Østfoldforskning

SUSTAINABLEINNOVATION

Innovative Life Cycle EcoDesign

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Overview

- Introduction
- Theoretical Background
- Case study
  - Upstream: Supplier Development and Selection
  - Downstream: Creating Demanding Customers
  - Internal Processes and Innovation
- Conclusions

Introduction: Sustainable Innovation

- Most innovations are of incremental nature and based on connecting known elements in a new configuration.

- Sharing the experience of successful companies is important → The HÅG case

HÅG

(part of Scandinavian Business Seating)
http://www.sbseating.com/

- SB Seating: an international company in the office chairs, canteen and conference furniture sector
- Three strong, independent brands (HÅG, RBM and RH)
- 460 employees
- Vision: “to make the world a better place to sit!”

Theory: models for successful innovation

- Success explained primarily in terms of the intrinsic properties of the innovation

- Success explained primarily in terms of an innovation's capacity to align with the needs of different stakeholders
  - (including, but not restricted to, the "innovator")

The environmentally innovative designer

- Supply-side “push” (materials and processes)
- Demand-side “pull” (customer expectations)

Overall good environmental performance requires:

- Supply-side push-back (“green” supply-side value chain)
- Demand-side push-back (develop customer expectations)

HÅG: an environmentally innovative designer

- Upstream, supply-side “push-back”
  - supplier development and selection
- Downstream, demand-side “push-back”
  - creating demanding customers
- Internal Processes and Innovation

HÅG: Supplier Development and Selection

- 1990s: initial work on environmental management
- 2005: environmental product declarations
  - first furniture producer to achieve EPDs
- 2005: instigated environmental supplier development projects
  - producers of PUR foam, plastic / alumnium components, coatings

Result: improved performance for HÅG and suppliers

Downstream – Creating Demanding Customers

HÅG needs to achieve a return on their environmental investments which can only be realised if the market sees, understands and responds to the environmental qualities.

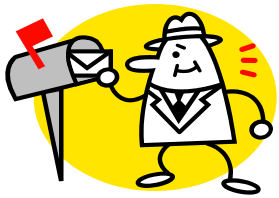
One important customer is the public sector in Norway.

Norwegian regulations for public procurement require that ”each procurement have regard to the resource implications and environmental consequences of the procurement”

Which environmental aspects should be given priority is not specified.

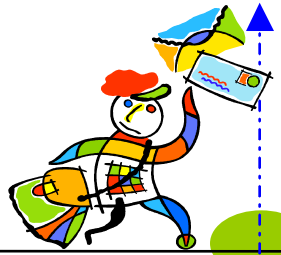
Public Procurement Regulation

A supplier driven strategy challenges the suppliers to provide the necessary environmental information adapted to the buyers' needs.



Buyer

Supplier driven



Supplier

Buyer driven

A buyer driven strategy for considering environmental consequences of purchases could take the form of better guidelines and increasing the competence of buyers.

HÅG chose a supplier driven strategy in collaboration with The Norwegian Association of Local and Regional Authorities (KS). The environmental information developed took the form of EPDs (based on LCA).

Internal Processes and Innovation

Environmental management in the early 1990s

Life Cycle Assessment (LCA)

EcoDesign

Ecodesign tools

- The Good
- The Bad
- The Ugly

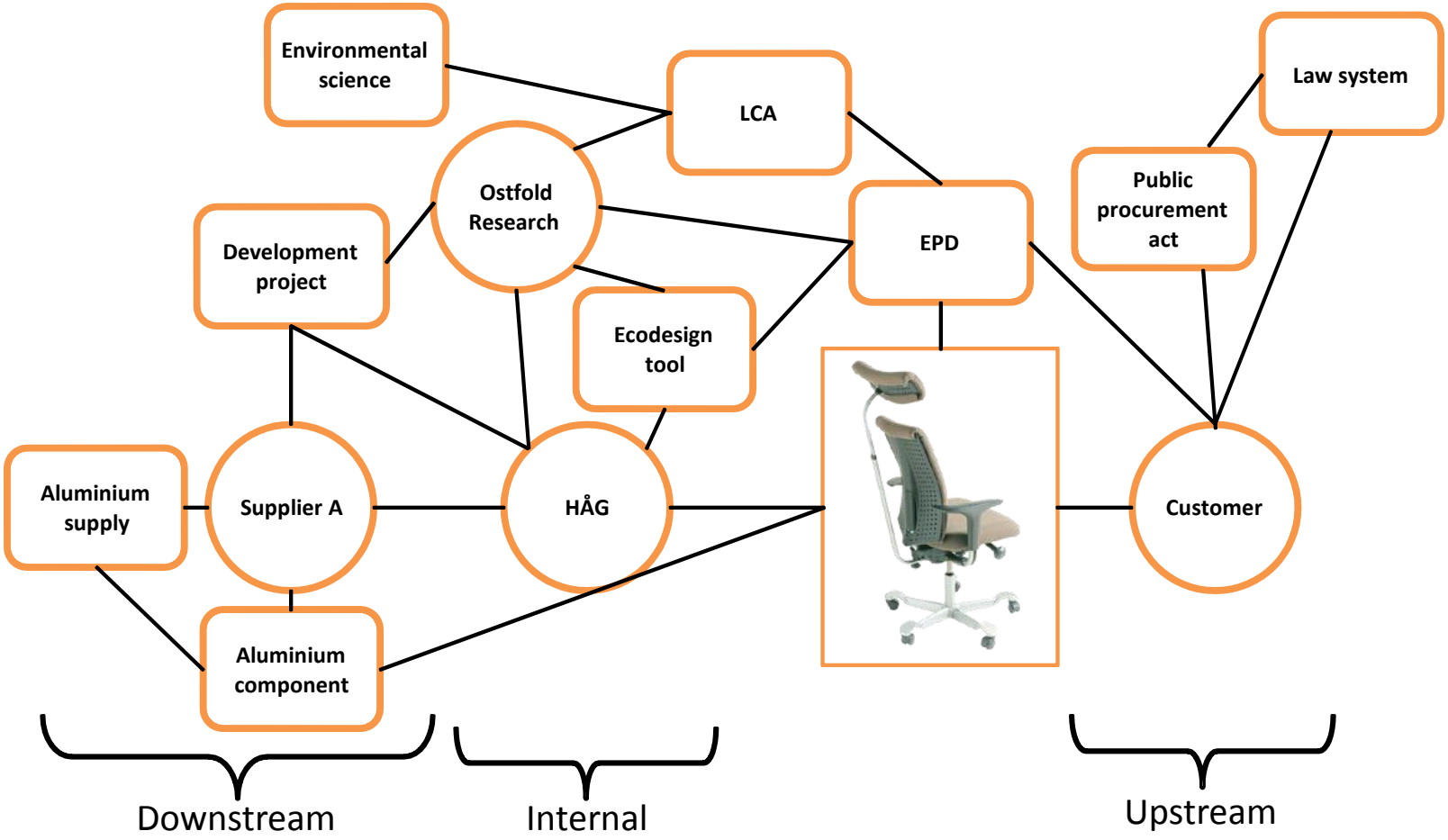
Carbon footprint of specific materials

Product Module Carbon Footprint

Seating solution design

A lighter chair with less steel, aluminium and polyurethane

Conclusions



Conclusions

- Successful environmental innovation is not just about good ideas from the “innovator”
  - also aligning these with needs / wants upstream and downstream; requires a “green” supply chain and market demand
- Implementing innovation and EcoDesign takes years / decades of sustained effort
- Developing partnerships outside the “innovative” organisation is equally important to innovative activity within it