

# DiCYCLE



**Reconsidering digital deconstruction, reuse and recycle processes using BIM and Blockchain**

Fördergeber\*innen:  
Projektkoordinator\*innen:  
Projektzeitraum:

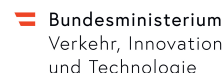
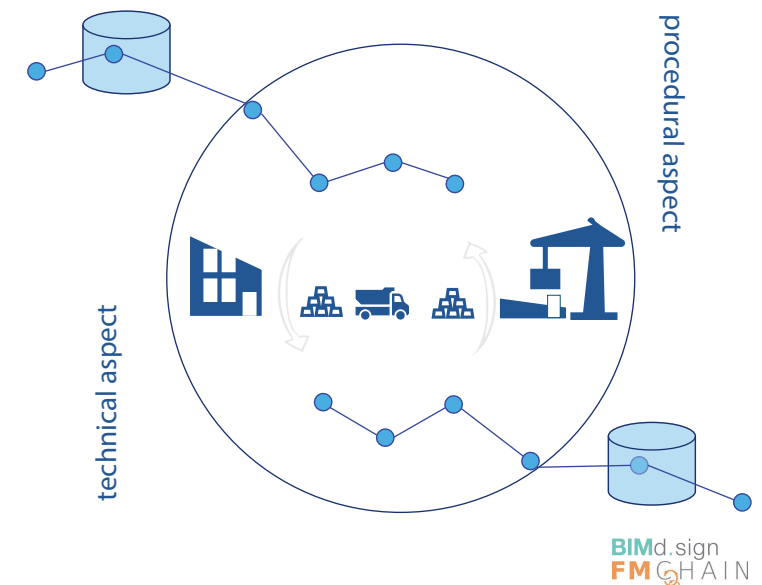
FFG, Programm „Stadt der Zukunft“ (Proj.-Nr. 886960)  
FOB Integrale Planung und Industriebau, TU Wien  
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The digitization in the AEC (Architecture, Engineering, and Construction) industry is progressing slowly and presents significant challenges, which are reflected in the slow adoption of innovative technologies. To implement digital technologies and methods in the building lifecycle, it is necessary to capture and adapt processes and workflows in planning, construction, operation, as well as renovation and dismantling (End of Life [E-o-L]) for the integration of digital technologies.

The goal of DiCYCLE is to analyze, map, and optimize current E-o-L processes in the construction industry, supported by digital technologies such as BIM (Building Information Modeling), blockchain (BC), and smart contracts (SC). This aims to create new business models and shape sustainable di-

gitized construction and planning processes that enable the reuse and recycling of building materials and components throughout their lifecycle. The innovation of the project lies in the integrative approach to E-o-L data and processes, their linkage with BIM, and the verifiability/traceability through BC and SC.

Additionally, a Proof-of-Concept framework will be developed to enable the implementation of BIM, BC, and SC in E-o-L. The main benefit lies in the creation of a transparent, recycling-friendly recording and tracking of building components and materials, supported by digital technologies, as well as in the minimization of construction and demolition waste in line with the Circular Economy.



Kontakt

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