



Demonstrate and Assess New Tools for Environmental Sustainability

DANTES

A demonstration project for
sustainable development

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CHALMERS



PROJECT INFORMATION

Project information



- Co-financed by the EU LIFE-Environment Programme
- Period: 2002 – 2005
- Partners: Akzo Nobel Surface Chemistry
ABB
Stora Enso
Chalmers University of Technology



- **Demonstrate** environmental assessment tools such as:
 - Life Cycle Assessment (LCA)
 - Life Cycle Cost (LCC)
 - Environmental Risk Assessment (ERA)
- **Demonstrate** tools for environmental communication like:
 - Environmental Product Declarations (EPD)
 - Environmental Performance Indicators (EPI)

STRATEGIES

DANTES goals



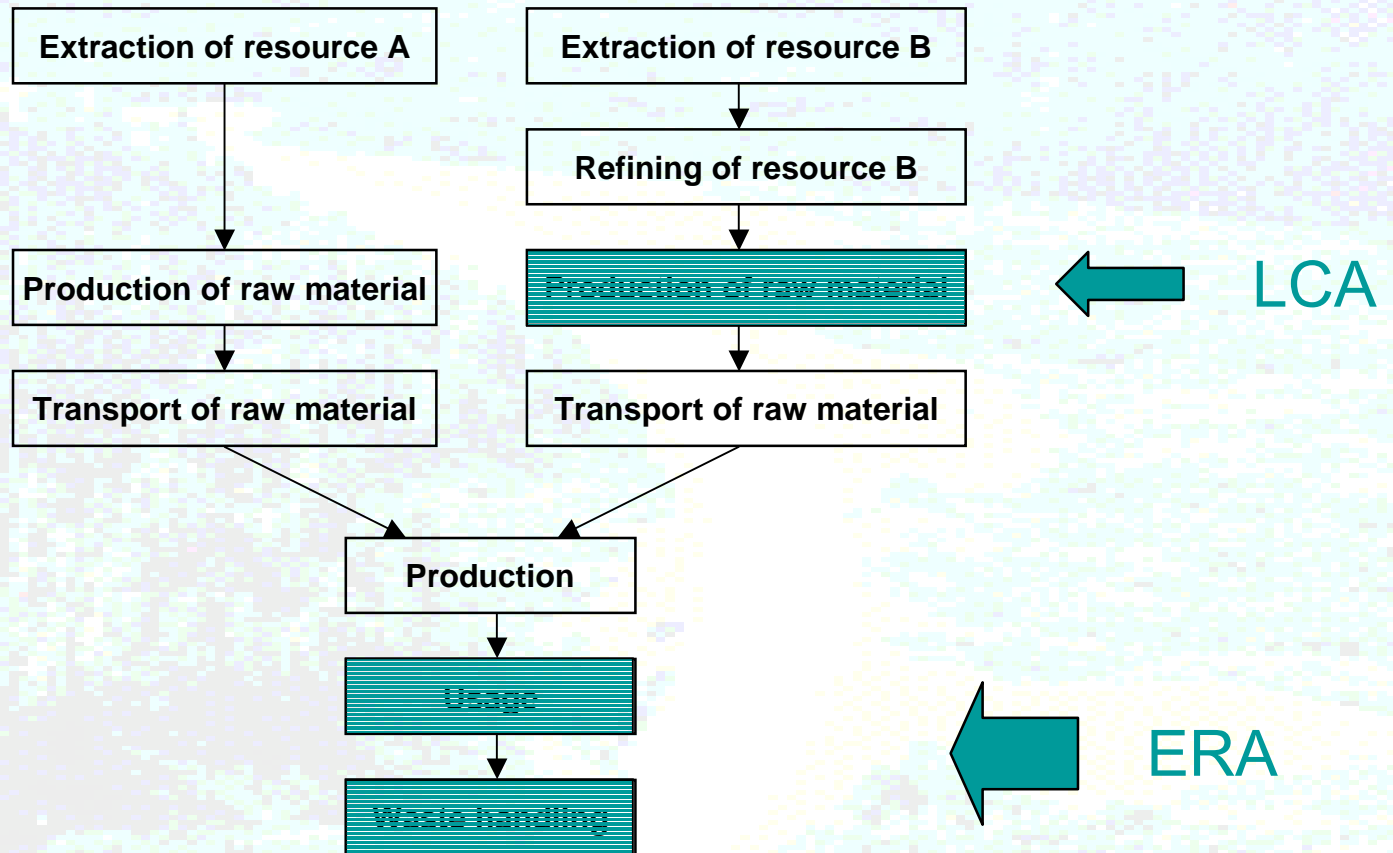
- Display **strategies** of how to use different sustainability tools in different functions within a company, focusing on:
 - Research & Development (R&D)
 - Marketing
 - Supply chain
 - Production
 - Environmental support



- Environmental Risk Assessment (ERA) and LCA on the same product (an asphalt additive)
- Promotes the adhesion and extends pavement life
- Low concentration (0,2-0,4% in weight of bitumen)

SUSTAINABILITY TOOLS

LCA & ERA example

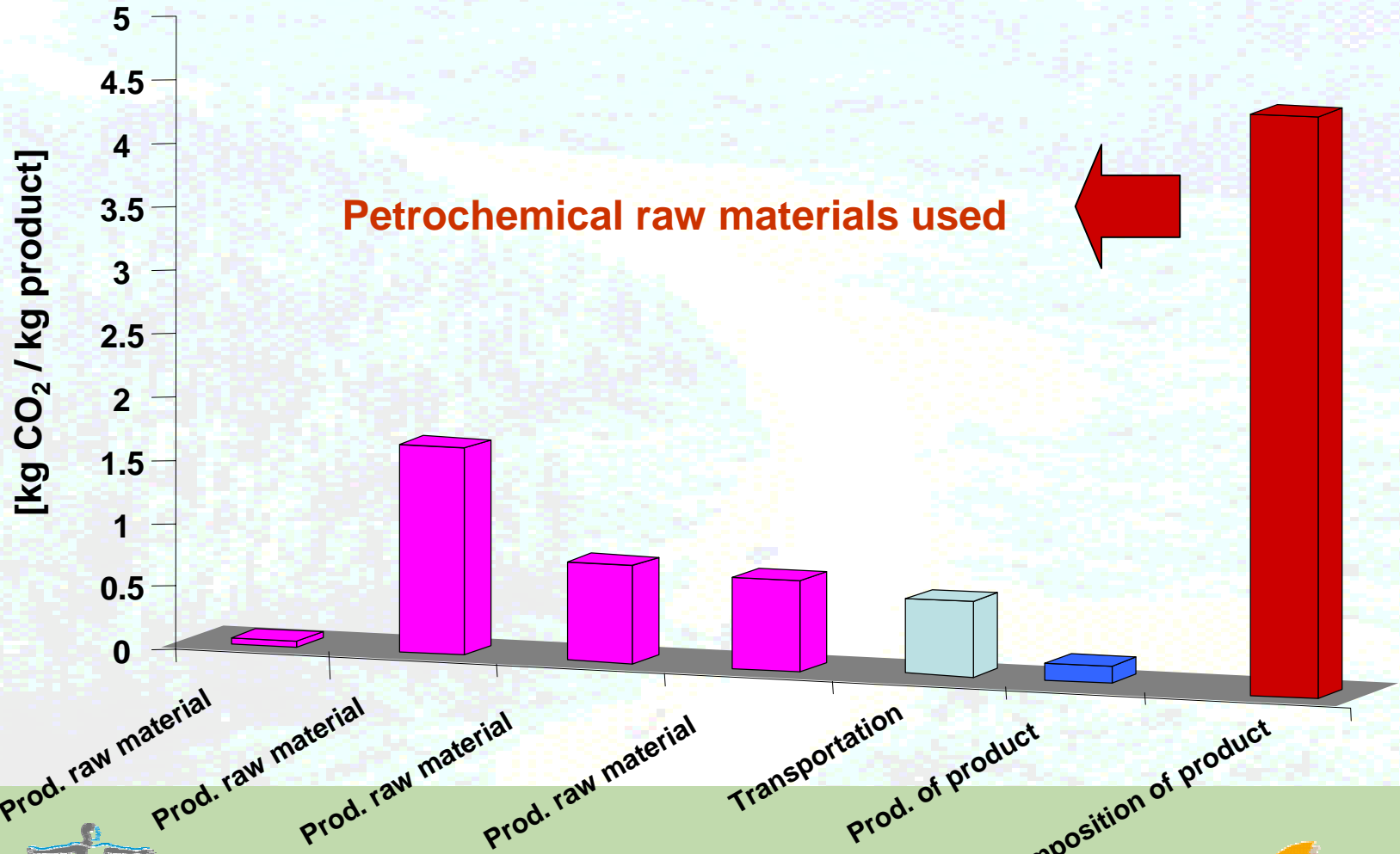




- Environmental costs for companies and consumers (not the society) allocated to a product
- Costs for all actors along the life cycle chain
- Costs now and possible future costs
- E.g. taxes, pollution prevention, testing of substances, permits, re-cycling fees etc.

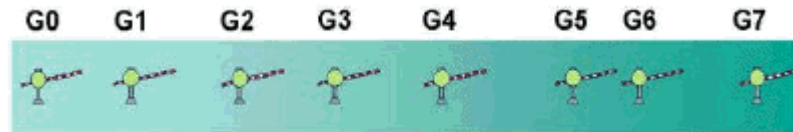
SUSTAINABILITY TOOLS

LCC case study - example



STRATEGIES

Example of a strategy used in R&D - Gate model



- A R&D project has to pass different *stages*
- The *stages* are separated by *gates*
- Each *gate* has key decision points with well defined - Go/Kill criteria for decision making about the projects survival

STRATEGIES

Example of a strategy used in R&D - Gate model

| | | | | |
|-----------------------------------|--|--|------------------------------------|--------------------------------|
| Gate 1 Screening | Gate 2 Project Initiation | Gate 3 Business Case Decision | Gate 4 Validation | Gate 5 Launch |
|-----------------------------------|--|--|------------------------------------|--------------------------------|

Gate 2 Project Initiation

- a) Have any ecotoxicity issues been identified? Will ecotoxicity testing be required by the market and/or by the authorities?
- b) May renewable raw materials be used?
- c) How will the product/process lead to an environmental improvement compared to existing alternatives?

www.dantes.info

- the official DANTES website
- General project information
- Case study reports
- Strategies aimed at different company functions
- Web based tools