

Title of PhD Research:

DEVELOPMENT OF A METHODOLOGY FOR ARCHITECTS FOR THE ASSESSMENT AND INTEGRATION OF SUSTAINABLE MATERIAL USE FROM THE EARLY DESIGN PHASE ON

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ABSTRACT OF PHD RESEARCH

The focus of sustainability in building design is shifting from energy performance towards the more global environmental impact assessment (EIA), to which building materials contribute a significant share. As architects are key actors in design, they are most likely the ones to perform an EIA in the future. However, their knowledge on and familiarity with EIA is found to be quite limited. Therefore, there is a need for design support for architects on environmental impact assessment of building design and materials choices. Environmental feedback should be provided from the early design stage on, as changes can still easily be implemented at this stage.

Therefore, this PhD research focusses on the architect-friendliness of environmental impact assessment tools. The final goal is to obtain an architect-friendly methodology for a tool for the assessment and integration of sustainable material use in building design, usable from the early design phase on. In the first phase of the research, the knowledge and practice of Flemish architects was studied and insights in usability and user-friendliness from the viewpoint of the architect were developed. In the second research phase, these insights are used to develop a methodology for an EIA tool, which allows early design environmental impact assessment and provides design-supportive environmental feedback on design and material choices. In the final phase, this methodology will be tested and fine-tuned to really fit the Flemish architects' needs.