LIFE CYCLE ANALYSIS (LCA) AND CIRCULAR ECONOMY

The module explores life cycle analysis principles, eco-design, and circular economy. We will reflect on life cycle analysis as a foundational assessment for designing sustainable products and developing circular economy strategies.
By doing so, we critically assess the potentials and limitations of life cycle analysis, eco-design, and circular economy in shaping sustainable products.

Contents

- Conduct a life cycle analysis of an everyday product subject to environmental issues with specialized software (SimaPro)
- Assessing the design of a product using the eco-design wheel
- Analysis of a case study of industry strategies for circularity
- Conduct a life cycle analysis for a given product (chosen by students in the agribalyse database, https://agribalyse.ademe.fr)
- Propose eco-design and circular strategies for the given product (chosen by students)

Learning objectives

- Understand the principles of life cycle analysis to use them as a decision-making tool
- Know how to conduct a basic life cycle analysis
- Understand and apply the principles of eco-design
- Understand the link between life cycle analysis, eco-design, and an organizational strategy
- Analyze a circular economy strategy
- Develop a circular economy strategy

Terms of evaluation

Individual quiz + final presentation of a study-case using the principles developed in class (small groups).