


 the international institute for industrial environmental economics at Lund University
 
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Environment and Products

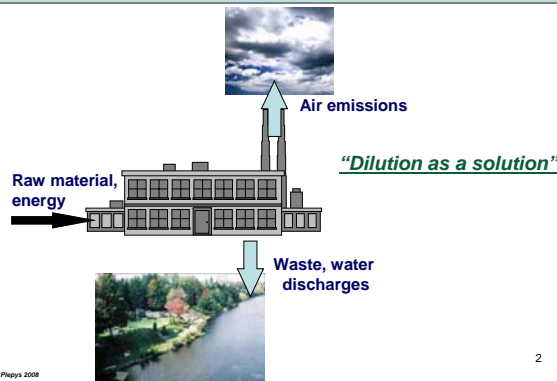
what is the problem?



Dr. Andrius Plepys May 2010

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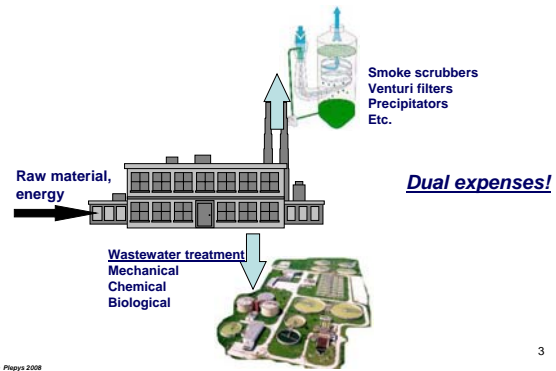
Reactive strategies - dilution



"Dilution as a solution"

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Reactive strategies – end of pipe

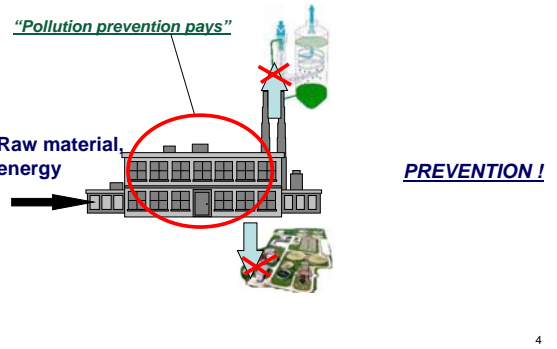


Dual expenses!

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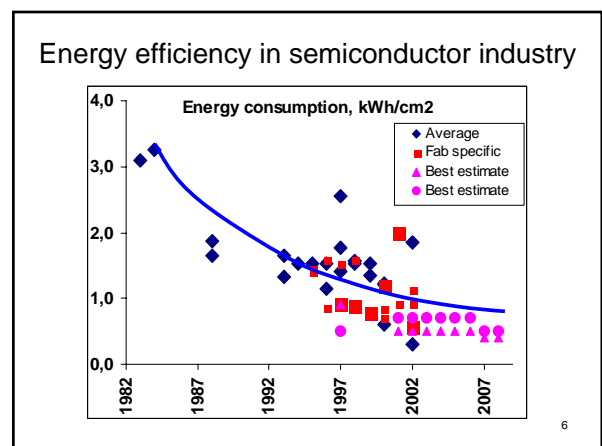
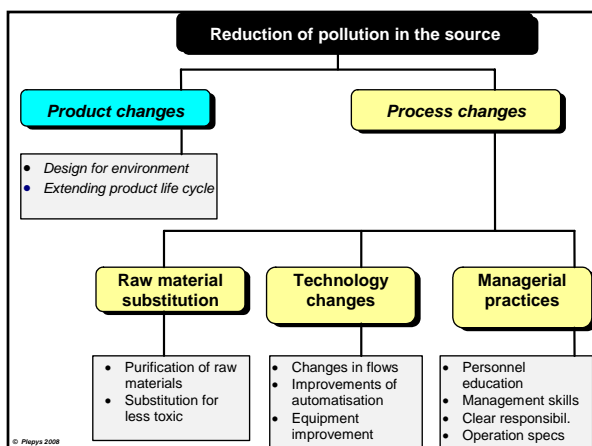
Prevention and eco-efficiency

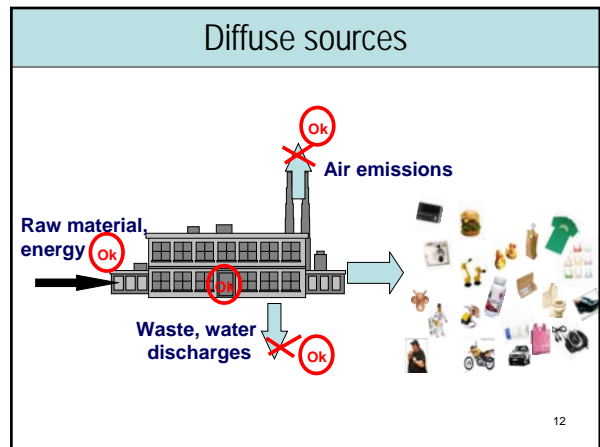
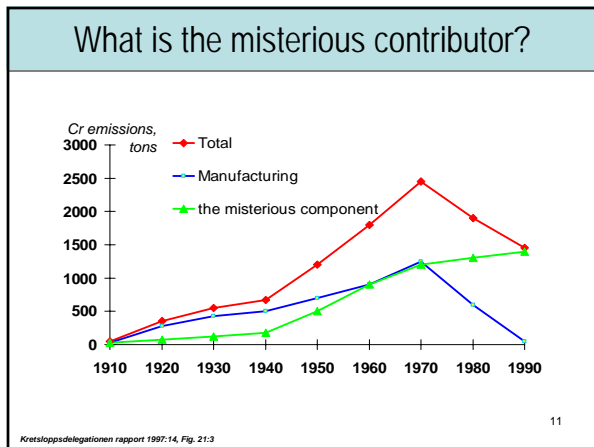
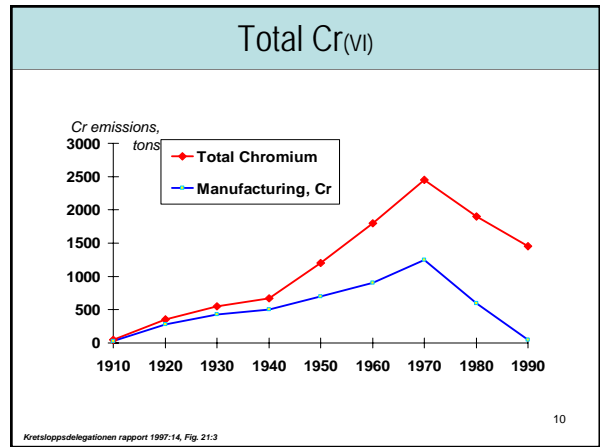
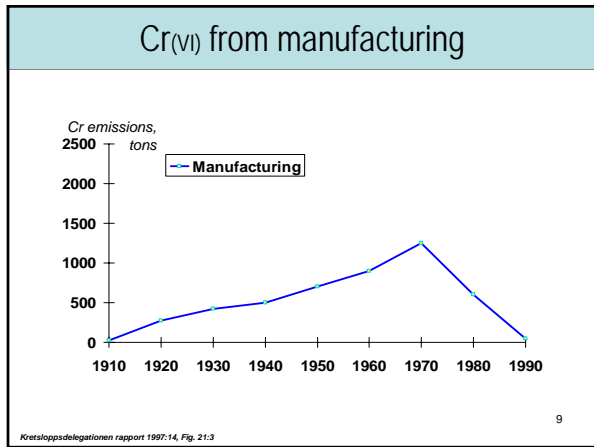
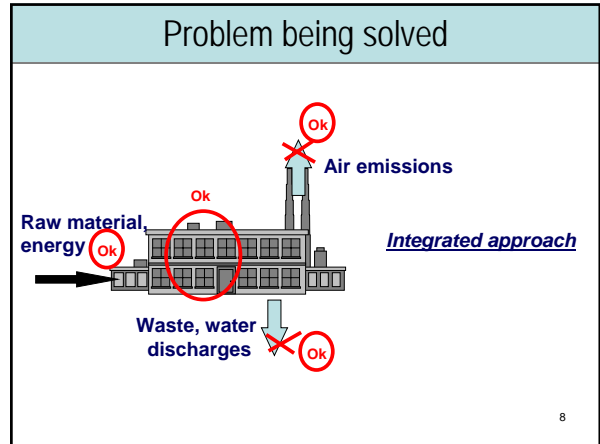
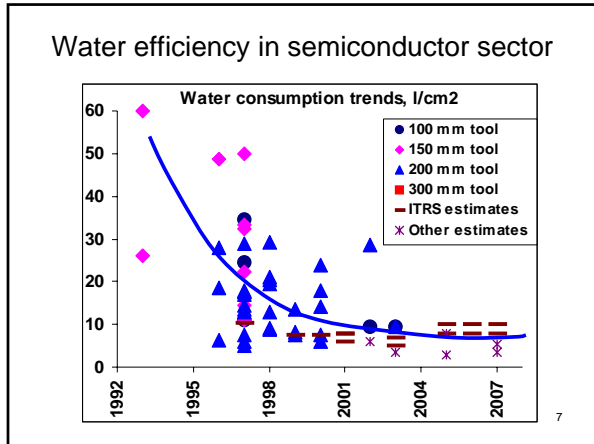
"Pollution prevention pays"



PREVENTION !

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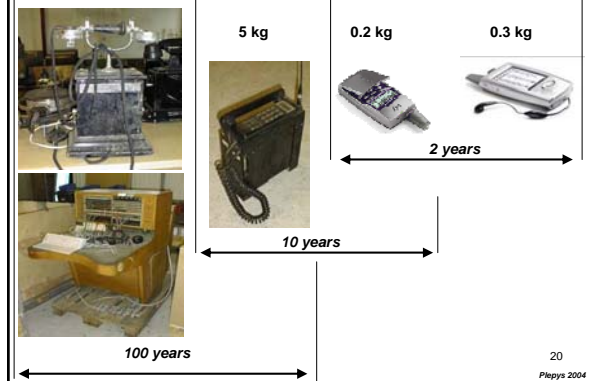


What determines product's impact?

- Product design (lifetime, complexity, material, technology, ...)
- Manufacturing efficiency
- Transport & logistics
- Interaction with the users
- Waste management efficiency



Innovation speed



waste



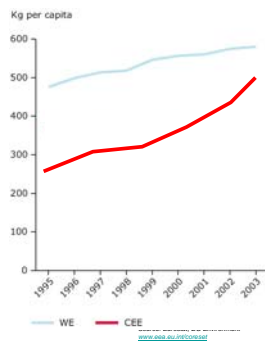
the problems with waste

- Problem 1: volume
- Problem 2: complexity
- Problem 3: toxicity
- Annual generation of industrial and municipal waste in the EU - 1.3 bln tons or 3.5 tons/person
- 40 mln tons hazardous waste
- In the EU 1990-1995 increase by 10% and projected 45% by 2020

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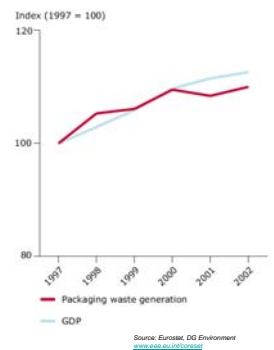
Generation of packaging waste and GDP

- Data for EU-15
- Packaging recycling ranges:
 - 33% in Greece
 - 74% in Germany



Generation of packaging waste and GDP

- GDP coupled with waste generation



The problem of waste: complexity

- Complexity is increasing!
- Variety of waste components
- Difficulty to identify and classify
- Mixing different kinds of waste
- Growing consumption → volume!

What is the biggest problem with landfilling?



Graphics: www.roseof.ox.ac

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How can we reduce the impact of products?

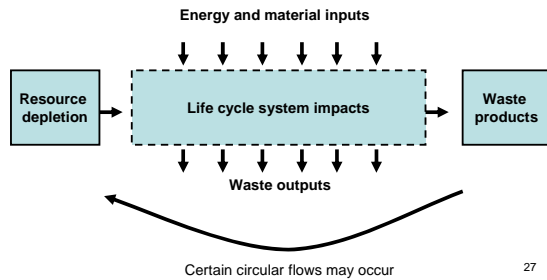
- Which are the products?
- Who are the actors?
- How can the actors influence the environmental impacts of the products?
- What possibilities are there to influence the actors?



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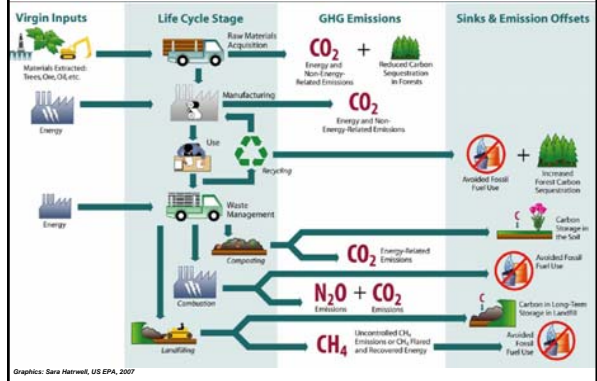
A way of looking at product life cycle



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Product's life cycle



Graphics: Sara Hatwell, US EPA, 2007