

Neighborhood-oriented and regenerative programming in teaching

Carsten Schade

Technical University of Munich

Johannes Staudt

Technical University of Munich

Arno Denk

Technical University of Munich

Werner Lang

Technical University of Munich

The Interdisciplinary Project (IDP) is a central teaching format of the master's degree program "Resource-efficient and Sustainable Building" at the Technical University of Munich. The paper presents the IDP design studio as a case study for a transformative approach to sustainable building design. It introduces the "neighborhood-oriented and regenerative programming" approach: First, students analyze sustainability aspects at the neighborhood level and develop an urban vision. Then, they combine it with the building analysis of an existing building to develop a building transformation concept. This forms the basis for creating mixed-use, resilient building designs with added value for the neighborhood.

The paper demonstrates the pivotal role of programming in the design process, linking urban-scale issues to building design. This way, collaborative programming can incorporate considerations of human well-being and planetary boundaries to address global challenges. A systemic approach supports dealing with high complexity. To recognize interdependencies for building concepts and design, skills of interdisciplinary collaboration such as communication and conflict management are crucial.

