



Steelcase Answer Open Workstation Life Cycle Assessment

Objective

For the Answer Workstation (worksurfaces, panels, shelf, bin, storage):

- Determine the environmental footprint of a key product line, before and after redesign
- Identify environmental hotspots in product life cycle
- Establish quantitative basis for public disclosure through Environmental Product Declaration (EPD)
- Understand the importance of disposal alternatives such as recycling, landfilling and incineration
- Design products with environmental performance in mind

Quantis Solution



Provided quantitative life cycle results to support EPD label and identified hotspots at manufacturing and disposal stages



Determined optimal disposal solution for each component



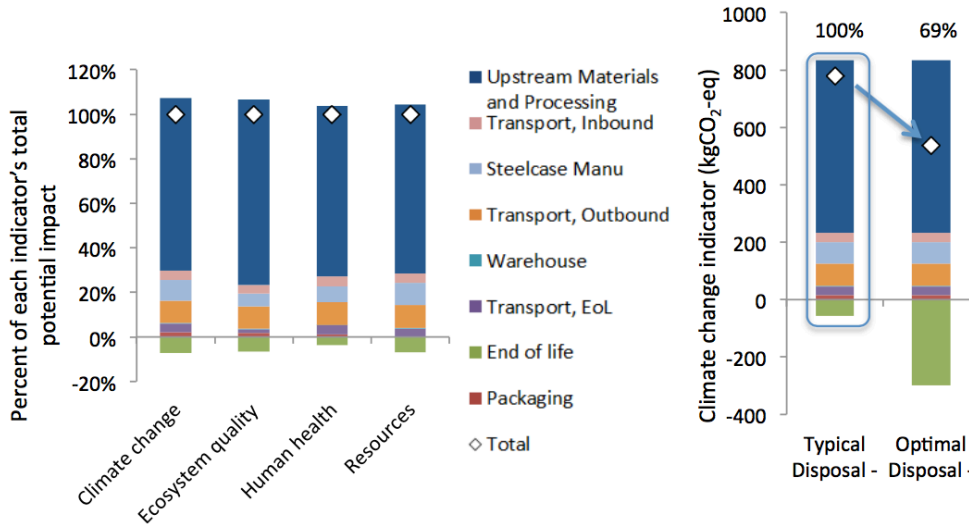
Calculated impact improvements of a recent design change which resulted in product light-weighting and improved recyclability

“As a sustainability leader in the furniture industry, Steelcase counts on LCA and collaboration with Quantis to provide clear steps to improve environmental performance by providing data to support optimal design decisions and consumer behavior.”

Kevin Owens

Developer, Global Sustainability Systems, Steelcase

Results



- The Upstream materials and processing is key in determining the environmental impact of the Answer system.
- Confirmation that the redesign of Answer is more environmentally efficient than the former design.
- Optimal disposal of each furniture component and material can improve environmental performance substantially.



Key findings

- Consumer behavior plays a key role in life cycle impact of Answer workstation in terms of type of disposal by recycling and incineration with energy recovery, and lifespan of product
- Relative to typical disposal, optimal disposal of each material may reduce:
 - Climate change indicator by 31%
 - Human health indicator by 20%
 - Ecosystem quality indicator by 26%
 - Resource indicator by 29%

Client's actions

- Development of Environmental Product Declaration to provide customers with Answer Open Workstation impact
- Outreach to customers regarding optimal disposal choices for each Answer component
- Equip design engineers with knowledge of ideal materials and assembly to enable high product and environmental performance