

## Master Thesis

At the Chair of Business Administration in the research group: „Project and Resource Management in the built environment” the following final thesis is offered:

### Technoeconomic, ecological and social assessment of an additively manufactured willow clay wall structure

#### Background

In the course of the increasing challenges in the construction sector, the research project aims to [ReSidence – Regionally Regrowing, Recyclable and Reconfigurable modular housing](#) support the transition to a circular economy in the construction sector and further reduce the CO2 footprint of buildings. At the same time, state-of-the-art digital design and manufacturing processes are used, which guarantees high material efficiency and leads to a high potential for economic exploitation. Through cooperation with farmers, the foundations are laid for agricultural transformation and local value chains based on rapidly renewable resources from ecologically valuable wetlands.

#### Contents of the thesis

The aim of this thesis is the development and application of a model for holistic sustainability assessment, i.e. the techno-economic as well as ecological and social analysis of a prototypically implemented willow clay wall structure. As far as possible, the assessment should cover the entire building life cycle (Cradle to Grave).

#### Requirements

Special prior knowledge in the field of sustainability assessment, especially with ecological and social life cycle assessments, is an advantage, but not mandatory. The offer is mainly aimed at students of industrial engineering, technology and management in construction, architecture, civil engineering, but also students of other disciplines.

#### Contact

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