



Building Information Modelling (BIM) for End-of-Lifecycle in Building Stock 4.0

Arghavan Akbarieh, Norman Teferle

University of Luxembourg

Arghavan.akbarieh@uni.lu

ADVANCED CONSTRUCTION AND ARCHITECTURE 2020

Raw Materials and Circular Economy in the Built Environment

September 23-25, 2020, Kaunas, Lithuania

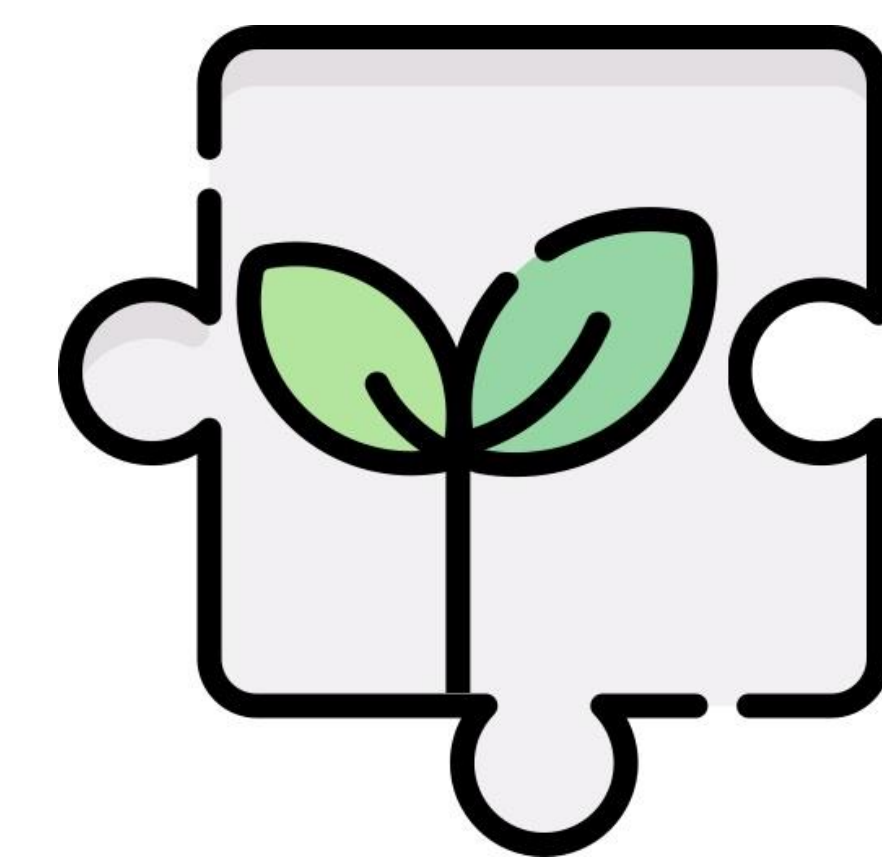
Kaunas University of Technology

- Project
- Aim
- Objectives
- Methods

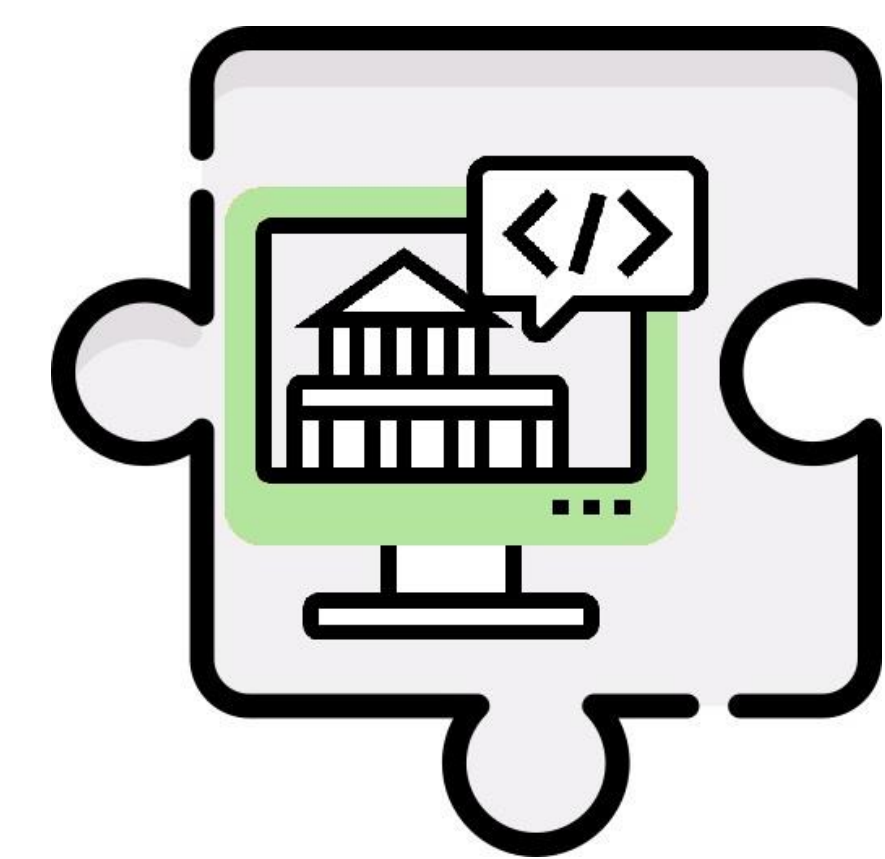
ECON4SD

Eco-Construction for Sustainable Development

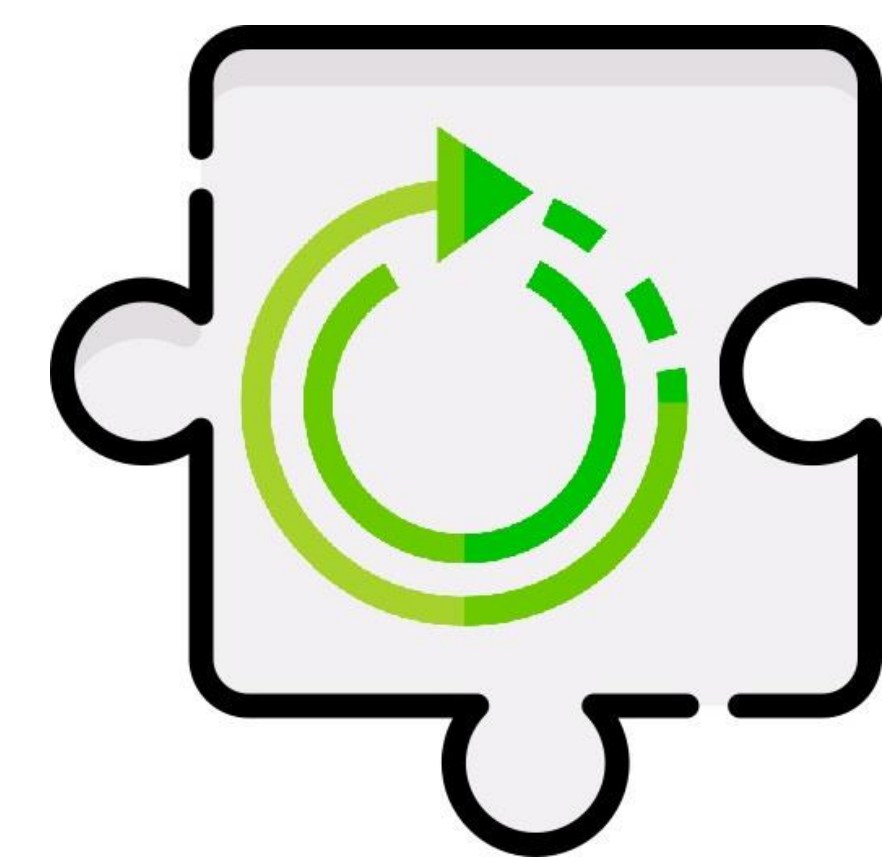
PhD Work-package: BIM for Sustainable Construction and De-construction



Sustainability



Digitalisation



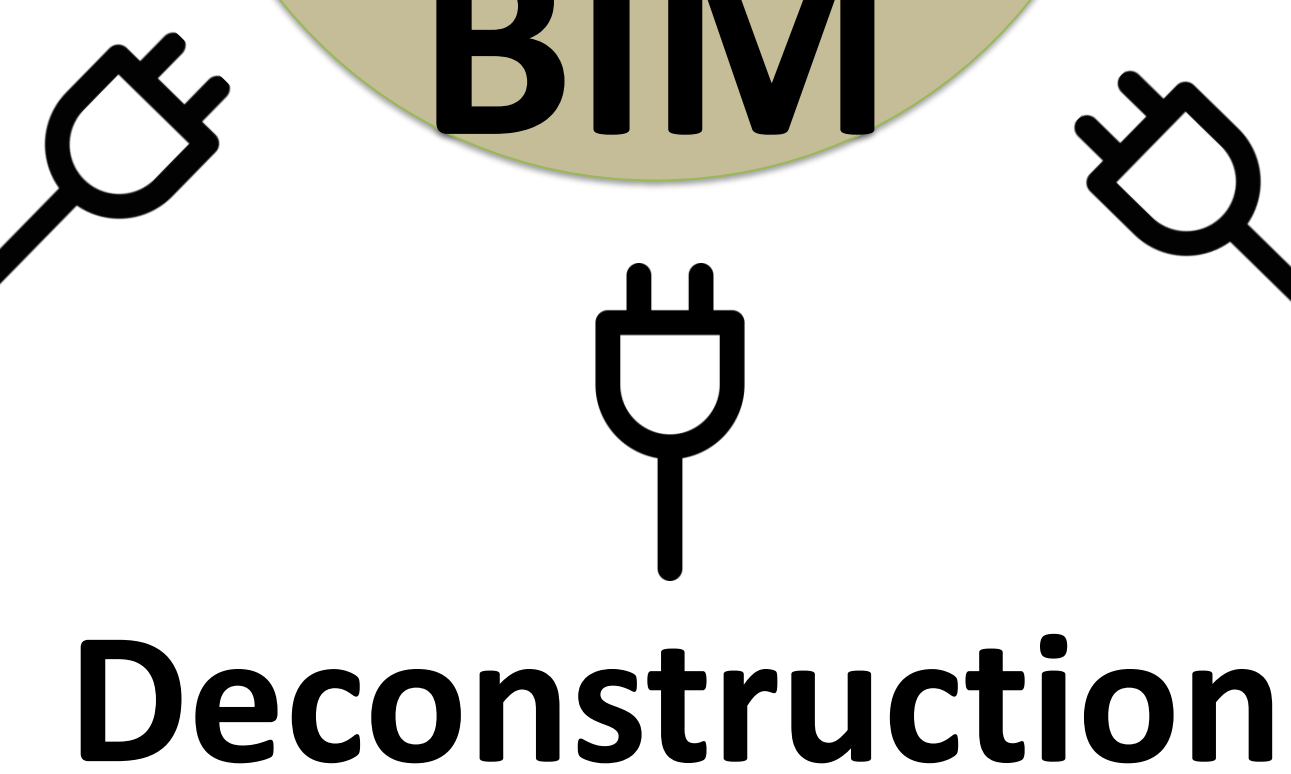
Circularity

End-of-Lifecycle of Buildings



BIM

Design for Deconstruction (DfD)



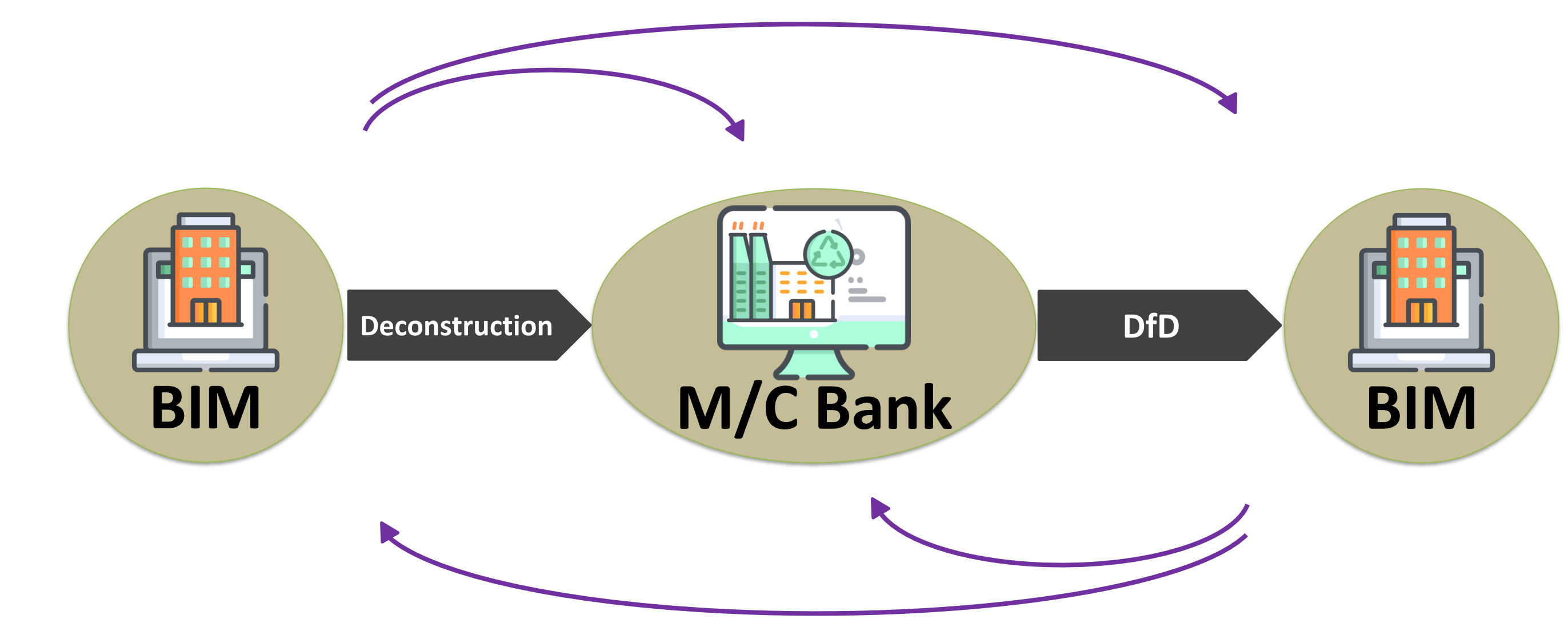
Deconstruction

Material and Component Bank (M/C Bank)

Revit, Dynamo, Industry Foundation Classes (IFC), Linked Data, Blockchain

Key conclusions:

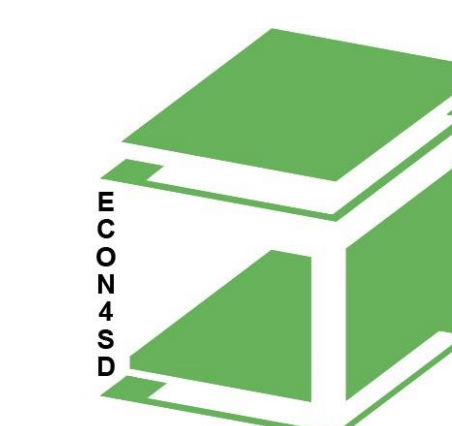
1. Interconnection of BIM and M/C Bank through deconstruction and DfD



2. BIM-based Deconstructable design

3. Adaptive conceptual Framework:

- a) Application of the Blockchain technology and Smart Contracts
- b) Business model



EUROPEAN UNION
European Regional Development Fund