

Life Cycle Assessment



Overview:

Life Cycle Assessment (LCA) is the most comprehensive method for assessing the overall environmental impact of products, processes or services through all life cycle stages - from raw material extraction to production, distribution, use, waste management and final disposal.

The use of LCA encourages preventative and proactive environmental management rather than reactive end-of-pipe approaches. It acknowledges that all phases of a product's life which can have an impact on the environment and these impacts can be quantified and compared.

“Cradle to Grave” Life Cycle Assessment: A full LCA can provide a detailed analysis of your product or service. This includes:

- An embedded measurement process providing high quality input data
- A hotspot analysis identifying key areas of your operation that generate environmental impacts
- A sensitivity and uncertainty analysis providing an understanding of the influence of variability on your results
- An assessment of next step options to prioritise and reduce your ecological footprint

Benefits:

- Identify and reduce a product's potential environmental impact. LCA help in identifying, compiling and evaluating the potential inputs and outputs and the corresponding environmental impacts of the product throughout its life cycle
- Lower costs by reducing your energy and raw material consumption
- Build consumer confidence in the quality and safety of your products
- Set yourself apart from the competition with an independent third party assessment
- LCA examine energy and resource consumption, emissions to air and water, incidental waste, toxicity and risk potential. Increase consumer confidence and reduce carbon footprint

Assessment Approach:

Product LCA verification is conducted in accordance with the ISO 14040 and ISO 14044 standards. The assessment comprises four phases:

- Goal and Scope: Life Cycle Assessment report verification using the framework of ISO 14040 (Environmental management- Life Cycle Assessment- Principles and framework)
- Life Cycle Inventory Analysis (LCI): Verify and evaluate all input and output data with help of traceable, and plausible calculations protocols
- Life Cycle Impact Assessment (LCIA): In the impact



assessment stage, additional information is drawn from the outcomes of applicable impact categories which are based on the system assessed and the technologies used in terms of the key local, regional, and global categories from the outcomes of applicable impact categories which are based on the system assessed and the technologies used in terms of the key local, regional, and global categories.

- Evaluation: LCIA procedures, assumptions and other operations within each element are evaluated for critical review and reporting. Verification assessment is carried according to the ISO 14040 or ISO 14044 standards.

The typical steps in the assessment process include the following -

- Acceptance of the proposal with the agreed methodology
- Evaluation of submitted data and documentation by TÜV India
- Release of desk review and onsite assessment report with findings, as appropriate
- Technical Review of documentation, including closure of findings as applicable
- Issuance of formal verification report &/or Certificate.

Why choose TÜV India?

- Wide pool of highly qualified and experienced assessors across India
- Comprehensive and diverse range of value - added services
- Wide pool of highly qualified and experienced

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assessors across India

- Comprehensive and diverse range of value - added services

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