

Vacant master thesis

Recommended for: [M.Sc. SSE](#),

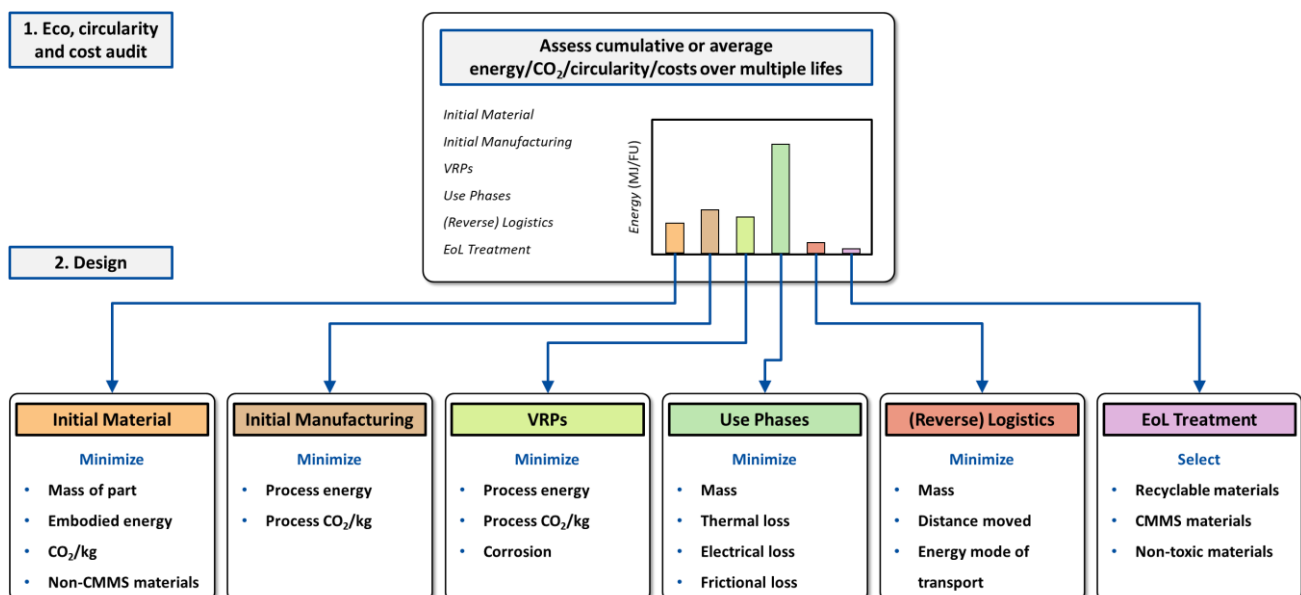
In a circular economy the material with the lowest price might no longer be the cheapest. But how to select the option that creates most value and is most sustainable?

Cost-Audits are a well-defined tool in material selection serving two functions:

1. Hot-spot analysis to identify objectives and constraints for material and corresponding process selection
2. Rapid comparison of the cost-impact of different material and processing options during the material selection process

Nevertheless this methodology does not serve the needs of circular product design and circular material selection yet. Life-cycle costing (LCC) is the base for this further development. LCC must be further developed towards multiple-life-cycle-modelling with differentiating value-retention on a product, component and material level to connect life cycles, as well as to incorporate different economic logics caused by different circular business model options. Testing and evaluating the new approach with fictitious or real-world examples will help to improve the new methodology.

If you are interested in this interdisciplinary challenge, supervised by experts from engineering (INATECH-EFM) and management (IQD, JKU Linz), get in contact!



Starts: As soon as possible

Timeframe: According to examination regulations

Contact

M.Sc. Hannes Geist & Mag. Dr. Daniela Schrack (IQD, JKU Linz)

hannes.geist@inatech.uni-freiburg.de | 0761 / 203 54 235

Department of Sustainable Systems Engineering | INATECH

Walter und Ingeborg Herrmann Chair for Power Ultrasonics and Engineering of Functional Materials | EFM

Faculty of Engineering | University of Freiburg

