"German Network on Life Cycle Inventory Data"

Int. Workshop on Quality of LCI Data, Karlsruhe

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Life Cycle Approach as Steering Instrument for Sustainable Development

Environmental policy:

- **EU-integrated product policy (IPP): Communication June 2003**
- **IPPC: Best available technique REFerence documents (BREF)**

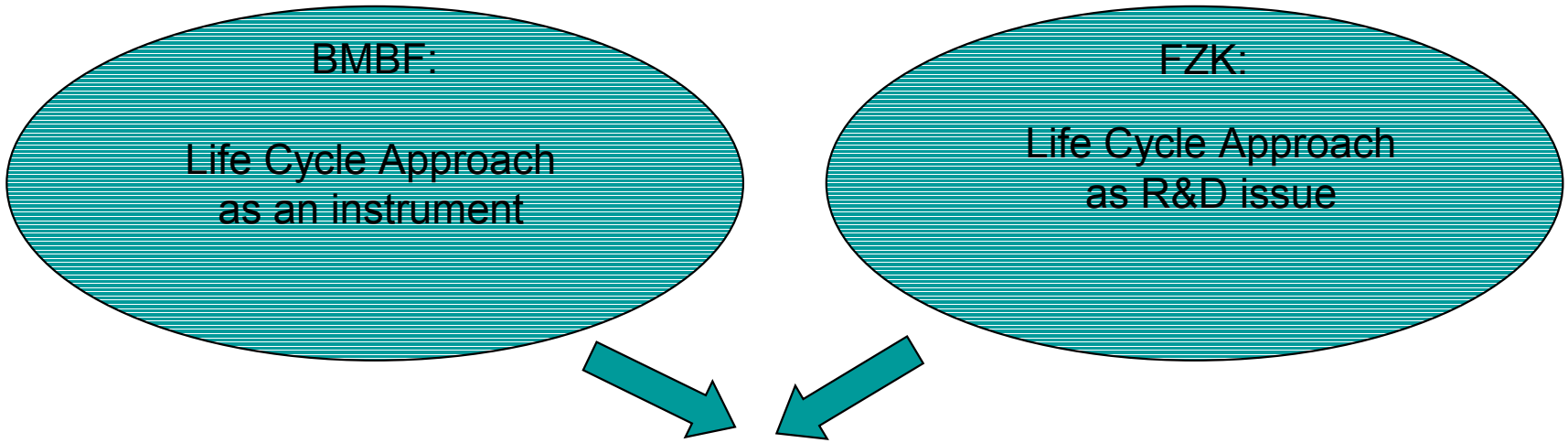
Industry:

- **"Design for the Environment"**
  e.g. automotive, telecommunication, and electric industries,
  CRC 392 TU Darmstadt "Environmentally Sustainable Product Development"
- **Process Optimisation**
  e.g. BMBF joint project "Changeover of electroplating plants to low-loss process technology with parallel cost reduction"
- **Environmental Management**
  e.g. integration of LC thinking in EMAS II

Consumers & Business to Business:

- **Ecolabel Type III**
  e.g. AUB Expert Committee on the Ecological Declaration of Building Products

Vision



Continuity by a scientific infrastructure for research on the supply and use of life cycle inventory data

- Long-term perspective by integration in HGF
- Network of experts
- Coordination of individual activities

Preliminary Study "Quality Assurance and User-oriented Supply of Life Cycle Inventory Data"

- Term: 3/02 – 12/02
- Scope: Life Cycle Inventory Data
- Tasks:
  - Contacting major stakeholders / demand analysis
  - Development of long-term concepts and implementation models
  - Presentation of results at a workshop (11-18/19, 2002)
- Resources: 3 members of staff

Partners

- 3 Helmholtz-Centers (FZ Karlsruhe, FZ Jülich, DLR Stuttgart)
- 9 Universities and technical colleges
- 11 Companies and industry associations (mainly metal, energy, building materials)
- 5 non-university research organisations
- 3 Federal organizations: Environmental Agency (UBA; several units) Federal Agency for Geosciences and Resources, Statistical Office

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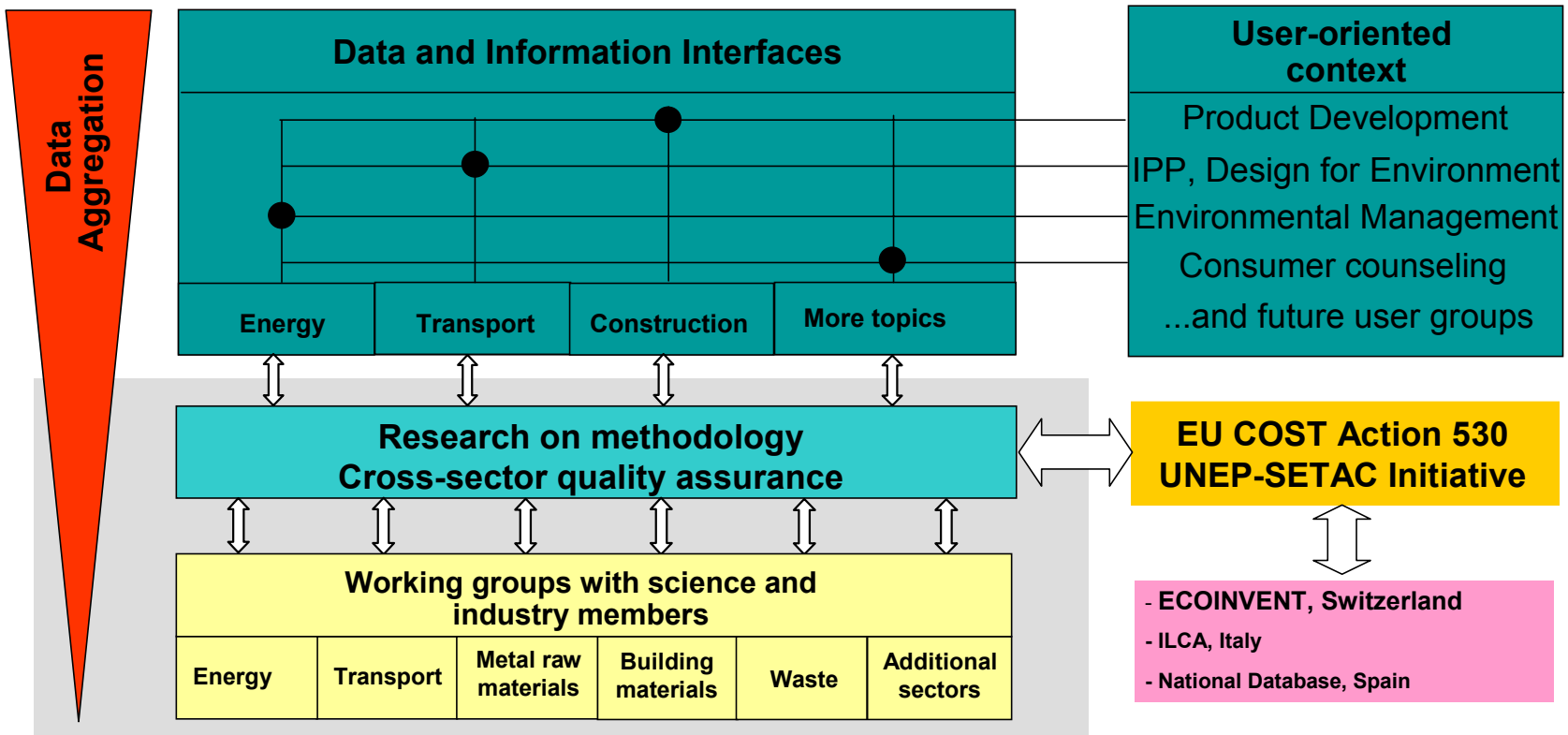


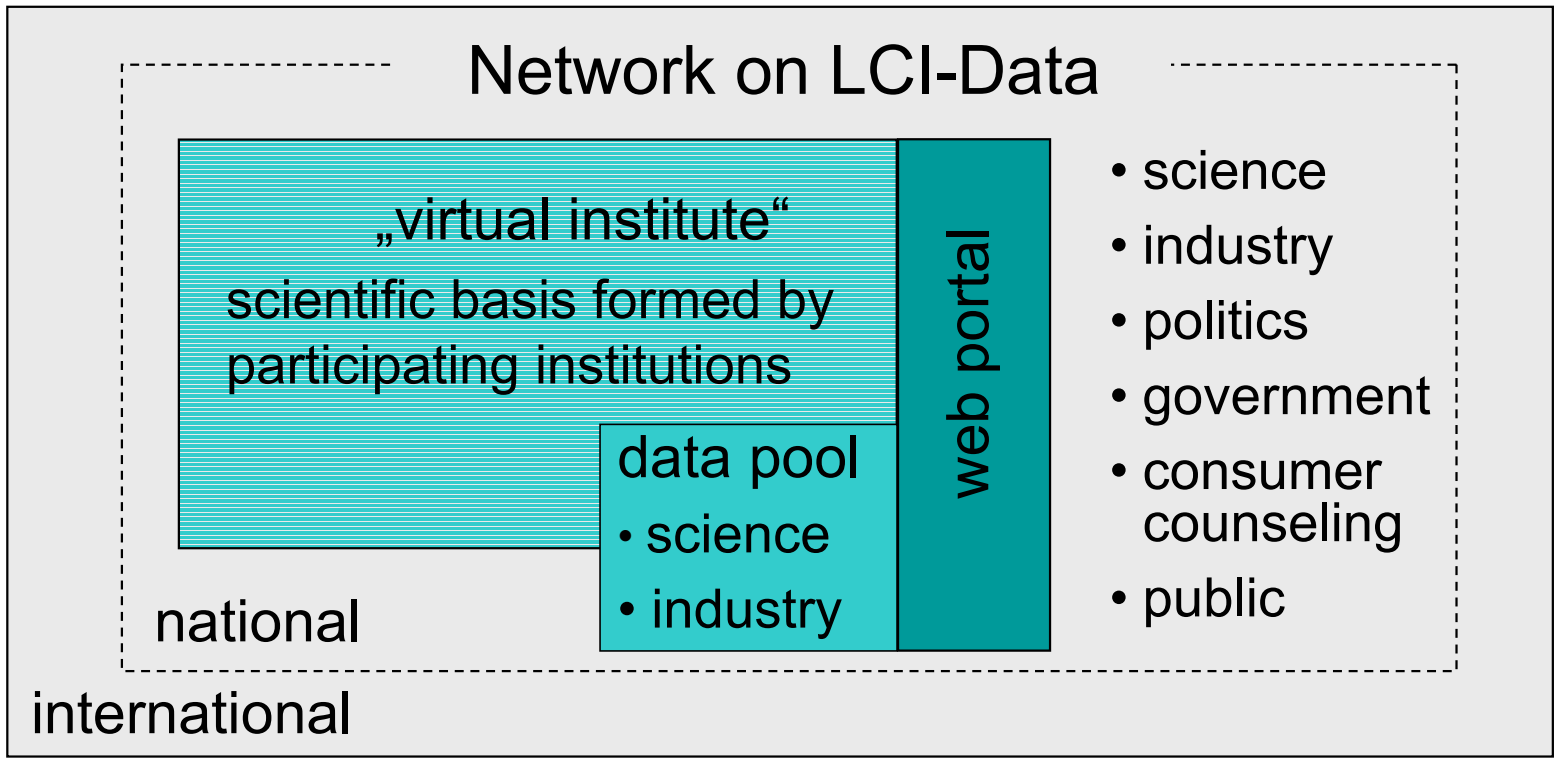
HGF Impulse and Network Fund

- September 2002:
  Promotion Initiative from the president of HGF for cross linking of Helmholtz-Centres with universities by foundation of a

„Common Research Center and common (virtual) Institute“

- Funding the start-up phase of a common Center/Institute (240.000 €/a for max. 3 years)
- Joint proposal by ~20 scientific institutions
- Approval in October 2003

"Virtual Institute"

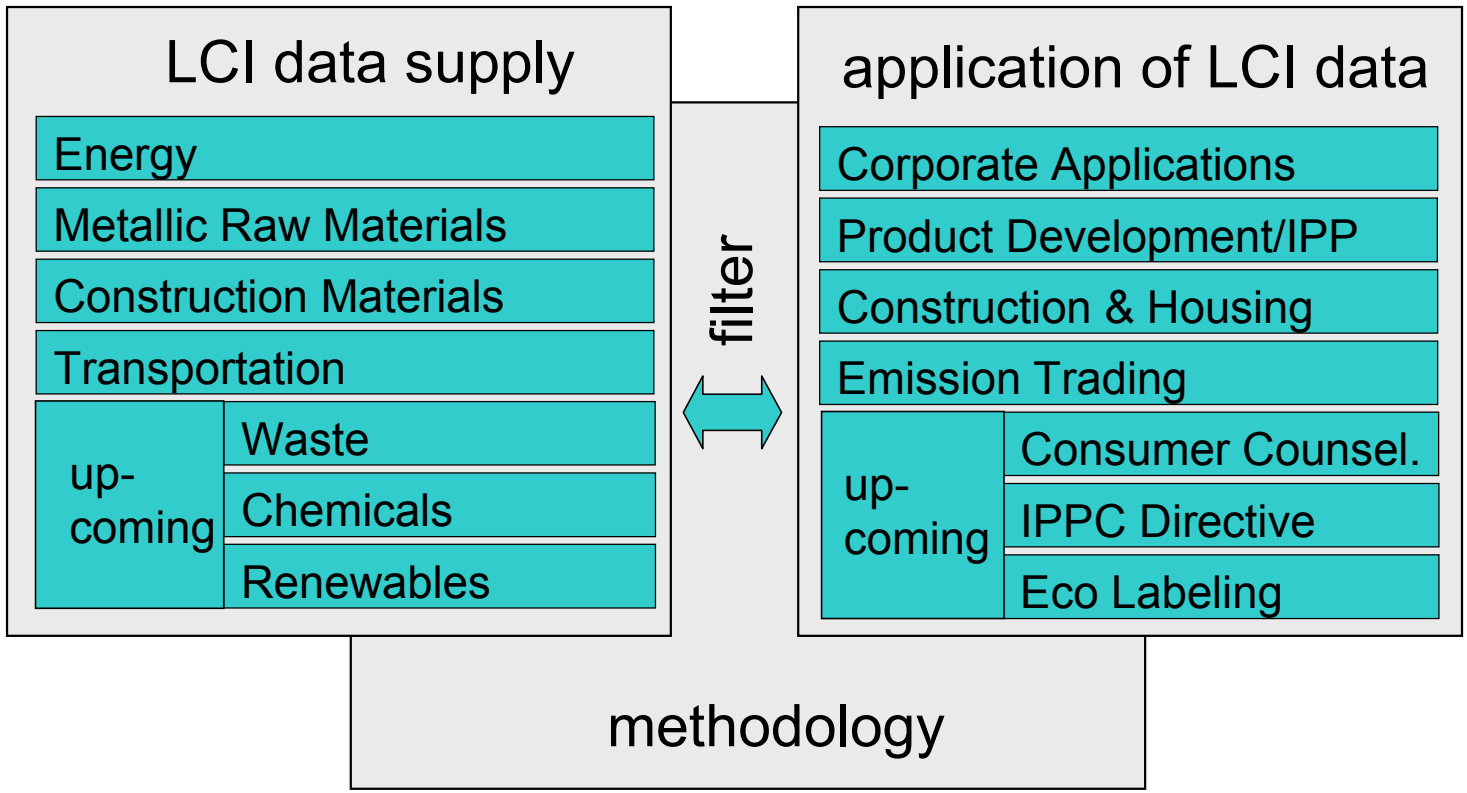


Objectives

- the scientific validation, generation and continuous update of data for life cycle analyses
- the use of life cycle data for scientific decision support with respect to sustainable production and consumption in varying application areas
- further methodological development of life cycle analyses within the research area material flows and sustainability.

- **Integration in international activities**

Work Programme



Towards Appropriateness

Qualitative DQIs	**Type of Study**			**Study objective**			**Level of Detail**	
	Single Product / Plant	Product Group	Regional / National / Inter-national	Ecolabeling	Product related decision (internal)	Pollution Prevention (Public Policy)	Screening	Detailed
Representativeness	Y	N/Y	N	N	Y	N	N	Y
Transparency	Y	N/Y	N	N	N/Y	N	N	N
Peer Review	N	Y	N	N	N	N	N	Y
Consistency	N/Y	N/Y	N	N	N/Y	N	N	N

N/Y: Some variability exists among practioners/studies.
*these ratings reflect the circumstances at the time of the workshop (October 1992)

Principal Responsibilites in the Network

1. Guidelines for data capturing (**WG Methodology**): documentation and specification of quality criteria.
2. Review of data sets (**WGs data supply**): internal review on quality but also quantification of DQIs.
3. User needs (**WGs application fields**): definition of appropriate data set properties and rule based filters which also have to encounter DQIs.

Common Criteria (WG Methodology)

Mandatory elements for a unit process data documentation are currently:

- kind of data (measured, literature etc.),
- age and timeliness of data and
- precision of data.

Elements for discussion are:

- additional quantitative DQIs
- treatment of data gaps and zeros
- treatment of different estimation techniques (conservative, optimistic etc.)
- lists of recommended exchanges (SETAC WGs)

Sectoral Specificities

WG Metals:

- Harmonisation of LCI-data of different origins
- Development of a template for metallurgical processes,
  - representativeness
  - equal level of detail

WG Energy:

- Harmonisation of LCI data for electricity generation, including full process chains for energy carriers and power plants
  - Method for updating of basic data
  - Dynamics of electricity grids

Summary

- growing interdisciplinary and national research activity
- broad stakeholder integration
- thematic focus on:
  - universal background-systems
  - specificities of different sectors **and** application areas
- scientific focus on harmonisation and integration of data

Outlook

- priority setting
- fund-rising for data acquisition
- defining the business case for the network
- implementing a pilot version for information infrastructure
- continuous supply of assessed LCI-data for background systems