SUM4Re

Creating materials banks from digital urban mining

PILLAR 1

IDENTIFICATION TECHNIQUES & TECHNOLOGIES

Utilising remote and embedded technologies with AI to identify and analyse construction entities in existing buildings and CDW.

UC1
3D geometric models

UC2
Characterisation of ageing timber

UC3
Detection of harmful materials, compounds, or coatings

UC4
Identification and modelling of concealed materials and components

UC5
Detection of hidden elements and concealed facilities, and condition of wood components

UC6
Characterisation of structural health

UC7
Optimum CDW upcycling

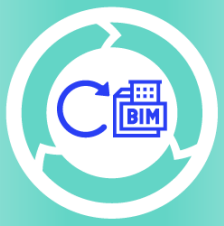
PILLAR 2

ANALYSIS SOFTWARE TOOLS FOR CIRCULARITY C-BIM

Applying digital tools to analyse construction entities for better interoperability and integration.

UC8
C-BIM generation for information management

UC9
Interoperability of the project platforms



Information management based on **open standards** to promote interoperability in construction, focused on existing and demolished built works.

SECURE STORAGE DATABASE

PILLAR 3

CONTRIBUTION TO CIRCULARITY

Enhancing the value of construction entities and developing market strategies with blockchain technology to address information gaps and establish property rights.

3.1. SMART/DIGITAL STRATEGIC PLANNING

UC10
Product/Waste Condition Analysis

UC11
High-quality reuse of secondary materials through LCA

UC12
Go-to-market strategies and constrains

UC13
EU legal framework analysis

3.2. GO-TO-MARKET + UPSKILLING

UC14
Outcomes and solutions

UC15
Co-creation strategies for skills development

EXISTING/DEMOLISHED BUILT WORKS

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