**Improving interpretation, presentation and visualisation of LCA studies for decision making support**

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According to ISO 14040 interpretation is the phase of LCA in which the findings from the inventory analysis and the impact assessment are considered together. It should deliver results that are consistent with the defined goal and scope of the study and which reach conclusions, explain limitations and provide recommendations. ISO 14044 further specifies that interpretation comprises the following elements: i) identification of the significant issues based on the results of the LCI and LCIA phases of LCA; ii) an evaluation that considers completeness, sensitivity and consistency checks; iii) conclusions, limitations, and recommendations.

Despite the interpretation being a crucial step for supporting decision making, it is often not performed in a systematic way. For example, the sensitivity analysis, the variability and uncertainties analysis, the comparison with results coming from different disciplines and domains are not properly done. So far, numerous LCA studies have been published and are often used by decision makers (both in business and policy contexts) to support the identification of hotspots or for drawing conclusions from meta-reviews while missing a good interpretation.

Besides, LCA is a methdology that is used for very different audiences: decision-makers, scientists, public authorities, consumers, etc. These audiences have different backgrounds and expectations. However, the way LCA results are presented is too often generic instead of being tailored to their needs. This leads to frequent difficulties to understand LCA studies.

Finally, LCA deals with numerous environmental impact indicators, large amount of data, complex uncertainties, spatial differentiation etc. LCA has evolved from e.g. a simple $CO_2$ and energy accounting to the assessment of large and complex consequential systems. Still, the way the results are presented has not changed a lot, i.e. mainly barcharts, piecharts, simple tables and Sankey diagrams while in the meantime, data visualization and analysis has evolved, with new interactive ways of displaying results, which may both help interpretation and communication of the results.

The session aims at discussing how to promote a transition toward more robust interpretation, presentation and visualization of the LCA results. This includes the identification of key elements and criteria for knowledge capitalization, with regard to existing studies.

We invite presentation and discussion on application of:

- approaches for interpretation and hotspots analysis
- methods for sensitivity analysis, variability and uncertainty analysis,
- new way of visualizing LCA results, using interactive tools and advanced visualization (such as tree-maps),
- rationale on how to choose a visualization/ graphical tools depending on the key messages to show and on the audience
- ideas on how to exploit the large amount of data used in LCAs to provide new insights, using visualization