



FC-Hy
Guide

Training Course

**Thurs. 1st September
2011, Berlin**

**Seminaris
Campus Hotel
Berlin**

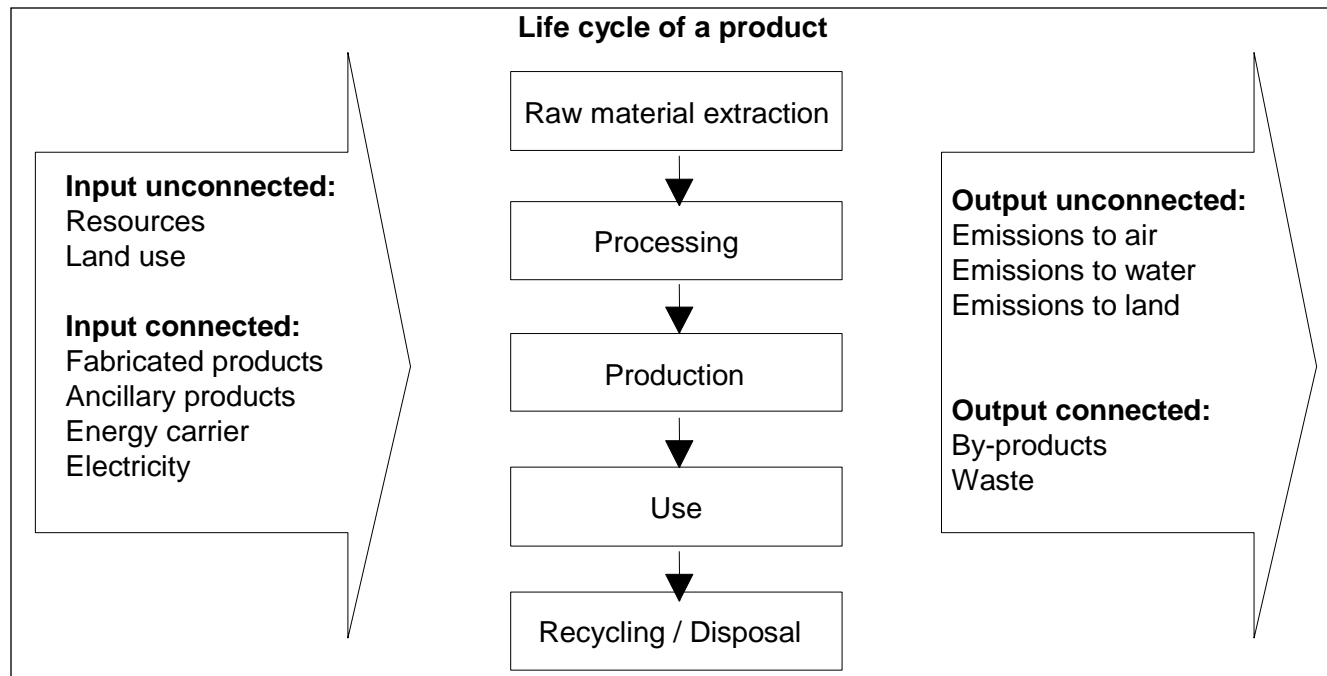


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Introduction on LCA

Definition of Life Cycle Assessment (ISO 14040):

“Life Cycle Assessment is the compiling and evaluation of the input and outputs and the potential environmental impacts of a product system during its lifetime“



LCA– Life cycle thinking as basis for the system model

Impact
assessment



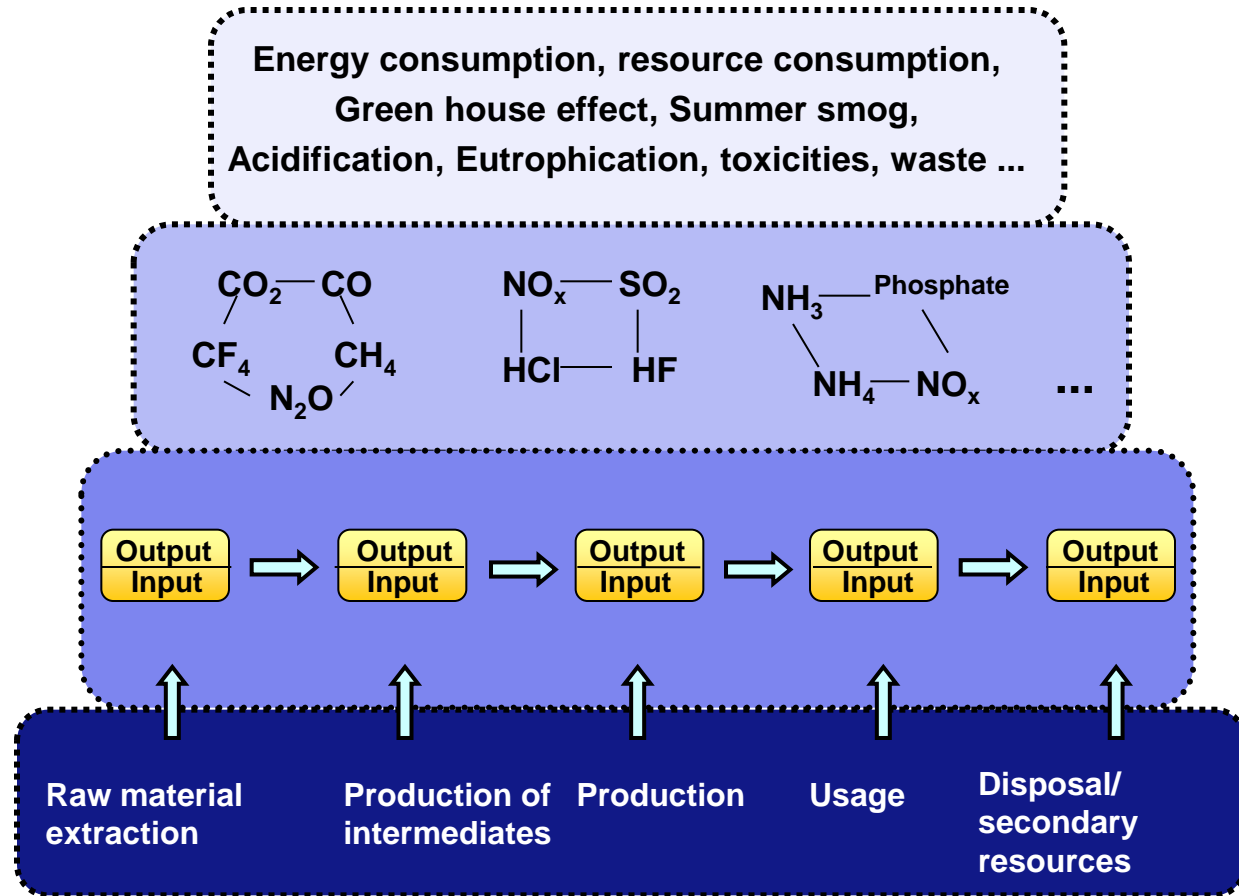
Impact
analysis

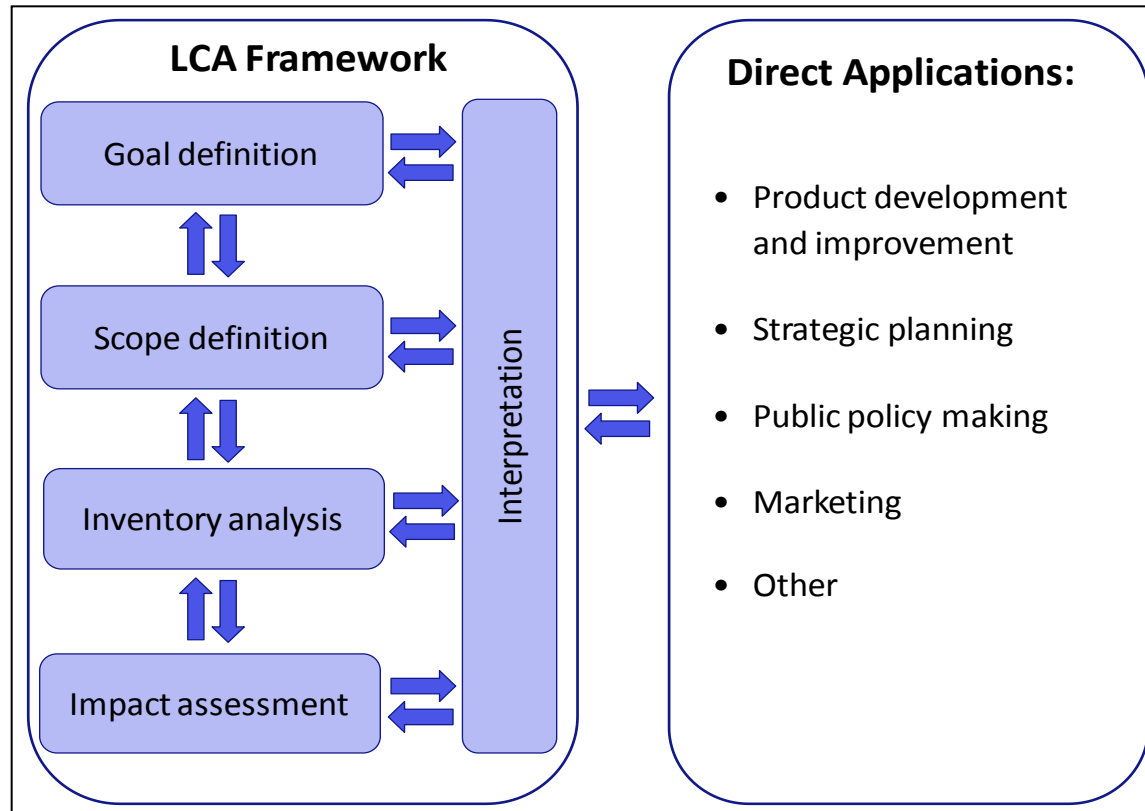


Life cycle
inventory



Life
cycle



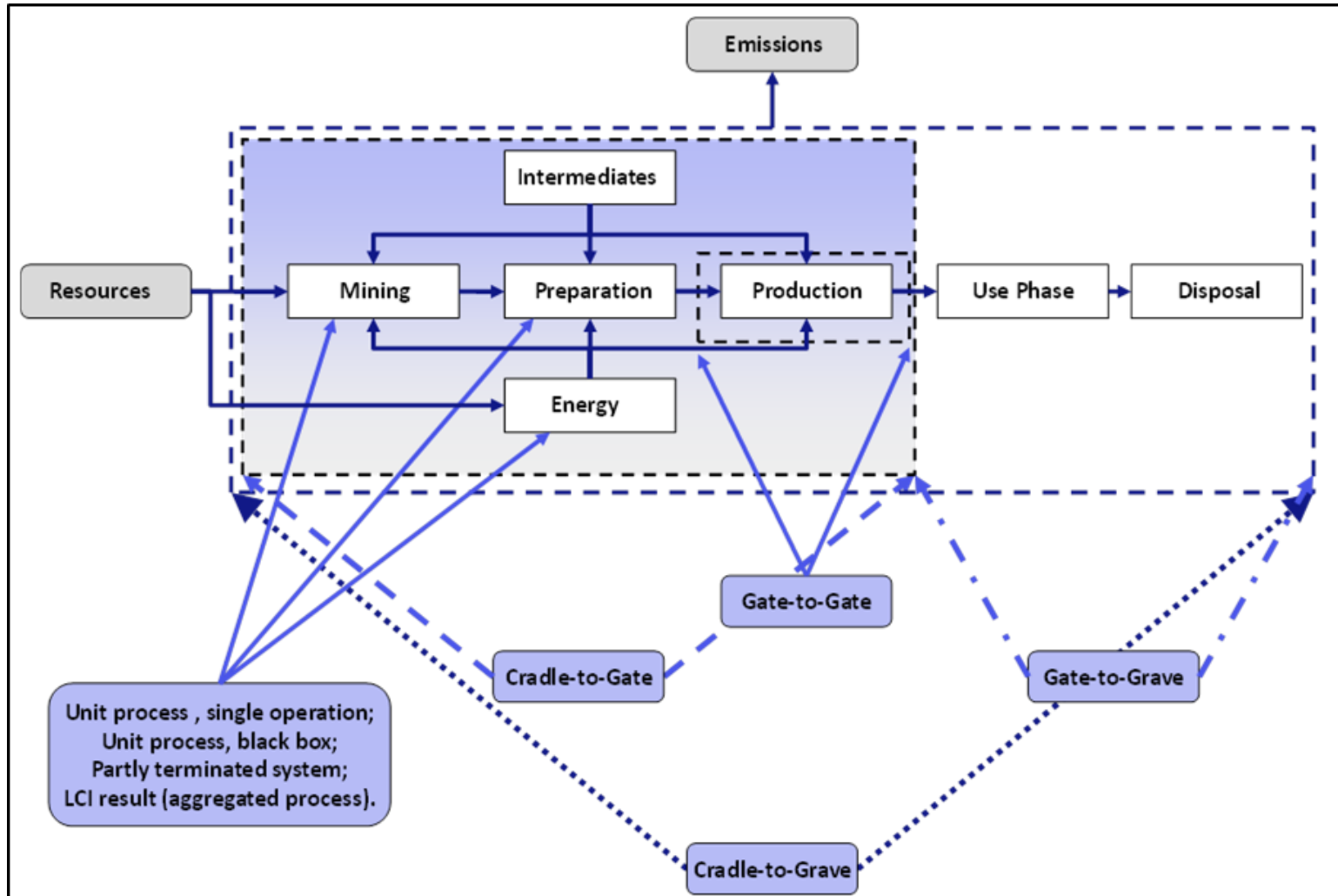


Adapted from ISO 14040 (modified)

- 1. Goal of the LCA study**
- 2. Scope of the LCA study**
- 3. Life Cycle Inventory analysis (LCI)**
- 4. Life Cycle Impact Assessment (LCIA)**
- 5. Interpretation and Reporting**
- 6. Critical Review (optional)**



Scope of the study: Definition of system boundaries



Global Criteria

- Resource depletion
- Global Warming Potential (GWP)
- Ozone Depletion Potential (ODP)

Regional Criteria

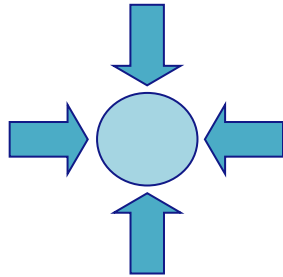
- Acidification Potential (AP)
- Land use

Local Criteria

- Human and Eco Toxicity Potential (HTP / AETP / TETP)
- Eutrophication Potential (EP)
- Photochemical Oxidant Creation Potential (POCP)

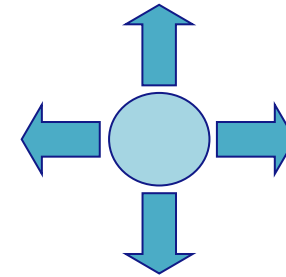


Internal



- Detection of strategic risks and environmental issues
- Identification of relevant steps in the complete life cycle of products
- Development of sustainable products based on environmental information
- Support in fulfilling laws and restrictions
- Improvement of motivation of employees

External



- Enhancement of communication to politics and authorities
- Improvement of image due to ecological considerations
- Supporting environmental innovations and decrease of environmental impacts
- Competitive advantage by inclusion of environmental aspects

The research leading to these results has received funding from the Fuel Cells and Hydrogen Joint Undertaking under grant agreement n° [256328].