



Life Cycle Assessment of a Universal Timber Slab (2) – Creation of an API between design tool and LCA

In the context of sustainable construction, Life Cycle Assessment (LCA) is gaining increasing importance, particularly when integrated into the design phase. By incorporating LCA early in the design process, architects and engineers can make informed decisions that significantly reduce environmental impacts, optimize resource use, and enhance the overall sustainability of buildings.

This Master's thesis focuses on the creation of an interface between LCA data of UniversalTimberSlab and the architectural Design Tools to achieve a direct feedback on environmental impacts during the design stage. Therefore, an evaluation of the general feasibility of integrating LCA data into design tools must be explored, the implementation of an API must be demonstrated, and recommendations should be derived. The goal of this Master's thesis is to provide an interface between LCA data and the design tool to contribute to the development of sustainable construction practices by developing an API.

Requirements:

- Enrollment in a Master's program
- Interest in topics such as construction, resource and energy efficiency, circular economy, innovative technologies, life cycle assessment, and sustainability
- Reliable, careful, and independent work ethic
- Proficiency in MS Office, especially Excel
- Advantageous: Experience with GaBi, JSON, BHOM
- Good command of English, both written and spoken

We offer:

- Independent work in an interdisciplinary team
- Coffee

Bewerbung:

If you are interested or have any questions, we look forward to hearing from you. Please attach your current application documents (CV, transcript, motivation letter, certificates, etc.) to your application. Send them to: bewerbung-gabi@iabp.uni-stuttgart.de

Information on the handling of applicant data can be found at: <https://www.uni-stuttgart.de/datenschutz/bewerbung/>

The department Life Cycle Engineering (GaBi) offers a

Master's thesis

For Students from Architectur, ITECH, civil engineering, environmental engineering or similar

Starting January 2025