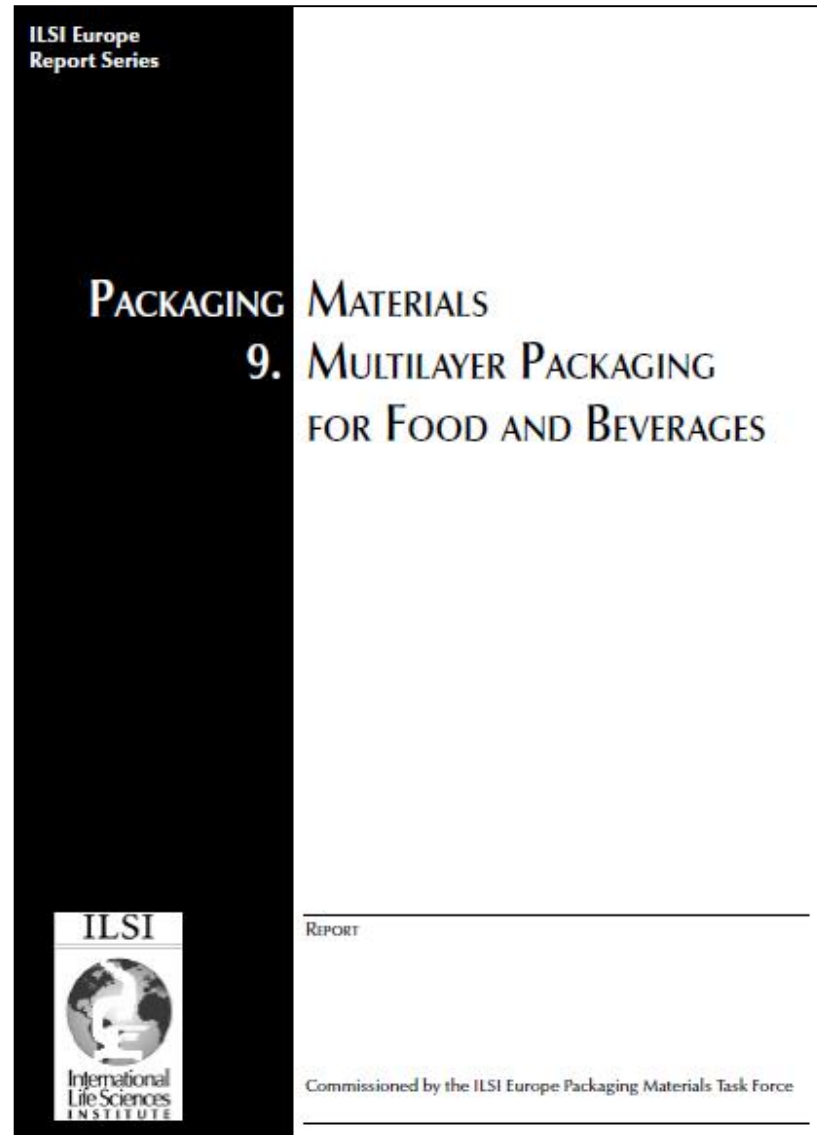
- Animal borne Viruses
- Campylobacters as zoonotic pathogens: a food production perspective
- Paratuberculosis and the food chain
- Mycobacterium avium subsp.
- Foodborne protozoan parasites
- TSE as a zoonotic disease
- Foodborne Viruses
- Enterohaemorrhagic *Escherichia coli*
- *Salmonella typhimurium* DT 104

Free downloads from [www.ils.eu](http://www.ils.eu)

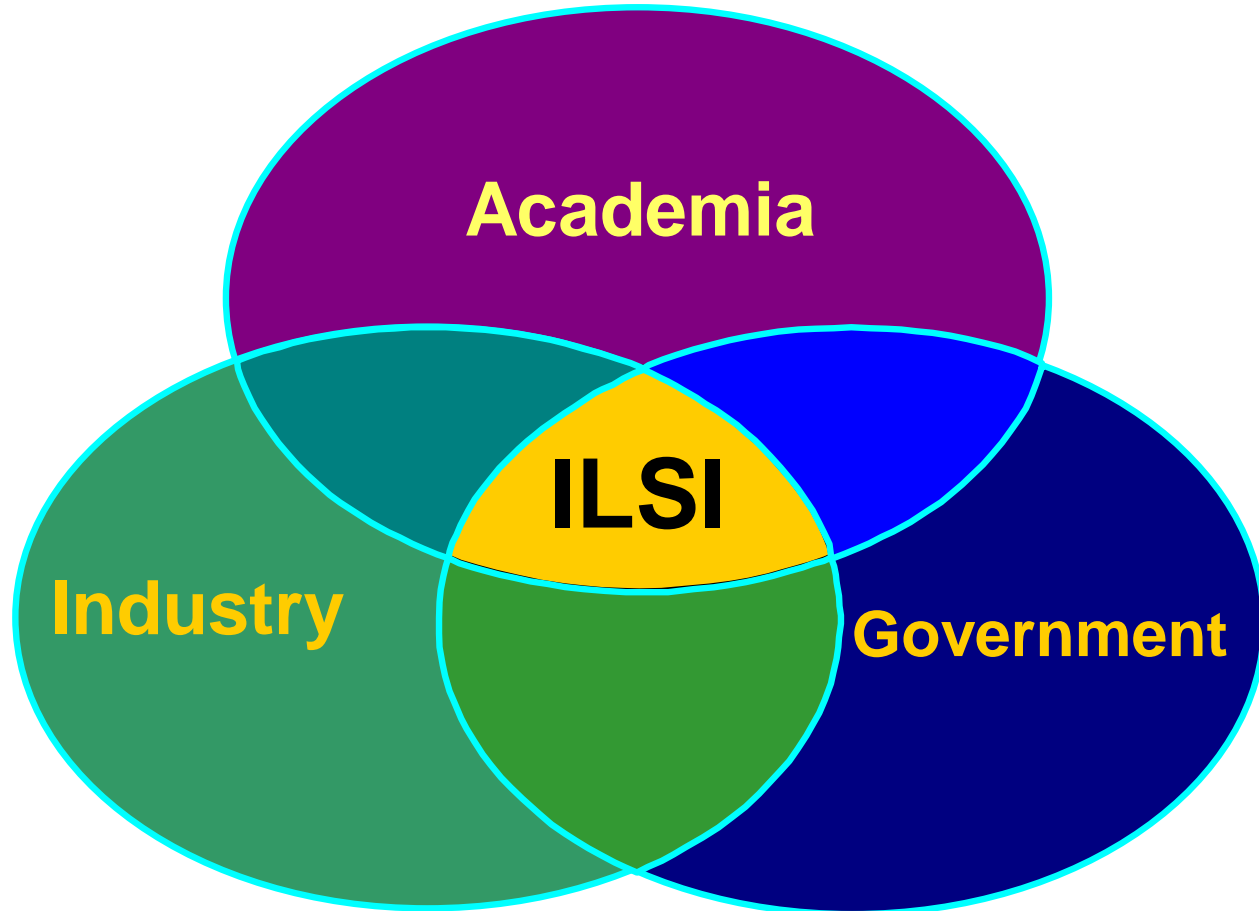


- Polyethylene terephthalate (PET)
- Polystyrene
- Polypropylene
- Polyethylene
- Polyvinyl chloride
- Paper and board
- Metal packaging for foodstuffs
- Multilayer packagings
  
- *Printing food contact materials*

***5th International Symposium on  
Food Packaging  
14-16 November 2012, Berlin,  
Germany***



# Key to a healthy future



[www.ilsieurope.eu](http://www.ilsieurope.eu)