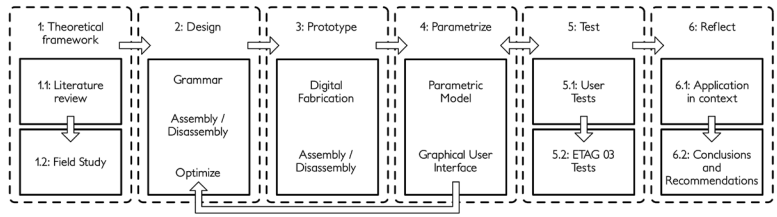
Filipe Brandão

CORK RE-WALL

Computational methods of automatic generation and digital fabrication of partition walls for building renovation



Developments in computational design methods and their integration with digital fabrication processes enable us to envisage a mass customized fabrication paradigm. Such is particularly suited to building renovation, a diversified corpus in which interventions are surgical and unique, and where partition walls are the most frequently replaced components. The main objective is to develop a disassemble-able and customizable solution of partition walls, with natural and renewable materials, insulation cork board and wood, for the context of building renovation. To meet this end is necessary to develop the construction system, the generative process for digital design and fabrication and a graphical user interface for building owners to interact. This design-to-production system will generate drawings for fabrication, instructions for assembly, and cost estimation. We foresee that the adoption of a file-to-factory process will present several advantages in this context: maximizing efficiency and speed of the construction process without reducing scope or increasing cost, contributing to a more sustainable construction process.

KEYWORDS

Digital fabrication, parametric design, building renovation, wood, cork.

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