Business case for eco-innovation

Asel Doranova, Technopolis Group and Eco-Innovation observatory

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Outline of the presentation

- Introduction
- What is eco-innovation?
- Why should SMEs eco-innovate?
- How to eco-innovate?
  - Revisiting your business model
  - Eco-innovate production processes
  - Eco-innovate products and services
  - Getting your eco-innovation idea off the ground
Eco-innovate!

A guide to eco-innovation for SMEs and business coaches
Why should companies eco-innovate?

Because eco-innovations:

✓ can **contribute to environmental sustainability**
✓ help to **comply with environmental regulations** that are becoming more and more stringent
✓ help to achieve **resource and money savings**
✓ create **new business opportunities**
✓ allow to **reach new markets and customers**
✓ creates **positive image for your company**
Business case for eco-innovation

PRODUCT AND SERVICE ECO-INNOVATION

- Resilient business models
  Creating business models focussed on delivering services and “performance” to customers

- New markets and customers
  Higher revenues and profit

PROCESS ECO-INNOVATION

- Cost saving
  Material and energy cost savings due to efficiency gains

- Cost avoidance
  Regulatory requirements, anticipation of new standards
Option 1: Revisit your business model

To stay competitive, companies are reinventing their business models.

Q: how to deliver value to a customer in a way that is both profitable and less resource intensive?

Reflecting on how to satisfy fundamental needs of a customer, be it a business or household, is the first step in tackling this challenge.

E.g.: thinking mobility rather than transport: Car-sharing, bike-renting businesses.
Business model examples: **CAR2GO**

An **urban mobility** concept designed by Daimler, which involves a vehicle fleet of “smarts” that are accessible to registered users at all times.

The main concept: cars can be spontaneously “hired”.

[www.car2go.com](http://www.car2go.com)
Option 2: Eco-innovate production processes

- Waste and emissions
- Material and energy productivity
- Supply chains
Waste and emission: hidden costs and benefits

- Effect waste has on capacity by reducing productivity
  - Raw material costs
  - Processing costs
  - Rework costs
- Management time
- Transportation
- Storage costs
- Utility costs
- Energy
- Water

Disposal costs
Waste and emission: Quick wins

✓ Conducting **audits of waste streams** will help your business to cut waste and inefficiencies and gain savings (*Get support from special programmes!*)

✓ Selecting **materials with high recycling** content can minimise your costs for waste disposal

✓ Ensuring **proper handling and storage** may help you to avoid breakages and loss.

✓ Establishing **supplier “take back” schemes** could be a way for you to resource used materials for remanufacturing
Good practice examples:

GENAN: TURNING TYRES INTO NEW PRODUCTS

NEWLIFE PAINTS: FROM WASTE TO ECO-PAINT
Material and energy productivity Challenges

• Many companies are exposed to risks of
  ✓ raw material supply shortages,
  ✓ price volatility
  ✓ high material prices.

• Europe is the world region most dependent on imports, especially for fossil fuels and metals
Material and energy productivity:

study from Germany

- 196 000 €/y savings (av.)
- 13 months payback (av.)

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<tr>
<th>SECTOR</th>
<th>SAMPLE SIZE</th>
<th>EURO</th>
<th>% TURNOVER</th>
<th>PER EMPLOYEE</th>
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<tr>
<td>Fabricated metal products, except machinery and equipment</td>
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<td>Furniture and other manufacturing</td>
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<th>COMPANY SIZE (BY TURNOVER)</th>
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<th>% TURNOVER</th>
<th>PER EMPLOYEE</th>
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<tr>
<td>&lt; 2 Mio.</td>
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<tr>
<td>&lt; 10 Mio.</td>
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<td>117,000</td>
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<td>&lt; 50 Mio.</td>
<td>34</td>
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<tr>
<td>&gt; 50 Mio.</td>
<td>18</td>
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<td>0.4%</td>
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<th>SAMPLE SIZE</th>
<th>EURO</th>
<th>% TURNOVER</th>
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Sum / Average: 92 196,000 2.3% 2,900
Good practice examples:

INTEGRATED WASTE MANAGEMENT IN SAMSUNG (HU)

- Recycling of chemical waste → decrease of waste and raw material use by 35% (8000 eur immediate saving)
- Use of reusable packaging → decreased paper waste by 2600 tons, wood waste by 960 tons, chemical packaging by 8 tons annually (160000 eur savings)
- The water recycling measures → saving of 20 625 m³/y
- Oil wash raw material use decreased by 50 tons (316 000 eur/y saving) as a result of replacement of the gas purifier with a thermal regenerative post-combustor.
- The activated carbon requirement of the previous filter is reduced from an annual 164.5 tons to 7-8 tons
Material and energy productivity: Quick wins

✓ Invest in material efficiency (case of Germany)
✓ Substitute resource-intensive materials and products with new materials, products or services that also improve the functionality of the end product.
✓ Select lightweight materials to improve energy efficiency and the options for storage or handling of the products
✓ Invest in energy efficiency simple energy-saving measures in companies in UK can save £1.6bn year
Supply chain management
Supply chain management: Quick wins

✔ Save costs from streamlining processes at all steps of the supply chain.

✔ Procure eco-efficient products and services.

*Carbon Disclosure Project: 39% of its members and 28% of their suppliers witnessed cost savings after introducing a sustainable procurement approach*

✔ Develop “sustainable stories” to increase customers adhesion to the company and its products and services
Supply chain: good practices

TRI-VIZOR: TOWARDS SMART FREIGHT MODELS

TRI-VIZOR, a spin-off from the University of Antwerp in Belgium, developed an original horizontal cooperation model called “smart bundling” and is similar to carpooling. TRI-VIZOR’s Cross Supply Chain Methodology® software makes it possible to maximise in real-time the total community gains in cost and CO2.

www.trivizor.com
Option 3: Eco-innovate products and services

- Research and development
- Design
- Marketing
Research and development

Building eco-innovative capacity into the Research & Development (R&D) process will help to

- identify new business opportunities,
- develop new competitive and unique products, services, technologies and reach new markets

Developing eco-innovative products, services and technologies may be costly in the short term but beneficial in the long term.
R&D product: good practice examples

TECNARO: NEW SUSTAINABLE MATERIALS

Arboform®, a new material developed by TECNARO GmbH, combines the properties of natural wood with the processing capabilities of thermoplastic materials.

The material is a biodegradable and renewable polymer, which has already substituted plastics in many products, e.g. various components used in automotive sector, furniture, toys etc.

www.tecnaro.de
Design: opportunity for “front of the pipe” eco-innovation

Eco-design is the integration of environmental considerations into product design and development that aims to improve performance throughout the product’s life cycle.

Most environmental impacts can be effectively avoided at the design stage. Addressing sustainability issues at the “front of the pipe” will therefore generate most benefits.

For instance, design specifies which materials and to some extent which production methods will be applied.

It also affects the potential reuse, recycling or disposal, and indirect impacts from distribution of new products.
Eco-design: good practice

ORANGEBOX: C2C FOR SUSTAINABLE DESIGN

OrangeBox used a “cradle to cradle” approach to apply materials safe and suitable to recycle. The Ara task chair design, for example, achieves product light weighting through a mono-material backing unit, improved assembly and disassembly times and improved overall resource efficiency.

Orangebox has set up a recycling centre at their site in Wales achieving a significant return on investment and reduction of materials sent to landfill.

www.orangebox.com
Marketing

Today’s customers buy greener products, services or technologies because they work better, save money or enhance health.

Eco-brands integrate relevant environmental benefits into products alongside cost and quality and communicate evidence-based messages avoiding *greenwashing*
Marketing:

Companies need to address environmental aspects at all stages of the customer experience:

- **Awareness**—how do we raise awareness about products and services?
- **Evaluation**—how do we help people evaluate greener value propositions?
- **Purchase**—how do customers purchase products and services?
- **Delivery**—how do we deliver a greener value proposition to customers?
- **After sales**—how do we provide greener post-purchase support?
Marketing: good practices

**Visionary Soap Company** Ltd successfully established a brand of fair trade soap. [www.visionarysoap.co.uk/](http://www.visionarysoap.co.uk/)

**Elvis & Kresse** achieved international press features for their bags and fashion accessories made from waste. [www.elvisandkresse.com](http://www.elvisandkresse.com)
Get your eco-innovation idea off the ground

✔ Test your idea
  • *advantages of your new product, service business*

✔ Assess your strategic capacity
  • *Knowledge, skills, partners, training needs*

✔ Get your eco-innovation funded
  • *Costs, source of funding and their risks, free support*

✔ Get your first customer.
  • *target market, pricing strategy, no greenwashing*
THANK YOU!