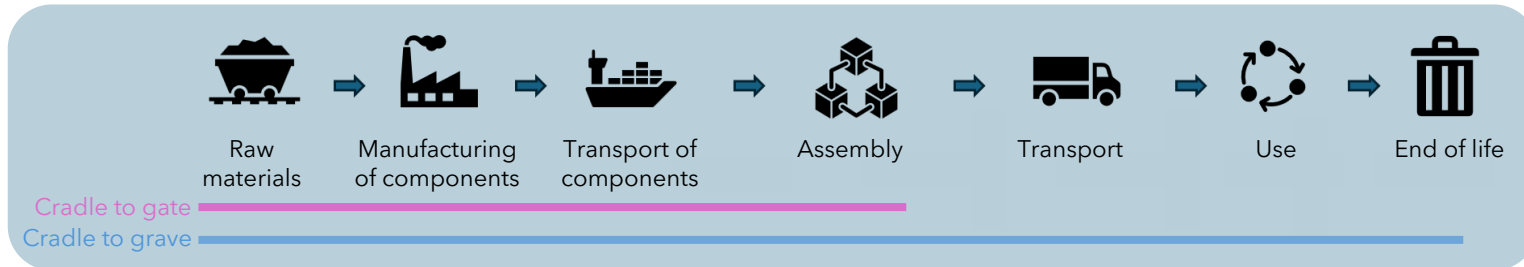


What is a life cycle assessment (LCA)?

A life cycle assessment is a thorough method for assessing the potential environmental impacts of products and services across their entire life cycle.



Why make an LCA?



To identify environmental “hotspots”, i.e. the processes in the life cycle that contribute most to the product's environmental impact.



Develop and optimize the product's design, manufacturing, use, disposal with the aim of reducing the environmental impact.



Become aware of and take responsibility for your value chain. Create a basis for decision-making to enable sustainable development of the value chain.



Be able to set specific requirements for the manufacturer or make concrete recommendations to the user.



Document environmental issues and compare alternatives.

Why demand LCA in tender requirements?



Documented environmental impact – ensures data basis for sustainable decisions in your procurement.



Creates a basis for comparison across offers – as long as the methods are the same.



Can be included as documentation for the offeree's climate reporting and goals – with high-quality data. Thereby strengthening the offeree's climate efforts.



Meet increasing requirements from the EU (CSRD). Sweden and Norway are already very far ahead! Sustainability weighs 30-40% in Norwegian tenders.



Ensures that the bidder in the tender takes responsibility for their value chain, as it forces them to deal specifically with the environmental impact of the products they sell.

Life cycle assessment of LM Gracey 11/12XSI curette

A Life Cycle Assessment (LCA) calculates the environmental impact of products or services throughout their entire lifecycle.

The environmental impact is assessed across several impact categories such as climate change, water use, ecotoxicity, resource use etc. and can be used to understand where innovations in e.g. materials, design or use stage can lead to reductions in the environmental impact related to the products life cycle.

Results for the impact on climate change from the LCA of the LM Gracey 11/12XSI curette is shown on the figure to the right in kg CO₂eq. Other impact categories are found in the full LCA report.

Main recommendations based on the LCA:

- Reduce the environmental impact related to the cleaning cycle in the use stage. Renewable energy and utilizing the full capacity of dishwasher and autoclave will help. (use stage is responsible for 90% of the kg CO₂ eq impact, assuming 150 cleaning cycles before the curette is disposed).
- Increase the amount of recycled aluminium content in the core of the curette.
- If possible, use a steel alloy with less molybdenum for the tips.
- Lower the energy consumption of the "Tips finalizing grinding" process during manufacturing.
- Design the instrument with re-use and repair in mind. For example, to enable users to replace parts that break or get worn down e.g. tips.
- Implement take-back systems where users of the instruments can hand in instruments that can no longer be used. This could create a basis for direct reuse of components – for example the aluminium core. Or simply an increase in recycling of the instruments.

