Best Practice: Circular Economy – Examples from Europe

"reduce, reuse, recycle - Future Building Materials"

Webseminar Series Circular Economy
24 June 2020 to 21 July 2020
**Please note: All examples included in this presentation stem from participants of the webinar and are not to be considered natureplus original content.**
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Reuse/Recycle
Care Center in Emergis, Netherlands

✓ Construction process used as many materials as possible from an old building to build a care center for special care.

✓ Examples: wood cladding of the façade and the wooden frame construction

✓ New products that were needed to complete the building were selected with Circular Economy standards in mind

Reduce
Aggregates Levy, Great Britain

✓ Tax on sand, gravel and rock that is dug from the ground or dredged from the sea in UK waters

✓ Designed to:
  • recognize the significant environmental impact of extracting aggregates
  • encourage the use of alternative materials and find more environmentally friendly solutions across the building industry
Reduce

Building concept in Indeland, Germany

- Goal: reducing the need for resources and energy as well as the climate impact in constructing new buildings
- Solution: Factor X, a holistic approach to optimize proven concepts of energy-saving construction and renovation with regard to the entire life cycle of a building
- More info: https://www.indeland.de/bewegen/faktor-x

Reduce/Reuse

Combining timber and concrete

- Systemized timber-concrete composite Building System
- Idea is to increase resource efficiency and combine the advantages of both materials
- Goal is to deconstruct the system and reuse the prefab elements without downcycling
- More info: https://www.creebyrhomberg.com/
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**Recycle/Reuse**

Initiative of voluntary agreements

- EU pushes voluntary agreements with manufactures across Europe to commit with their products to the life cycle
- So far, there is one for gypsum, one for bricks, blocks and concrete
- Manufacturers agree to aim at 10 percent recycling content and collecting 50 percent of construction waste
- Goal is to eventually get the whole supply chain to join the agreements

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**Reduce**

EU project for energy-efficient refurbishment

- EU-funded project called “ProRetro”, led by the Wuppertal Institute; started in June 2020
- Goal: establishing a “one-stop-shop” concept for more climate-friendly residential buildings
- Idea is to provide consultation on energy-efficient solutions, obtaining subsidies, applying for financial support and commissioning installation contractors – all from one source
- More info: [https://wupperinst.org/en](https://wupperinst.org/en)
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Recycle/Reuse
Bus shelter at Schipol Airport

✓ Example for a third-life-building: bus shelter used to be an aircraft hangar


Recycle/Reuse
Recycling potential of foam glass

✓ Foam glass as promising building material to be recycled and reused

✓ Possibilities to reuse as a whole, but also to break up in smaller pieces, i.e. as ground insulation below surfaces

✓ Cascading circular use is possible, even to remelt and start from the beginning

(Image source: Steelconstruct fact sheet)