Quick guide to LCA (Life Cycle Assessment)

WHAT`S THE ENVIRONMENTAL IMPACT OF MY PRODUCT / COMPANY / SERVICE?

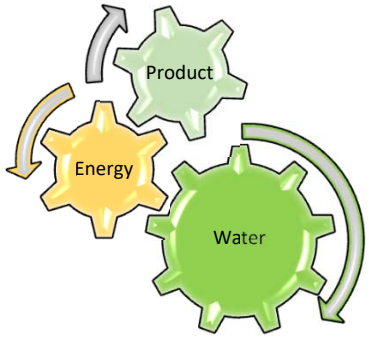
LCA is a framework standardized by ISO 14044 to make sure this impact! It´s conducted in 4 stages:

Why ask?

- Management - Make sustainable decisions
- Product Development - Develop sustainable products
- Sales & Marketing - Prove sustainable claims
- Supply Chain - Find better suppliers

Stages:

- Raw Materials
- Processing
- Transport
- Retail / Use
- Waste



1 Goal & Scope

What do we want to measure?

- Define the product / company / service you want to measure.
- What system do we measure in?
  - Which part of the life cycle?
  - Which impact category (water, CO_2, …)
- What do we exclude?

You can´t just compare one LCA to another. It´s important to compare the goal & scope of each analysis! For better comparision, there are Product Category Rules (PCR) that define how to analyse a certain product or industry.

2 Life Cycle Inventory (LCI)

Collect and structure your data

What data do we need? In this stage, we collect all the inputs and processes that we want to measure. For example…

The raw materials and bill of materials
The energy we use and buy
Supplier data
… everything that goes into and flows out of the system we want to measure

The easiest way to structure your data is in a flow-chart or tree-chain - from input, over processes, to outputs, and waste

3 Impact Assessment

Translate our Data to impacts

- We look at Life Cycle Databases (for example Ecoinvent or SimaPro5) and scientific papers to define what the impact of our Life Cycle Inventory is.
- We sum up the impacts in category totals – for example, Global Warming Potential (CO_2)

We translate everything to our total: Example:
Our category is CO_2. 1 kg of nitrogen equals 25 kg of CO_2 according to Norm EN15804

4 Interpretation

What does all of this mean?

- How high are your emissions?
- How do your products compare?
- Can we improve them?
- Can we improve our processes?
- What are the biggest levers for us?

Based on the interpretation, it is common to go back to the analysis and re-assess certain aspects of it.