

Product Life Cycle

Material extraction
and processing

Manufacturing

End of life

Product use



Ricardo
Energy & Environment

Profiting from life cycle assessments

Life cycle assessment (LCA) is an established method of assessing the environmental (and sometimes social) impacts of a product, service, business, policy or process.

Covering multiple environmental indicators and looking from cradle to grave (or cradle to cradle subject to the scope of the study), LCA helps avoid adopting changes that shift burdens to other life cycle stages or impact categories. Many evolving policies from the European Commission are based on life cycle approaches.

The LCA method has been standardised by the International Standards Organisation (ISO 14040 series) and various ways exist to streamline LCAs. These include using generic data and reducing the system boundary or the number of environmental indicators considered. Even so, undertaking a fully ISO-compliant LCA remains a significant undertaking.

Experts in Ricardo Energy & Environment's Resource Efficiency Team have been performing LCA studies for public and private sector clients for many years. Our track record covers a large breadth of products including construction products, industrial equipment, vehicles, lighting, beverages, toilets, packaging and paper products. We have licences for SimaPro8 and WRATE, and direct access to the latest ecoinvent online database.

LCA benefits

An LCA will help you to:

- Measure and analyse the full life cycle impact of your product, organisation, project or service.
- Identify and communicate any risks or opportunities to satisfy your stakeholders.
- Realise tangible savings in terms of time, cost, energy and natural resources.
- Answer the question 'Is my business sustainable enough to still exist in 20 years' time?'
- Prioritise where to target for improvements, mitigation of risks and realisation of opportunities.
- Create a benchmark by which to assess progress with regard to improvement measures.

How Ricardo Energy & Environment can help

Our Resource Efficiency Team supports clients in their use of LCAs. Many opt for a high-level scoping LCA initially, and then use the findings to drive and focus follow-up investigations. We provide LCA studies that can be targeted at a number of levels and carried out according to the ISO 14040 series of standards:

Following an LCA study, we can help our clients to use the data and analysis to identify 'hot spots' and focus efforts when looking at resource efficiency (including water and energy), and to target and measure the success of circular economy thinking.

We also help clients to communicate LCA results through a comprehensive report or an Environmental Product Declaration (EPD). An EPD is a verified document that reports the environmental data of products and other relevant information in accordance with the international standard ISO 14025 (Type III Environmental Declarations).

Why Ricardo Energy & Environment?

- Ricardo Energy & Environment is a corporate member of the International EPD System (IES).
- Members of our Resource Efficiency Team are approved individual verifiers of IES.
- We provide support at all stages of the LCA process.
- We are able to go beyond the EPD and provide expertise to manage and mitigate the risks identified.

Our experience

Our Resource Efficiency Team has experience in:

- Designing and implementing bespoke LCA tools for private and public sector organisations.
- Supporting a range of private sector clients in the construction product, food and drink, consumer electronics and industrial equipment sectors with:
 - Full LCA studies.
 - EPD development and publication.
 - EPD verification in our capacity as individual verifiers.
 - Life cycle energy and carbon assessment of major infrastructure projects.



For more information on how Ricardo Energy & Environment can help you profit from life cycle assessments, please contact us at enquiry-ee@ricardo.com or +44 (0) 1235 753000