

Material Reuse as a Design Driver: Insights from Superuse Studios

Tuğba Özer

TED University, Faculty of Architecture and Design

Keywords

Material reuse; Circular design; Superuse Studios; Material-driven design

Materials have long been designated to fulfill predefined functional and formal requirements in architectural design, leaving existing materials underutilized in the design process. This paper examines how reuse-based practices reconfigure this assumption. It argues that material reuse operates as a fundamental input that actively shapes design decisions. Accordingly, design unfolds through the reciprocal relationship between programmatic needs and available materials as each continuously informs and reshapes the other.

The paper focuses on Superuse Studios (formerly 2012Architecten), an international architectural collective established in 1997. Guided by the requirements of the design brief, Superuse identifies locally available reusable materials through its “harvest mapping” method in the very early stages of its design process. With their predefined dimensions, properties, and prior uses, the found materials may initially appear to be constraints; yet they ultimately guide the process, add value, and serve as sources of inspiration for designers. The use of found materials also enables adaptive design processes in which spatial and programmatic solutions remain open to modification until the final phase, resulting in what Superuse describes as a “dynamic final design.” Through an analysis of selected projects, this paper aims to demonstrate the feasibility of reuse-based design, render its processes visible, and draw on Superuse Studios’ expertise. By foregrounding material reuse as a constitutive element of design rather than a secondary consideration, the study addresses a relatively underexplored dimension of architectural design and contributes to emerging discussions on circular and material-driven design methodologies.