

Group 1: Solid construction



1. Which technologies of circularity do you know and how can they be used in the corresponding construction method?
(Technologies, innovations, products, companies, etc.)



3. What practices can be used to improve the construction method as much as possible in terms of circularity and sustainability?

Construction in modules

It seems that applying hemp derived materials can improve a lot buildings performances with little impact

Modular buildings are certainly easier to deal with and this is not a novelty

There are many companies, in Europe, that deal with demolitions. This is becoming a specialisation

Use materials of textile sector? Fast fashion => rest materials => waste

Improve prefabricated 3D-objects

Improve Skeleton constructions

Designing by foreseen the eventual maintenance and demolition

Designing and constructing by making installations very easily modifiable

What are the alternative materials for concrete for example?

3D printed construction

Using the residual/waste textile as the insulation material (preventing textile waste to be burnt or taken to the landfill)

Tracking of the material

Using materials that are fully "organic". Using PVC, Plastics, etc is not circular at all even if we use recycled

3d printing to reduce waste and for making complex models and parts

Adaptable use of existing building: innovations quite low total lack between innovations and traditional

Wooden parts combined in old buildings

No Solutions in Romania, but openminded for methods; less companies, which are thinking circular



2. What are the biggest problems of the construction method that stand in the way of achieving circularity criteria such as reusability, separability, reutilisation?



4. Which points should be focussed on in particular?

Reinforced concrete is very difficult to maintain in case of damage. Most of the time it easier to demolish.

Composite materials

In case of demolition, the debris and the stell/iron can be easily reused in other applications

I think that traditional methods of construction by using small replicable parts is the most sustainable

Use of alternative cement materials

Increase Separability of solid constructions

3d printing for me is not fully good, because experience is that modifications are coming often in the life of the building

Lots of waste, both during building and during demolishment

Solid constructions can only conditionally repurposed (weight, fix structure,...)

Imposing only sustainable materials, namely those that disappear in nature

Priviledging reuse of assets, technologies and materials

Mix between different materials

Group 2: Wood construction



1. Which technologies of circularity do you know and how can they be used in the corresponding construction method?
(Technologies, innovations, products, companies, etc.)

Material
reduction

packwall
Tetrapack
boards

Lignoloc
wood
nails

Straw
reed
linen

Reuse of
reclaimed
wood

Green steels,
using
electronic
facility with
clean energy

Decarbonate
cement

NLT or CLT
with wooden
nails (no
glue)



3. What practices can be used to improve the construction method as much as possible in terms of circularity and sustainability?

Material-
reduction

Use
recyclable
materials

Prefabrication

Modular
systems for
renovation

Plan full
stream
until Dis-
mantling



2. What are the biggest problems of the construction method that stand in the way of achieving circularity criteria such as reusability, separability, reutilisation?

Glue

Impregnated
wood
(chemicals in
it)

Cost of
product

Connecting
elements

Workload

Cost,
recycle vs
dispose

Regulations
are not fitting
the needs of
the future.

Lake of
will and
knowhow



4. Which points should be focussed on in particular?

Foot print

Process
management

Promote
reuse

Materials

Modularity
to make
reuse easier

Longtime
USE

New
technologies

Logistics (all
construction
methods)

Deconstruction
planed in the
beginng

Reconstruction

Connections

Use
Brownfields

Group 3: Hybrid construction



1. Which technologies of circularity do you know and how can they be used in the corresponding construction method?
(Technologies, innovations, products, companies, etc.)



3. What practices can be used to improve the construction method as much as possible in terms of circularity and sustainability?

Falco Zrt (Szombathely-HU) - transforms wood waste into sustainable wood chipboards

Rhomberg/CREE buildings in Vorarlberg

Modular Homes or other buildings

Renting materials

Reuse of complete module

3D printing

Technical documentation
IKEA like (materials and guidelines for dismantle and recycling)

Reuse/recycle of existing materials

(Wood) screws

Organic glue?

Wikkelhouse - modular houses from cardboard

Thinking ahead ;)

Intelligent way to combine materials

End-of-Life plannin - Develop a plan for the end-of-life phase of the building or provide material passports for the wood and concrete components to facilitate future recycling and reuse.

Each building to be constructed should have its "circular scoreboard" or benchmark in design phase

Waste management - strict waste management protocols (policies)

Explore business models that promote the return and refurbishment of materials. For instance, a "take-back" system for materials could be established where the manufacturer reclaims components for refurbishment and reuse



2. What are the biggest problems of the construction method that stand in the way of achieving circularity criteria such as reusability, separability, reutilisation?



4. Which points should be focussed on in particular?