

Digitalisation as a tool for sustainable architecture?

# Urban Mining Index

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The Urban Mining Index records components, products and building materials that can be reused for as long as possible and then sent for high-quality recycling. In this way, waste is significantly reduced - especially in cities and settlements. The Urban Mining Index was designed by Prof. Dr. Anja Rosen as part of her doctorate at the University of Wuppertal and has already been successfully applied in practice. [www.urban-mining-index.de](http://www.urban-mining-index.de)

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# Background

The Urban Mining Index is a digital planning tool for circular construction. Cities are viewed as "urban mines", i.e. as huge stores of materials, and used accordingly. A distinction is made between the reuse of components or entire buildings, high-quality recycling and downcycling when it comes to the reuse potential of the materials used. The Urban Mining Index quantifies which renewable raw materials, recycled raw materials and reusable materials have been incorporated into a building. It also measures both the recyclable materials that can be generated from the building stock and the effort required to recover them by type. The focus of the tool is on selective deconstruction. The aim is to create cycles that are as closed as possible across the various phases of a building's use (so-called "closed-loop potential").

## What?

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- Spreading knowledge about circular construction
- Maximizing circularity with the help of a comprehensive component catalog for evaluation

## Who?

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- Architects
- Civil engineers
- Sustainability planners

## When?

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- In the preliminary planning stage (LP2); refinement during the planning process makes sense

## How?

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- Intuitive to use; a tutorial is planned
- Currently purely a service; software with license fees under development
- Mapping and calculation in cycle diagrams
- Own database for deconstruction costs
- Further development for BIM application possible