

UNDERSTANDING SUSTAINABILITY: BECAUSE TOMORROW MATTERS

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The design criteria of goods or tangible products have transcended beyond the traditional goals of functionality, cost, aesthetics, quality, and safety and now take into consideration environmental objectives, incorporated at the early design stages of the product (eco design). The use of different materials and processes to manufacture a product not only affect how its hitherto established functional objectives can be achieved, but also, how its impact on the environment (such as CO₂) can be reduced to protect the environment. The poster presents an environmental audit process that highlights the impact categories and compute CO₂ traces /footprints of products for its various life cycle stages, using the Sustainable Minds software¹. The purpose for this research was to develop a detailed model of possible outcomes by taking into consideration the environmental effects of products using eco-design philosophy. Product design protocols as well as environmental audit processes were developed based on the fundamentals of:

- Life cycle thinking: - environmental effects of a product from its raw materials acquisition, processing, use, and disposal after use.
- Seeking to eliminate or reduce the environmental impact of a product at the design stage which could possibly lead to cost savings, enhanced profits, product innovation and the added benefit of reducing its environmental impact over its life cycle.
- Adding environmental performance of a product as an additional design criterion.

¹ Design greener products right, from the start | Sustainable Minds. (2011). *Design greener products right, from the start | Sustainable Minds*. Retrieved June 30, 2012, from <http://www.sustainableminds.com>