Building Design for Disassembly:

Metrics and methods of evaluation.

PROBLEM

Demolition of buildings and infrastructure is among the largest contributors to landfills worldwide. In order to reduce the future output of waste from the construction industry, new buildings should be designed with end-of-life material recovery in mind. A shift in design awareness however, is not sufficient to ensure a lasting change. This transition needs to be complemented by policy measures and with clear methods to define material recovery goals and assess compliance at the design stage.

GUIDING QUESTIONS

What are the main influencing factors on material recovery potential in building assemblies?

What indicators could be used to assess these factors?

This research aims to determine whether it is possible to accurately assess material recovery potential, and to explore which assessment methods are most accurate.
PROJECT DESCRIPTION

The project aims to provide metrics for evaluating material recovery potential in building assemblies. These metrics are intended to be used by decision makers and designers in order to reach higher material recovery in new buildings.

IMPACT

With an ability to evaluate material recovery potential in buildings during the early design phases, researchers and practitioners could develop recovery-oriented products and assemblies. Additionally, the developed framework could be used as a policymaking tool for setting recovery goals for building design. In turn, this framework could also lead to the possible introduction of a recovery-oriented rating system.

Enable practitioners to evaluate material recovery potential in early design phases.

Develop framework by which policymakers can set recovery goals, and establish future recovery-oriented rating systems.

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