

LIFE CYCLE THINKING IN PLASTICS INDUSTRY

Challenges and Benefits



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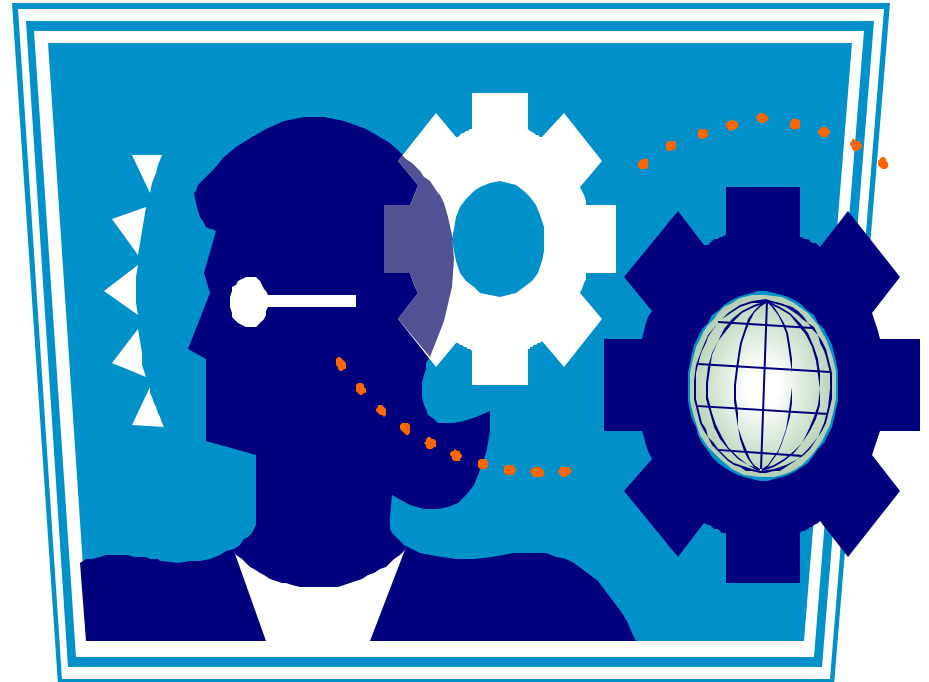
Life Cycle & Sustainability

on behalf of *PlasticsEurope*

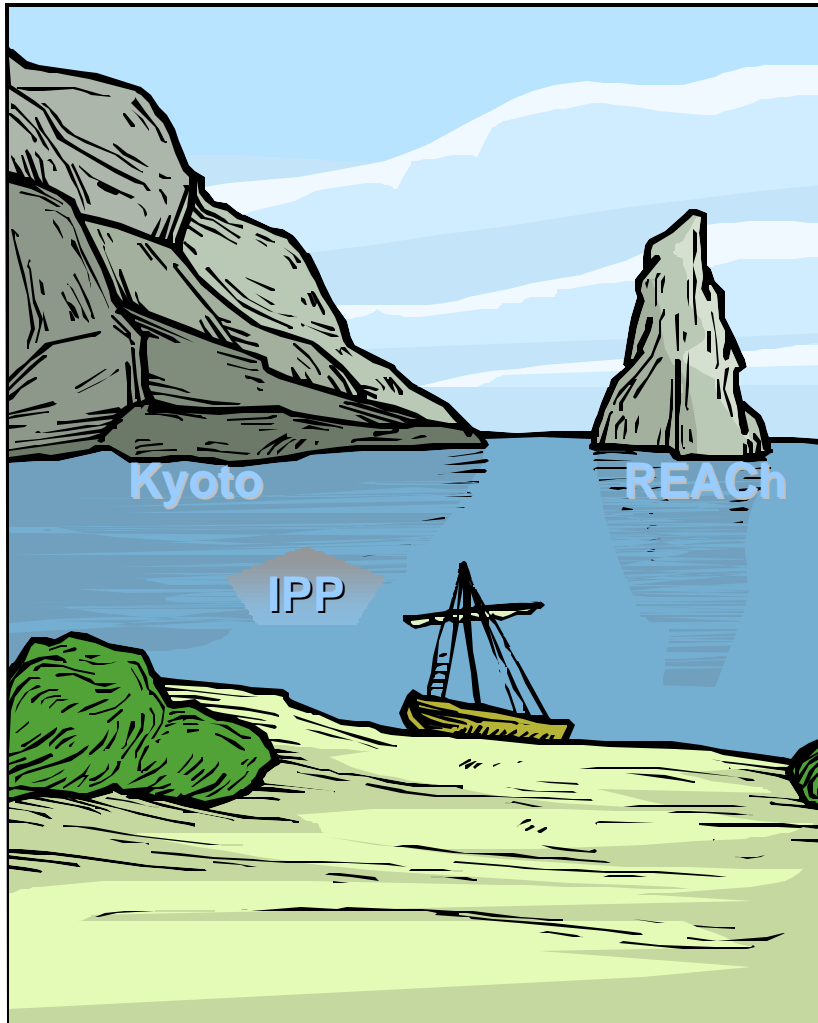


Overview

- ◆ Introduction
- ◆ Life Cycle Tools & Information
- ◆ Impact on Business Strategy & Marketing Decisions
- ◆ Success Factors
- ◆ Lessons Learnt & Outlook



Introduction: Setting Sail for Sustainable Solutions

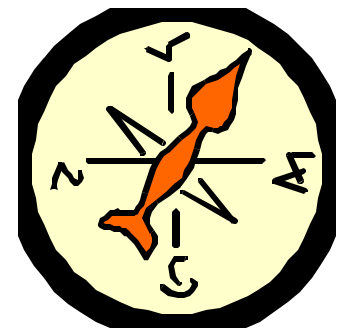


Market is changing –
Business needs to know:
Shoals and reefs?
License to **sail**?

Look ahead:

- Position
- Course

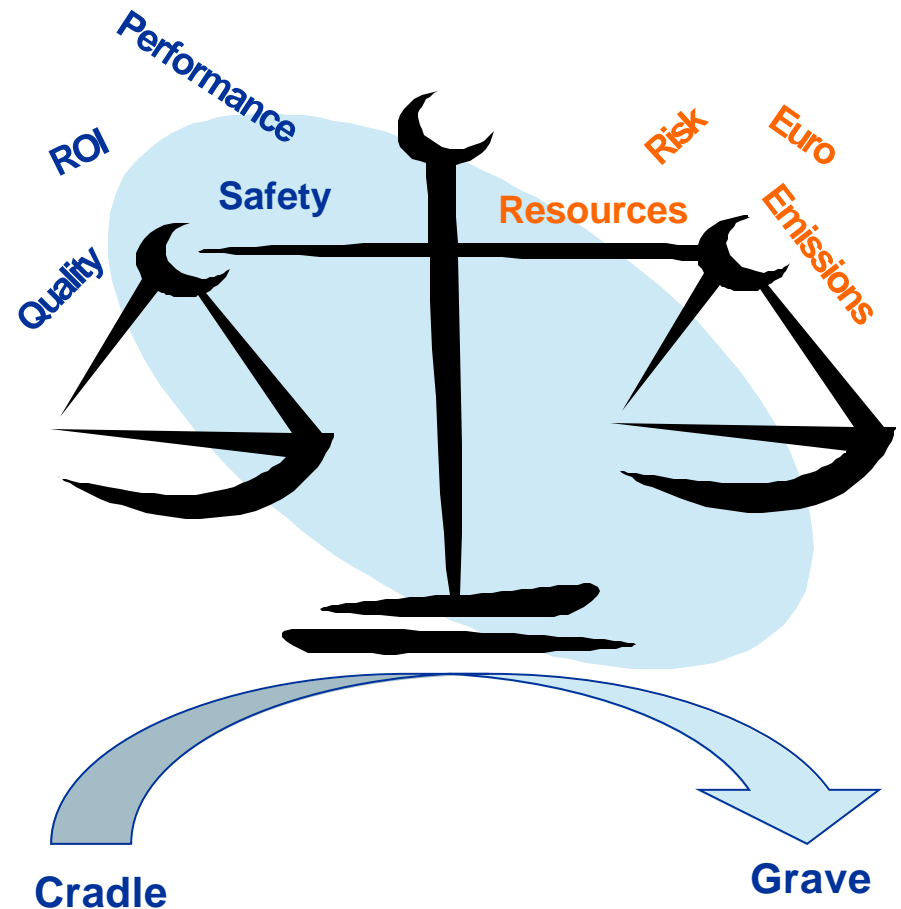
... from a sustainability perspective.



Introduction: Why Life Cycle Thinking?

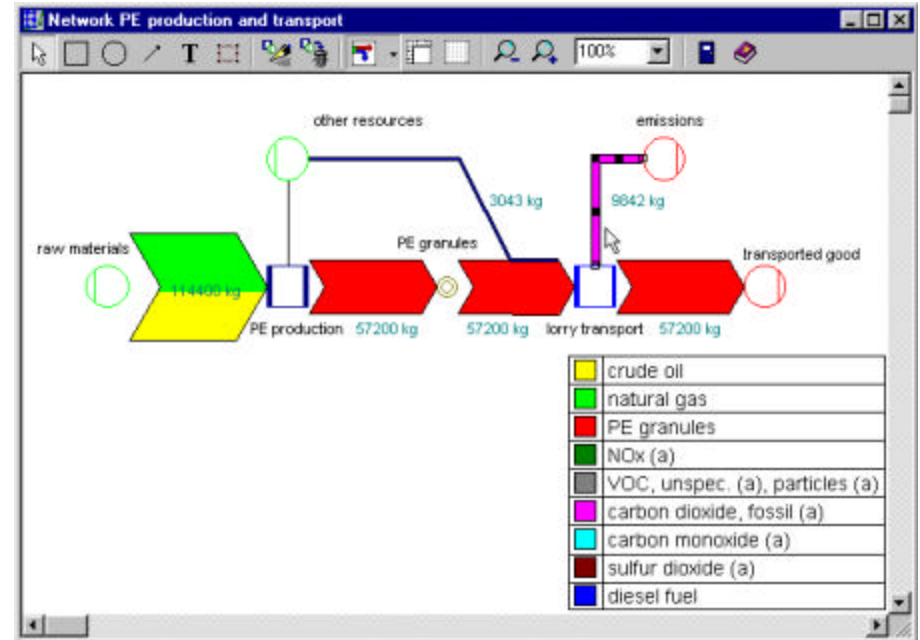
- ◆ **TRUE:** Main environmental impact due to products (use), not production.
- ◆ **FALSE:** Improved environmental performance by restrictions on substances/materials.
- ◆ **KEY:** Balance of
 - Demand & Benefit
 - Expenses & Burdensalong entire life cycle.

$$\rightarrow \text{Eco-efficiency} = \frac{\text{Function}}{\text{LCA \& LCC}}$$



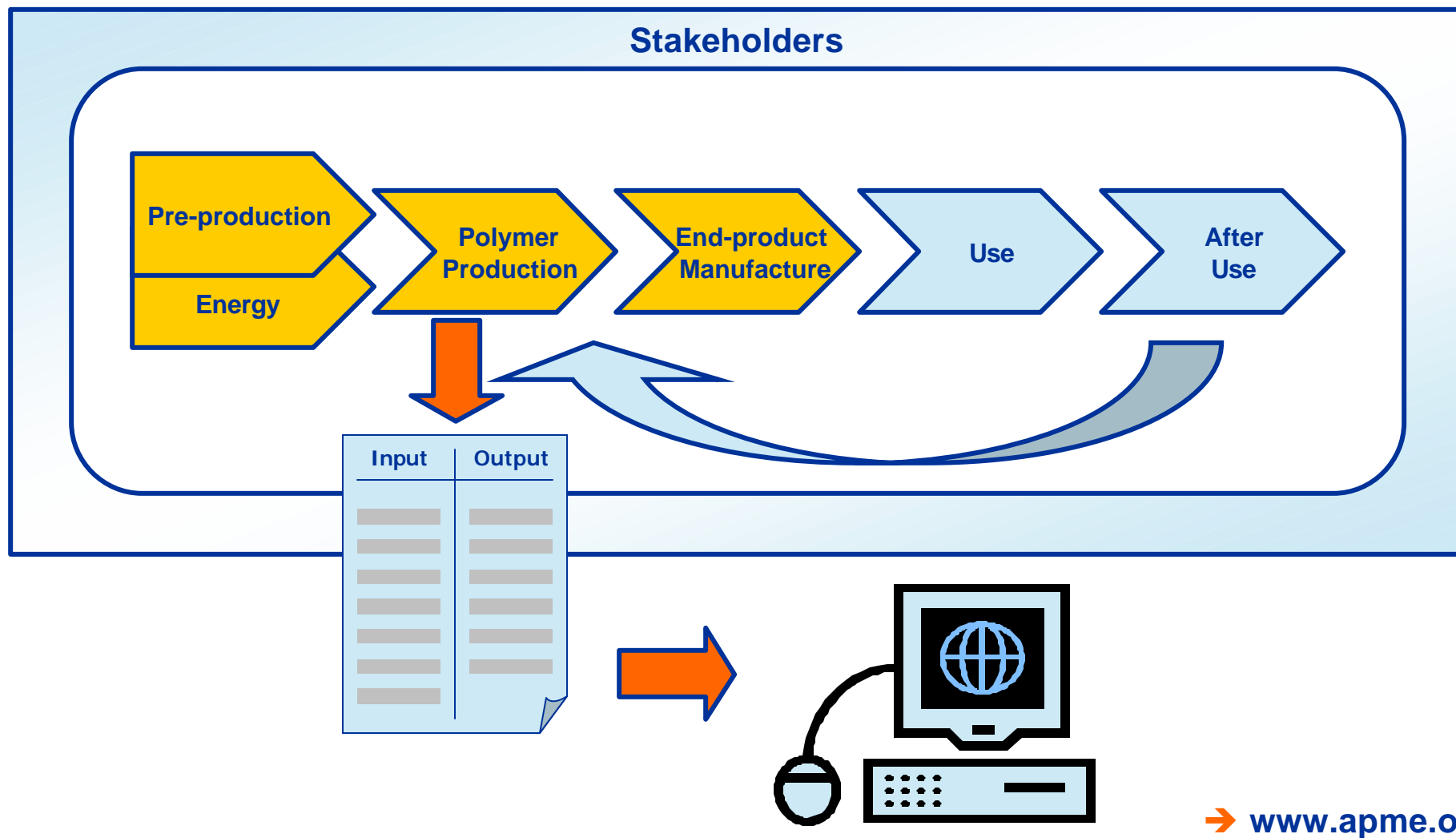
→ www.wbcasd.ch

Life Cycle Tools & Information: Data Sources & Processing



- ◆ SAP Business Warehouse (Enterprise Resource Planning, ERP)
- ◆ Specialised Life Cycle Software (Environmental Information System)
- ◆ Integration: XML, Reporting

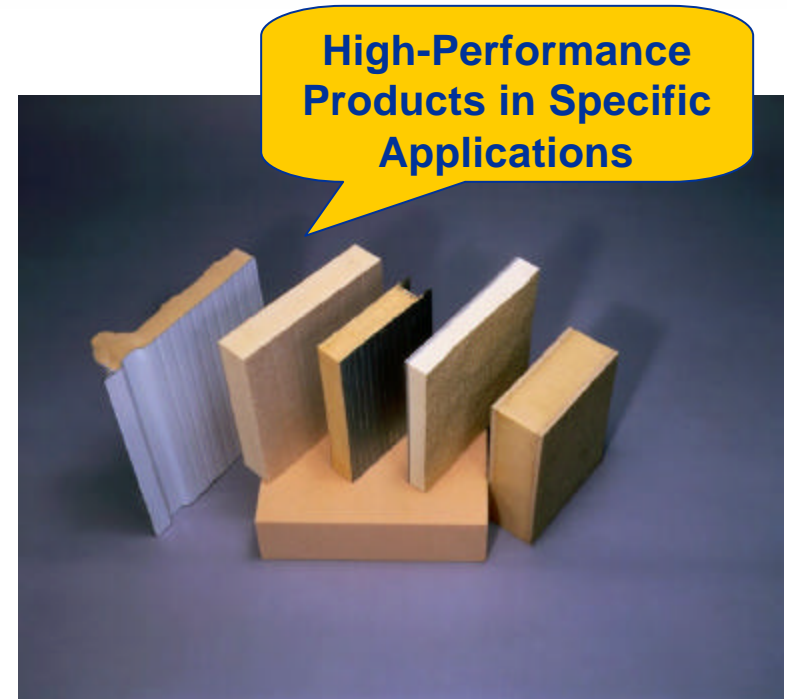
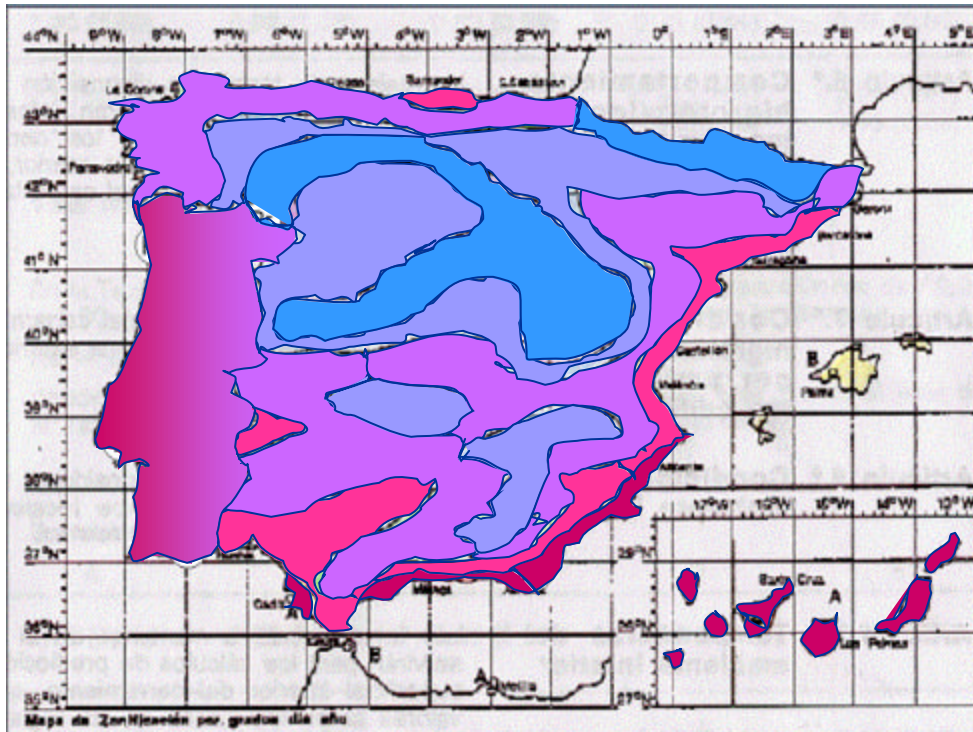
Life Cycle Tools & Information: *PlasticsEurope* Eco-profiles



Impact on Business Strategy & Marketing Decisions

◆ Case Study: Thermal Insulation

- Regional Construction Habits (Spray/Boards)
- Climate Dependency
- Blowing Agent

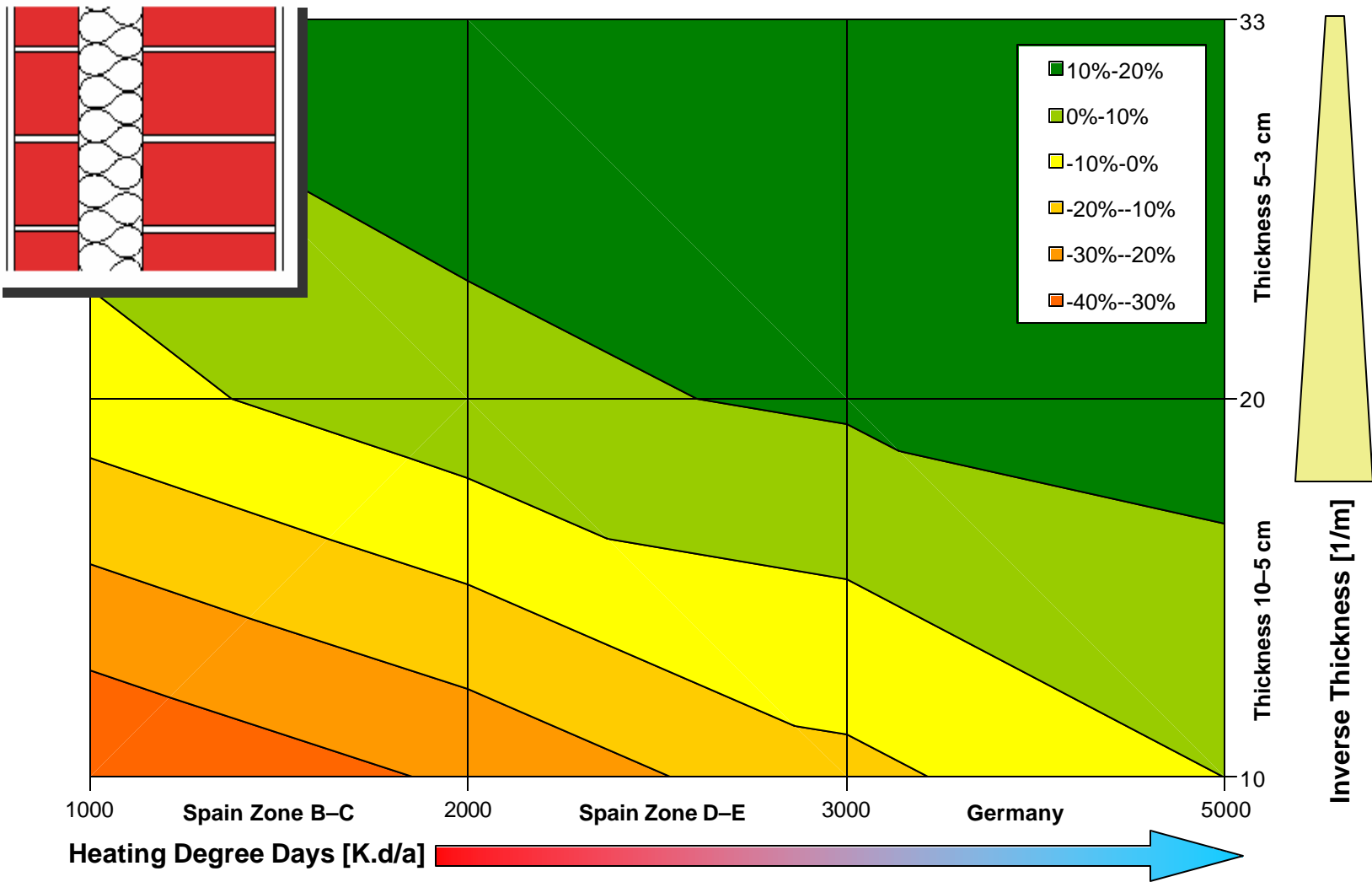


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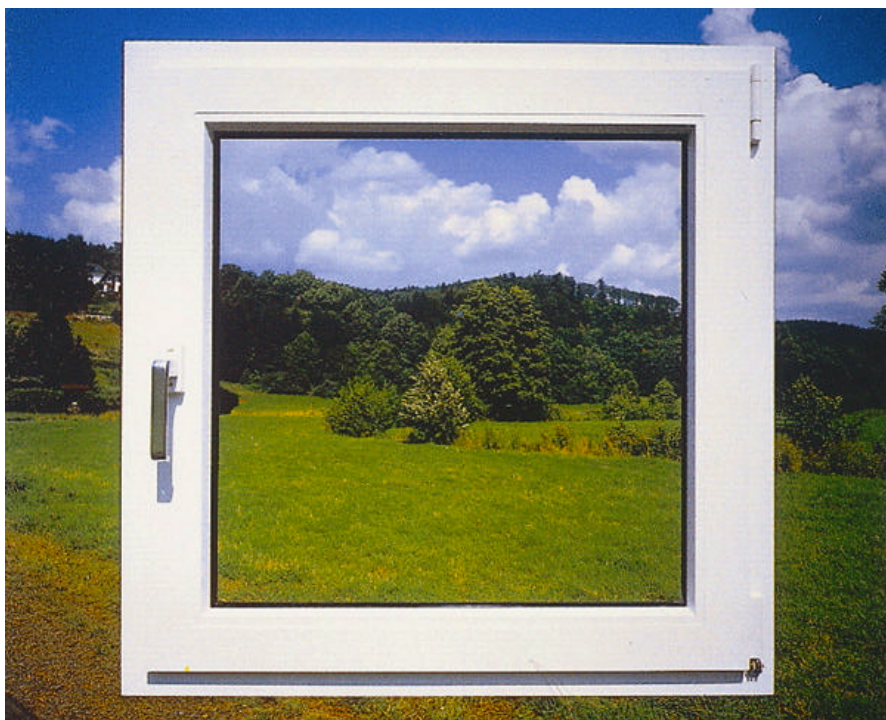
↑ Madrid

Impact on Business Strategy & Marketing Decisions

GWP Advantage of PUR Thermal Insulation
Foams blown with HFC-365mfc vs. H₂O/CO₂

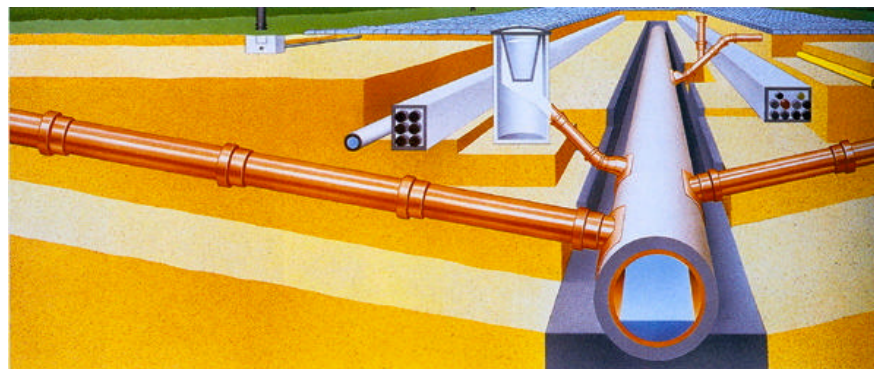


Success Factors: Communication & Dialogue

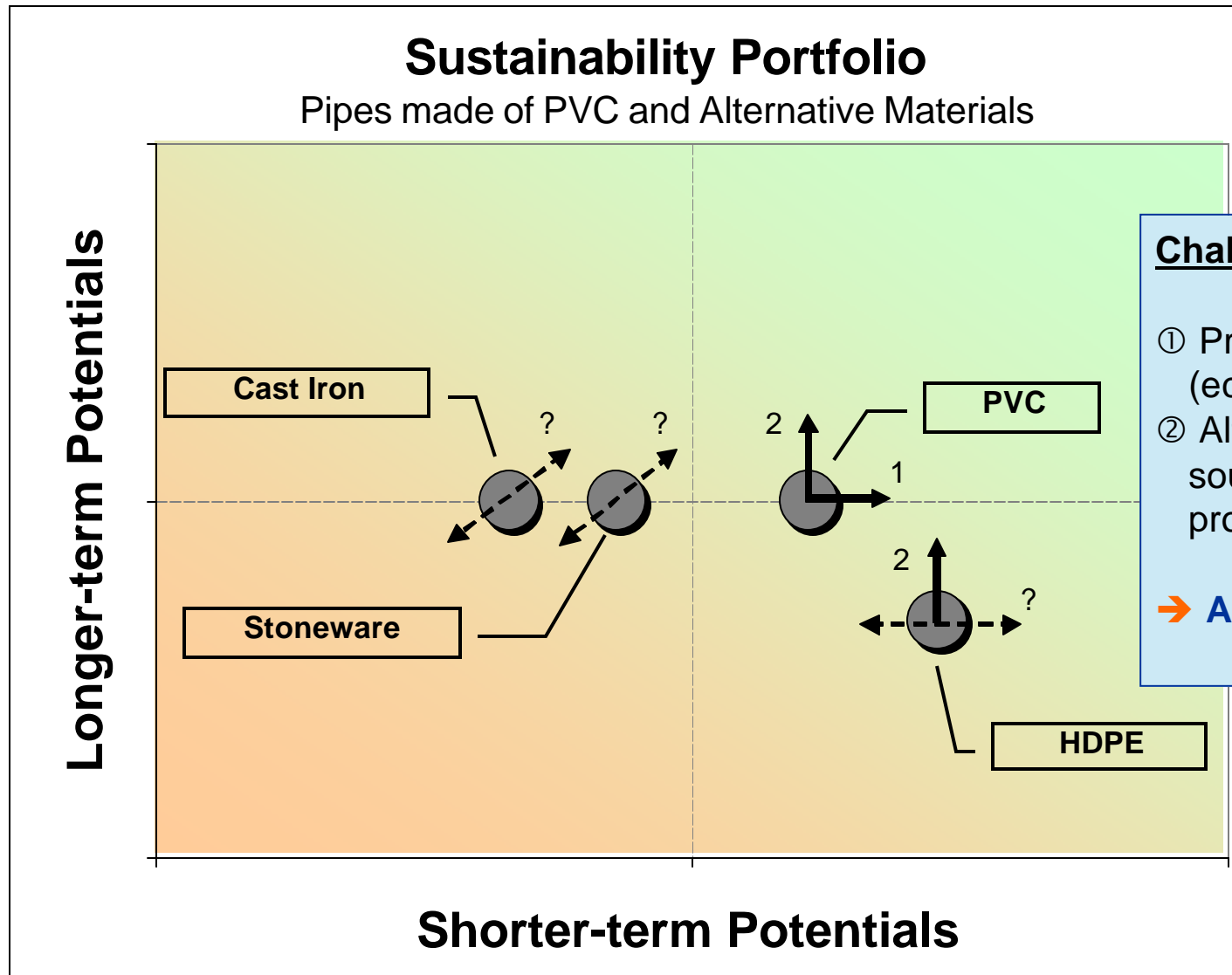


◆ Case Study: PVC and Sustainability [AgPU/Prognos 1999]

- Window frames, pipes, packaging, cables
- Participation of stakeholders
- Long-term system stability
- Socio-economic effects



Success Factors: Communication & Dialogue



Challenges

- ① Production processes (eco-profiles)
- ② Alternative carbon sources, light-weight products, recycling.

→ AgPU/Prognos 1999

Success Factors: Collaboration & Partnership



◆ Collaboration with customers

- Reliable data
- Customer relationship
- Support from market

◆ Dialogue with stakeholders

- Participation
- Acceptance



Lessons Learnt & Outlook



◆ Integrated Product Policy (IPP)

- Chemical/Plastics Industry: Solution Provider
- Coalition with Downstream Customers
- Life Cycle Thinking Approach
- Product Development & Marketing

◆ Success Factors

- Awareness & Competence
- Integration
- Partnership & Collaboration
- Communication





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