

LIFE CYCLE ANALYSIS

Every product we buy has an impact on the environment at every stage in its "life cycle" - extraction of raw materials from the ground; processing, manufacturing, fabrication; transportation; consumption; recovery for reuse or recycling and ultimate disposal. Fortunately some products have the ability to avoid disposal, and can continually be recycled, such as iron and steel. However, most items including recycled iron and steel - have the potential to reduce their environmental impact in a number of ways.

Growing concern about the impact products and materials have on our environment has led to much discussion on the importance of Life Cycle Analysis (LCA). LCA determines the full extent of environmental impacts of a product in all stages of production, use and disposal. It is

often promoted as the best way to determine the total cost of a product and helps industry to reassess environmental efficiency, often leading to economic efficiency. It also allows for better comparison of product and product design alternatives by providing an inventory of resource extraction and consumption, energy use, and solid, liquid, and gaseous waste generation and pollution. To convert this inventory into the likely effect on the environment requires further evaluation and is known as life cycle assessment.

LCA provides a strong framework to make informed environmental decisions and can help improve the environmental performance of business and the community.

WHAT CAN I DO?

While some countries have embraced LCA, Australia still has a long way to go. Write to the environment minister or ask at your local environment centre how to best give your support for LCA implementation in Australia. Support companies that aim to minimise their product's environmental impact. A simple life cycle analysis can be conducted yourself-particularly useful when comparing products. Questions to ask are:

- What is the product made from? For example, does it include renewable or recycled materials? Is the use of raw materials minimised? Are hazardous substances used?
- How was the product produced? Does the public have access to the company's environmental report?
- How is it packaged? Is it made from recycled materials? Is it recyclable? Is there an excessive amount of packaging?
- Where was it produced? In Australia, or has it been imported, creating greenhouse gases unnecessarily through transportation?
- How efficiently does it work? For example, how many batteries does it need, how many A's on the water efficiency label or how many energy efficiency stars does it have?
- Can it be repaired?
- How will the product be disposed of? Does it contain recyclable materials and is it designed for easy recycling?

MORE INFORMATION

- www.environment.gov.au/about/publications/economics/consumption/lessons.html - A great case study highlighting the benefits and difficulties of implementing Life Cycle Analysis throughout Australia
- http://www.cfd.rmit.edu.au/life_cycle_assessment - focuses on product design to improve life cycle assessment
- <http://www.howproductsimpact.net/> - aids understanding of the relationship between products and our natural resources.
- www.environment.gov.au/settlements/industry/corporate/eecp/publications/shop.html - search for the booklet Shop Smart Buy Green, a consumers guide to reducing environmental impacts while saving money