Climate, environment and circular economy | Life cycle analysis (LCA)

LIFE CYCLE ANALYSIS (LCA) OVERVIEW AND CHALLENGES

Life Cycle Analysis (**LCA**) is an assessment method aimed **at quantifying the environmental impacts** of a product or a service, as part of an eco-design approach or with a view to selecting the optimal solution. All the potential impacts on the environment are quantified and the consumption of resources is examined, from extraction of raw materials to treatment of waste (“from cradle to grave”).

It is therefore a **global, multi-step and multi-criteria approach**, governed by a standard (ISO 14040-44) and recommended by the European Union. LCA developed rapidly from the 1980s and it is now used by:

- international, European and national public bodies,
- the scientific community,
- industrial players.

In practice, it takes a variety of forms to:

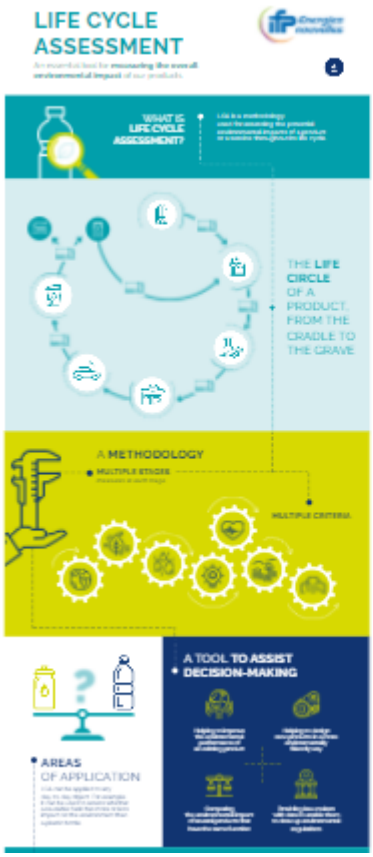
- take into account specific regional and sector-based characteristics,
- incorporate new criteria, such as:
  - the risk of **water shortage**,
  - the **monetization** of environmental impacts,
  - new **climate change** indicators.

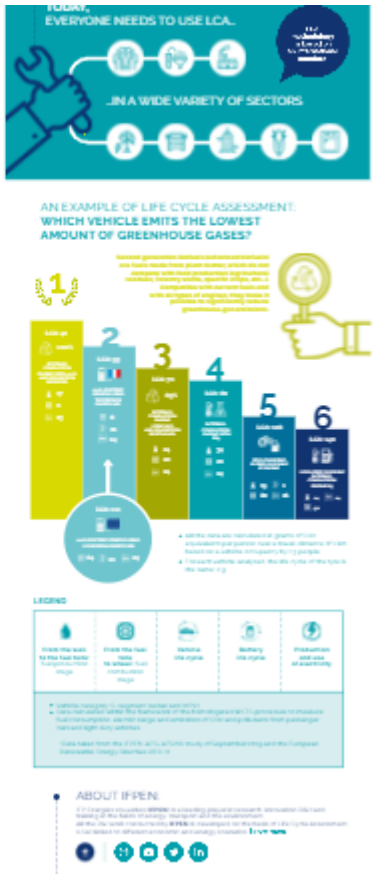
Today, LCA is an invaluable tool for assessing the **impacts on the environment of activities linked to new energy systems**. It is used to identify :

- the principal sources of pollution,
- opportunities to improve the environmental performance of products and services at **various stages of their life cycle**.

Conduct studies and develop methodologies to support decision-making and guide R&D strategies.

Infographics:





Our solutions

Our networks

Our strengths

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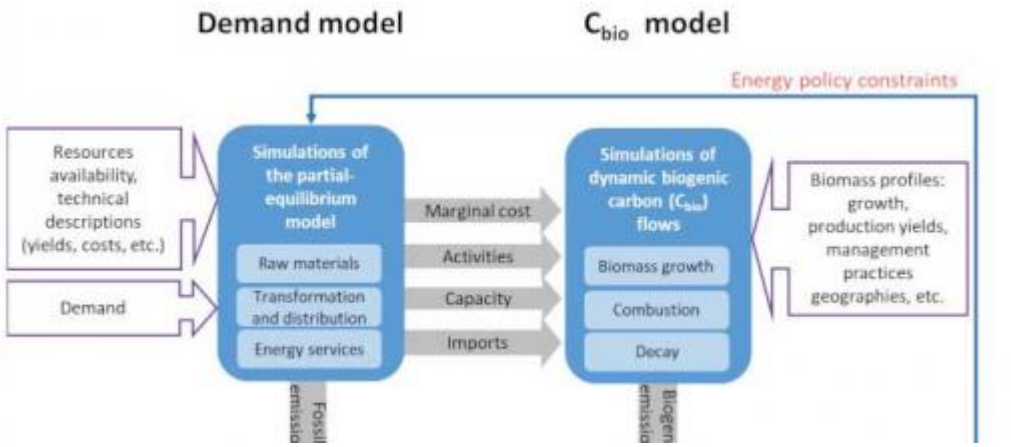

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Life cycle analysis (LCA)

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