## **LESS** waste

## Circularity and urban mining





By consuming enormous amounts of resources, humankind has created a gigantic anthropogenic stockpile of raw materials. Around 15 billion tons of mineral raw materials, metals, wood, plastics and other materials are embedded in German buildings alone. The strategy of urban mining makes use of these materials to continue building with them. However, this can be difficult. Buildings, especially those erected after World War II, weren't planned to become "urban mines". Traditional craftsmanship commonly reused items and, for the most part, natural materials. Since the beginning of industrialization, the building sector has followed the linear system of "take - make - waste". Achieving a circular economy is a key strategy for sustainable development in the Earth's circular system. Circular construction must, therefore, be an integral part of the training of architects. It must also underpin a new basic understanding in every approach to sustainable design and construction.

For the EAAE conference, we invited contributions and discussions on how circular construction is integrated into teaching at European universities. The focus was on the following key questions:

- Is circular construction included in curricula and which concepts are used to teach it?
- Which new skills do students need to acquire in order to be able to propose circular constructions?
- Which hurdles complicate planning with pre-used components or secondary raw materials?
- Which solutions to challenges of reuse in architecture can we communicate to prospective architects during their training?

## Possible further topics include:

- Which legal aspects need to be taught in construction management education?
- Which tools do prospective architects need to be familiar with in order to be able to assess the impact of their work on climate and resource protection?
- What contribution can Al and digitalization make to promoting urban mining and the circular economy in the construction industry?
- How do topics of urban mining and the circular economy affect teaching?

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