Sustainability

Sustainable DESIGN solution
Topics

- Definition of sustainability
- History
- Design cases
- Design approaches
- Where do we go from here...

- Please Designers
See this as an - obstructions
Sustainability
Revolution - Cradle to Grave
Cradle to GRAVE (burning)
1987 Brundtland Rapport
Environmental problems are a reality and an increasing problem globally.

1992 Rio FN konvention
Environment and Development / Agenda 21. 178 governments acknowledge their responsibility to find sustainable ways for future development globally, nationally and locally.

1997 Kyoto Protokol
37 industrialized nations have committed themselves to reducing the amount of greenhouse gas emissions.

2010 COP 16
Climate Change Conference with approx. 190 countries. The goal is to stabilize the amount of greenhouse gases in atmosfærden at a level so that it prevents dangerous anthropogenic climate change. (Reduction of CO2)

2012 COP +20
Climate Change Conference yet another meeting with no real goals achieved.
PPP

People
Profit
Planet
+
Purpose ...

Fig 1. Corporate Social Responsibility Dimensions
Three dimensions of sustainable business

"Triple Bottom Line" performance [economic, environmental, social]
No More Waste

Cradle to Cradle
Decentralized Uncontrolled Development
UP CYCLE
The chair can be separated in all its components in five minutes. 44% is recycled material. 99% can be included as 'nutrients' in the construction of new chairs or other products.
Nobody Chair is made of synthetic felt, more specifically polyester. This kind of felt is composed of fiber strands made of plastic granules.
No wash Top

- Printed prevents dirt from attaching to.
- The color is camouflage.

Design Solution: Fletcher.
REDUCE REUSE RECYCLE
Every year, 1.8 million people as a result of diarrheal diseases. 90% less than 5 years.

Peepoo is made of biodegradable plastics (PLA)
Huge amounts of residual yarn from cones disposed of in industrial production. Here the yarn is used to knit underwear.

MUJI

For one material, few seams
No streaking, lightweight
Reduction of excess material
Shoes for Disassembly
What to do ...
We have to get
- Sustainability INTO the product development

**APPROCHES:**

- Materials
- Production
- Use
- Recycling
Comparison of subsystems. Materials, transportation, maintenance, cut waste, color and finishing etc.
What problem are we solving ... - protection from the rain.

Comparison of subsystems. Materials related, like transportation, maintenance, cut waste, color and finishing etc.
## Basic properties of textile materials.

++ = very good | + = good | 0 = average | - = bad | -- = very bad | * = bleached

<table>
<thead>
<tr>
<th>Material</th>
<th>Produktion</th>
<th>Brug</th>
<th>Bortskaffelse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bomuld</td>
<td>++</td>
<td>+</td>
<td>++</td>
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<tr>
<td>Hørflet</td>
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<td>Uld</td>
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<td>Polyamid</td>
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<tr>
<td>Polyvinylchlorid</td>
<td>+</td>
<td>-</td>
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</tbody>
</table>

**Comparison of multiple problem-solving**
Method Cards

- to understand and see possibilities and to develop Sustainable Design Solutions.
Help consumer to evaluative!
Please...

GoodGuide logo

Do your purchases meet your personal standards?

Dr. Hauschka Cleansing Milk

Rank: 3,673 out of 24,424 skin care products • Company: Dr.Hauschka Skin Care, Inc.

5.9
Scientific Rating

4.0 Health
This product contains one or more ingredients that raise a medium level of health concern.

8.5 Environment

5.1 Society
This company's social policies, practices and performance are average.
Where do we go now ...
QUALITY OF LIFE

Spiritual
Emotional
Social
Scientific

TREND ATLAS 2020+

Decoding socioeconomic and cultural drivers of society enable us to discover key challenges and opportunities.
LINEAR ECONOMY

TECHNICAL & BIOLOGICAL MATERIALS MIXED UP
ENERGY FROM FINITE SOURCES

CIRCULAR ECONOMY

ENERGY FROM RENEWABLE SOURCES

PRINCIPLES OF A CIRCULAR ECONOMY
- Waste = Food
- Diversity = Strength
- Energy from renewable natural systems
- Price = Real cost

TECHNICAL MATERIALS DO NOT COMPOST, THE PRODUCTS ARE MADE TO BE MADE AGAIN