

CESME

Chair for Life and G64 take back and remanufacture scheme

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Brief Description of Good Practice
<p>In 2014, Orangebox undertook an Innovate UK –funded project ‘Office Chair for Life’. The intention of the project was to design an office task chair and accompanying sales model optimised for a circular economy. The project was supported by Ecodesign Centre.</p> <p>In 2015, the company also began development of a take-back scheme and remanufacture scheme for one of their existing products, the G64 office chair. PDR’s service design team worked with Orangebox to develop a blueprint for the service.</p>
Problems/challenges and how they were overcome
<p>A significant difficulty for the company was reverse logistics – providing the collection, storage space and facilities for chair return. Orangebox overcame the challenges by identify a number of new partners in their value network who would take responsibility for the storage and refurbishment of chairs, including GreenCap, a local social enterprise.</p> <p>In the case of the G64, retrofitting the take back scheme was difficult since the company sell through a network of dealers and do not always know the destination of the chairs. Orangebox undertook pilot studies with a key corporate customer to understand the typical wear and tear on the chair and how the chair may be remanufactured.</p> <p>In both cases, the company faces a challenge in developing new markets for refurbished goods. Orangebox is currently developing a separate brand which will sell the refurbished goods.</p>
Impact from Good Practice
<p>Both case studies are still at pilot stage. However, the design of the ‘Office Chair for Life’ product and service has been modelled and shown to have the potential to reduce resource intensity by up to 75% compared to Orangebox’s next best available option. It is estimated that, when rolled out, the Chair for Life will divert up to 375 tonnes of material from landfill, generate sales of up to £5 million per annum and generate £2.5 million per annum of added value for Orangebox’s supply chain.</p> <p>The pilot study has shown that 98% of the G64 chair is recyclable and remanufactured chairs have</p>

78% recycled content. Carbon footprinting conducted by Best Foot Forward calculates that this represents a 32.44 kg CO₂ reduction compared to a newly manufactured chair. The savings are gathered mainly from the reuse of metal and plastic parts. Remanufactured chairs require no additional aluminium and 75% less steel. Polypropylene requirements fall by 45% and nylon demands by 66%.

The refurbishment scheme also provides a new revenue stream for the company and the expanded value network. Taking into account remanufacturing costs, remanufactured chairs are likely to generate between 60 and 90% of the sales value of a new G64.

Lessons learnt from the Good Practice

Designing a product for a specific business model (in this case a business model extending the lifetime of a chair to fifteen years) has a significant impact on decisions made within the product development phase. Where possible, product and business model should be developed concurrently.

Implementation of circular business models requires a re-evaluation of a company's value network, including potential new partnerships and market research into how customers will respond to new value propositions. Pilot studies with willing customers can reduce the perception of risk within the company.

Recommendation you want to stand

Designing circular business models may require skills and knowledge that lie outside an SME's typical competencies. Funding open/collaborative innovation focused on circular economy activities is vital to promote uptake amongst SMEs.

For more information

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