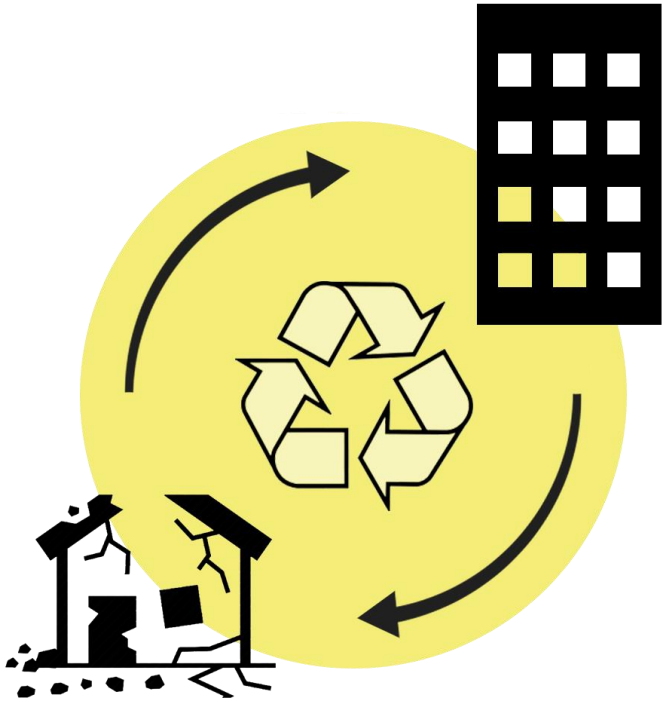


Πιλοτικές Δράσεις Επαναχρησιμοποίησης Στοιχείων στον Κλάδο της Οικοδομής

Δρ. Μαρία ΒΡΟΝΤΙΣΗ

Καθηγήτρια. Τμήμα Αρχιτεκτονων Μηχανικων. Πανεπιστήμιο Θεσσαλίας

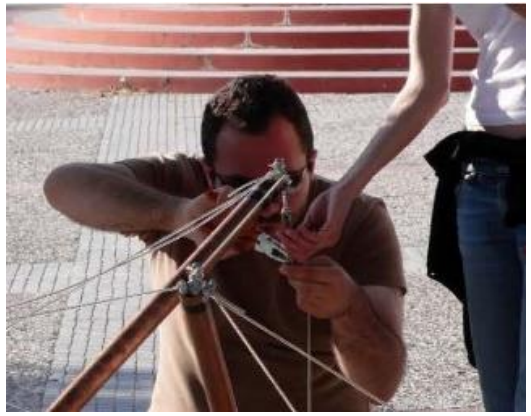
Διπλ. Αρχ. Μηχ. Ε.Μ.Π., MDesS Harvard GSD, Dr. Sc. ETH-Zurich

ma[K]e

Ερευνητική Μονάδα Δομικών Κατασκευών











1. ΔΟΜΙΚΑ ΣΥΣΤΗΜΑΤΑ

3. ΑΣΤΙΚΗ ΕΠΙΠΛΩΣΗ

2. ΠΕΡΙΒΑΛΛΟΝΤΙΚΕΣ ΔΥΝΑΜΙΚΕΣ

4. ΑΣΤΙΚΟΣ ΑΚΤΙΒΙΣΜΟΣ

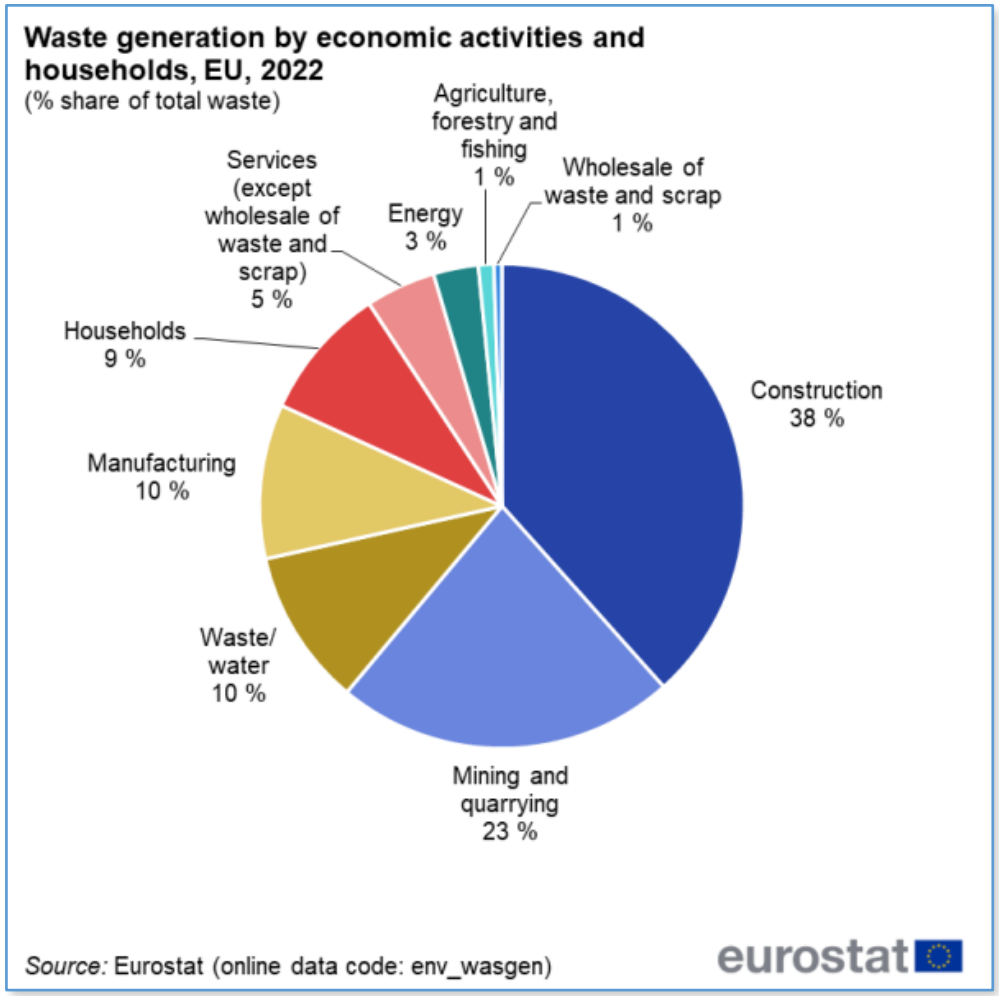
take – make – waste

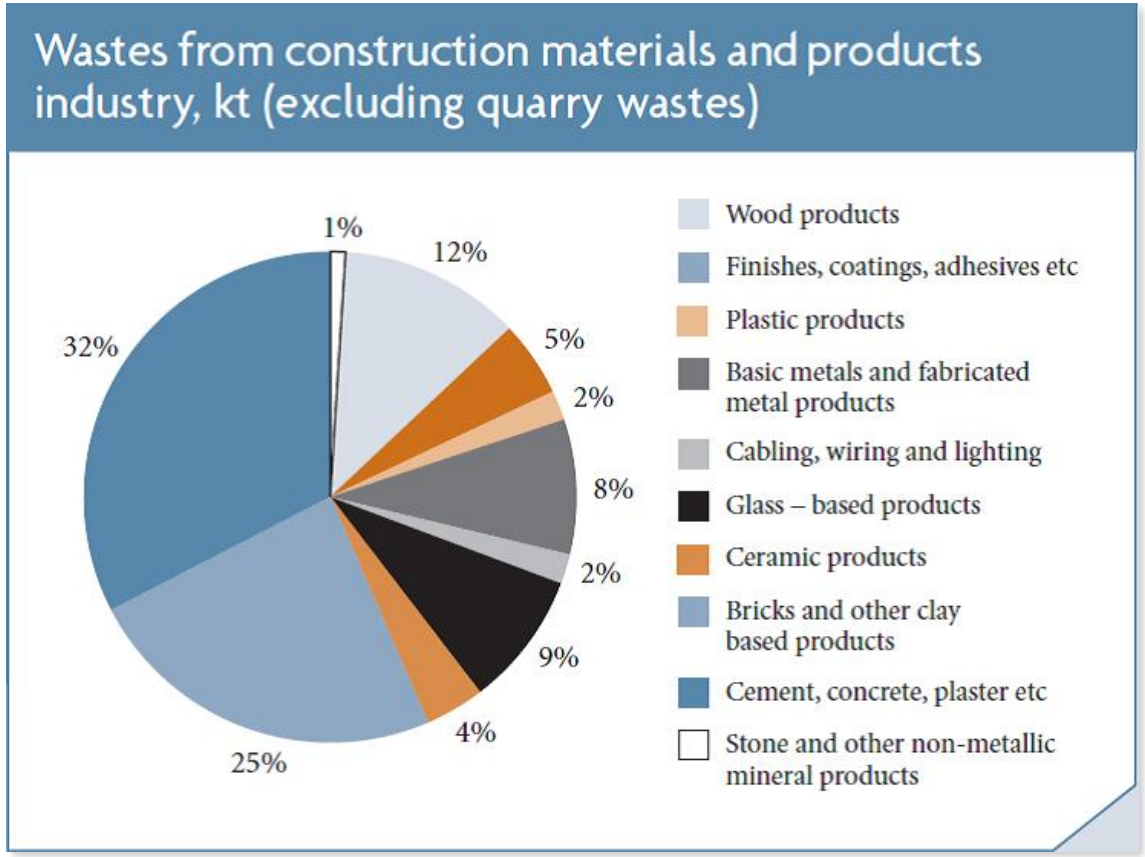
[γραμμική οικονομία]

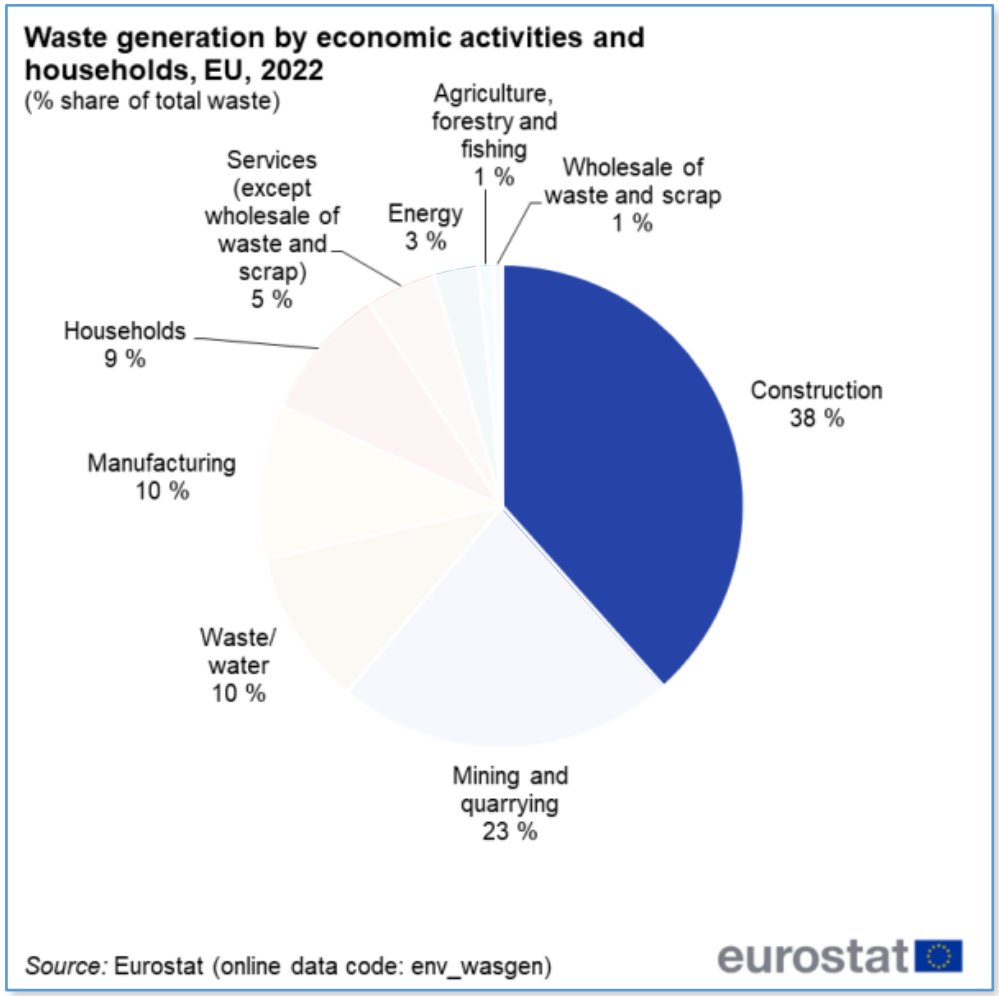
ΠΡΩΤΕΣ ΥΛΕΣ
ΕΚΜΕΤΑΛΛΕΥΣΗ ΠΕΡΙΟΡΙΣΜΕΝΩΝ
ΦΥΣΙΚΩΝ ΠΟΡΩΝ

ΕΝΕΡΓΕΙΑΚΟ ΑΠΟΤΥΠΩΜΑ
ΕΚΠΟΜΠΕΣ
ΜΕΓΑΛΩΝ ΠΟΣΟΤΗΤΩΝ CO_2

ΑΠΟΒΛΗΤΑ
ΕΚΣΚΑΦΩΝ,
ΚΑΤΕΔΑΦΙΣΕΩΝ & ΚΑΤΑΣΚΕΥΩΝ


Waste generation by economic activities and households, EU, 2022
(% share of total waste)
Agriculture, forestry and fishing 1 %
Wholesale of waste and scrap 1 %
Services (except wholesale of waste and scrap) 5 %
Energy 3 %
Households 9 %
Construction 38 %
Manufacturing 10 %
Waste/ water 10 %
Mining and quarrying 23 %
Source: Eurostat (online data code: env_wasgen)
eurostat


Wastes from construction materials and products industry, kt (excluding quarry wastes)
1%
12%
5%
2%
8%
2%
9%
4%
25%
32%
Wood products
Finishes, coatings, adhesives etc
Plastic products
Basic metals and fabricated metal products
Cabling, wiring and lighting
Glass – based products
Ceramic products
Bricks and other clay based products
Cement, concrete, plaster etc
Stone and other non-metallic mineral products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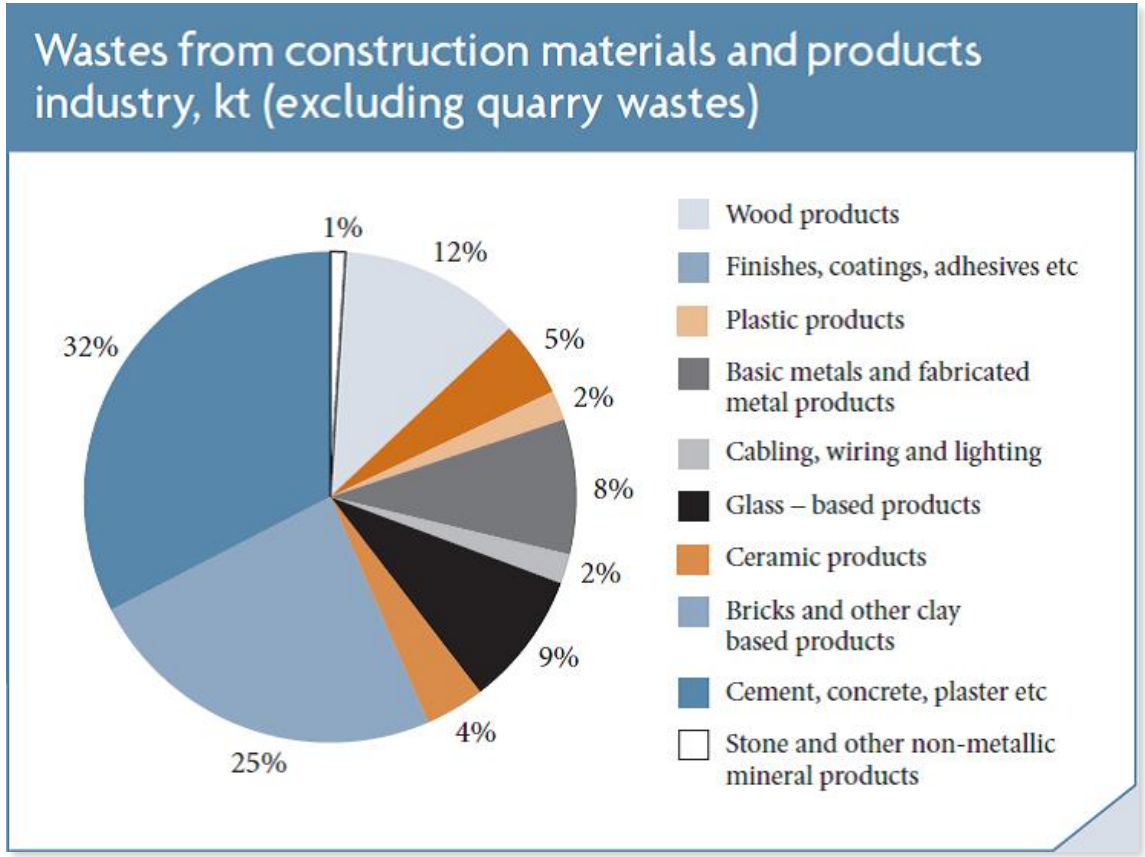
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Wood products
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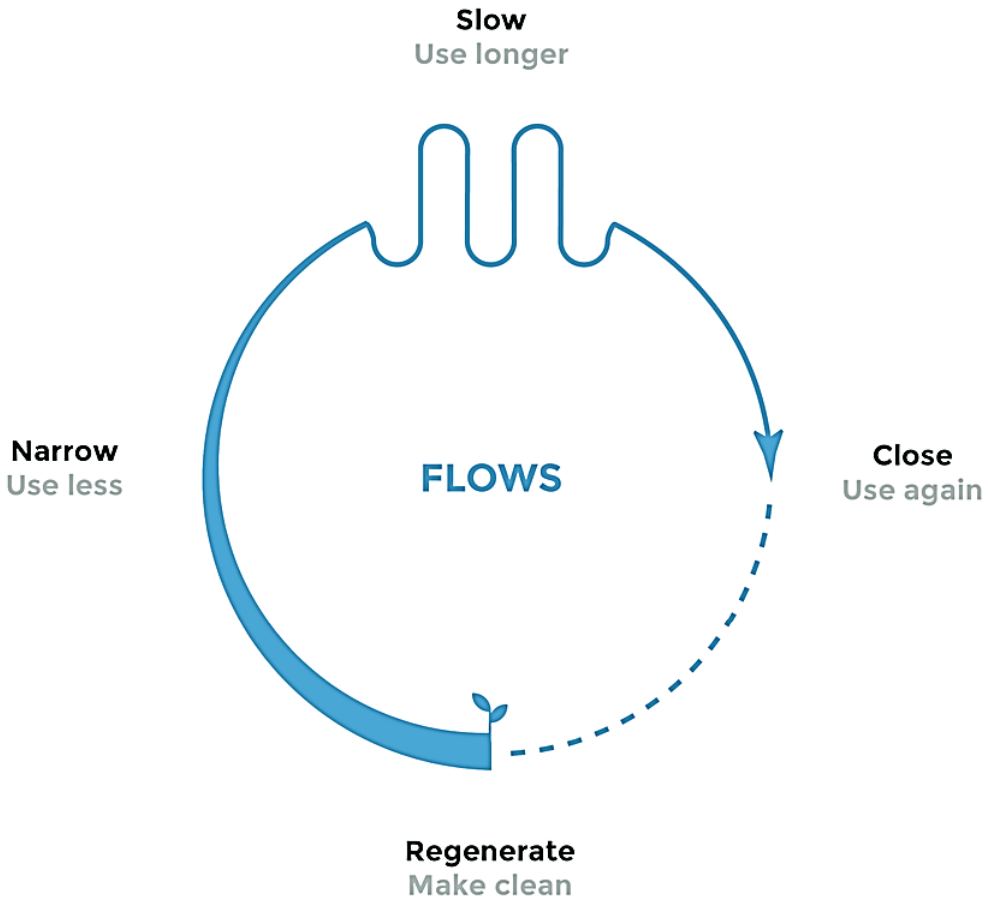
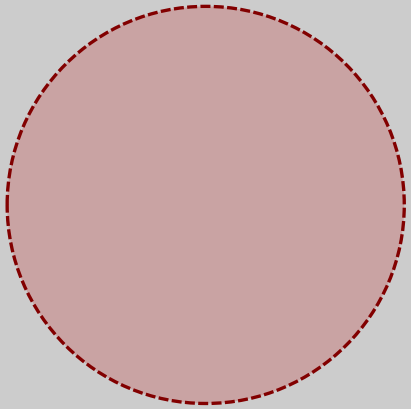
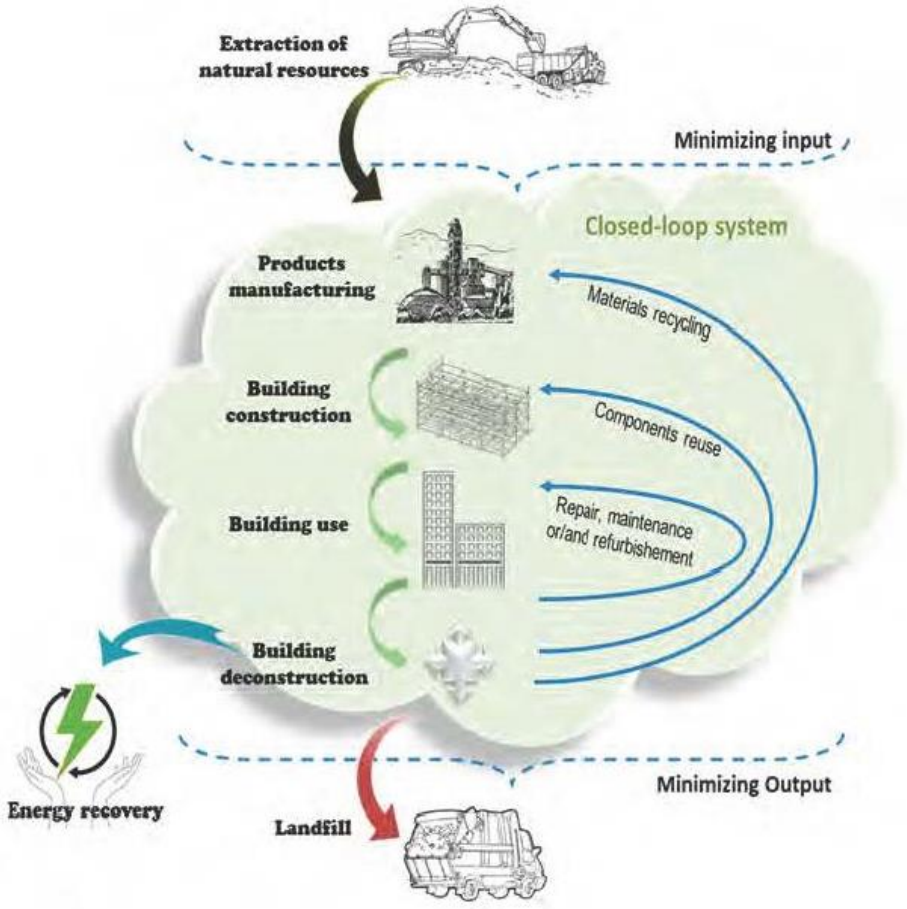
Basic metals and fabricated metal products
Cabling, wiring and lighting
Glass – based products
Ceramic products
Bricks and other clay based products
Cement, concrete, plaster etc
Stone and other non-metallic mineral products

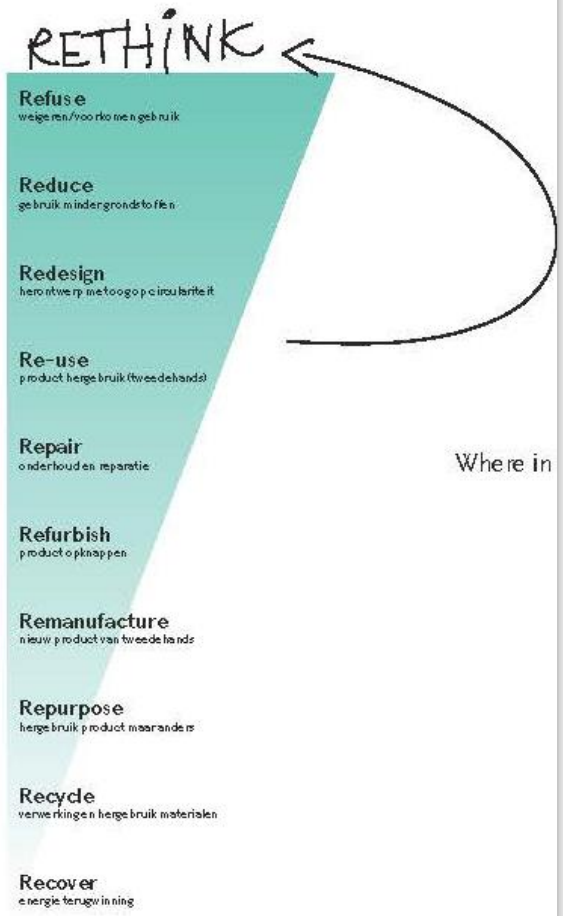
use less – use longer – use again

[κυκλική οικονομία]

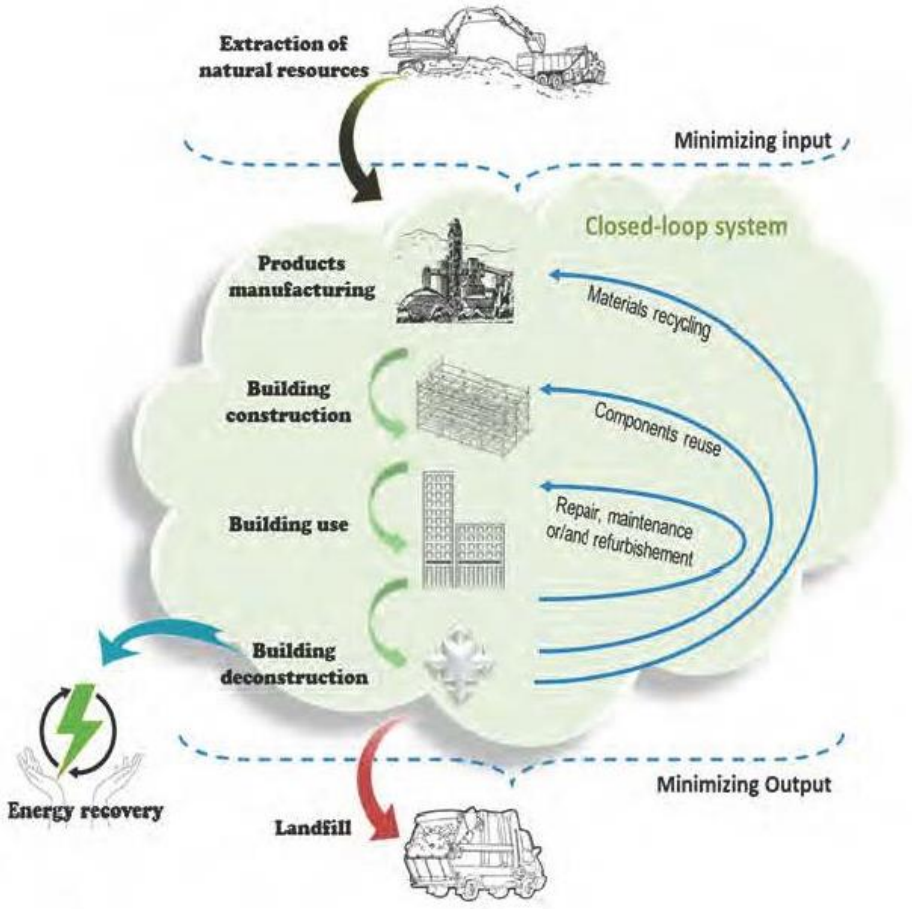


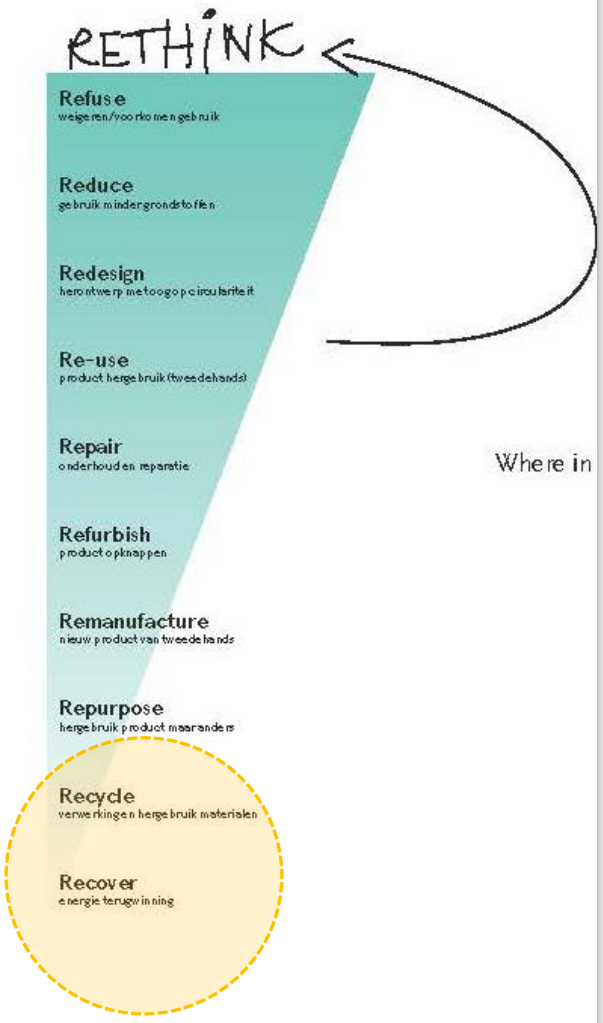




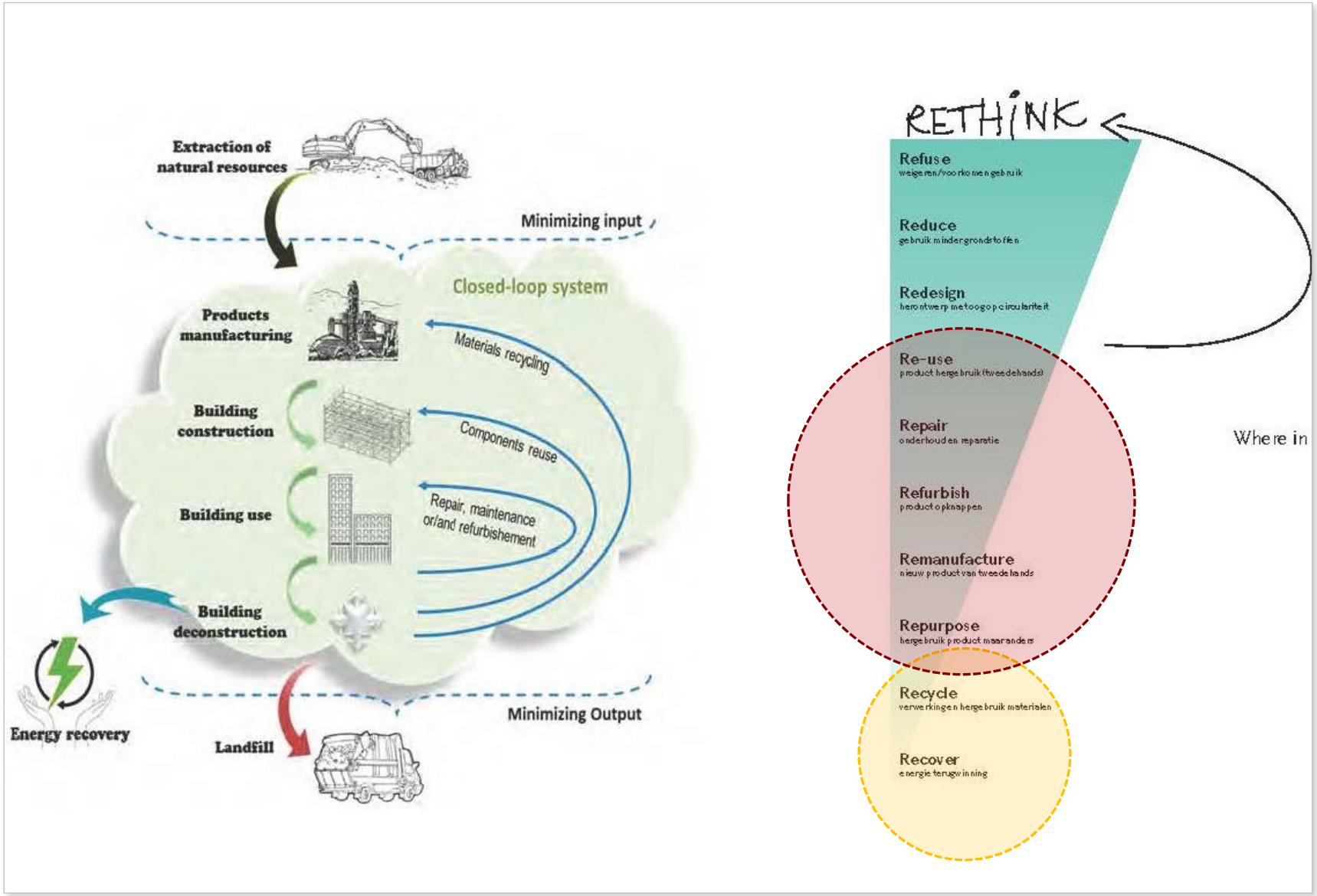


R-STRATEGIES: RE-CYCLE >>> RE-USE >>> RE-DUCE



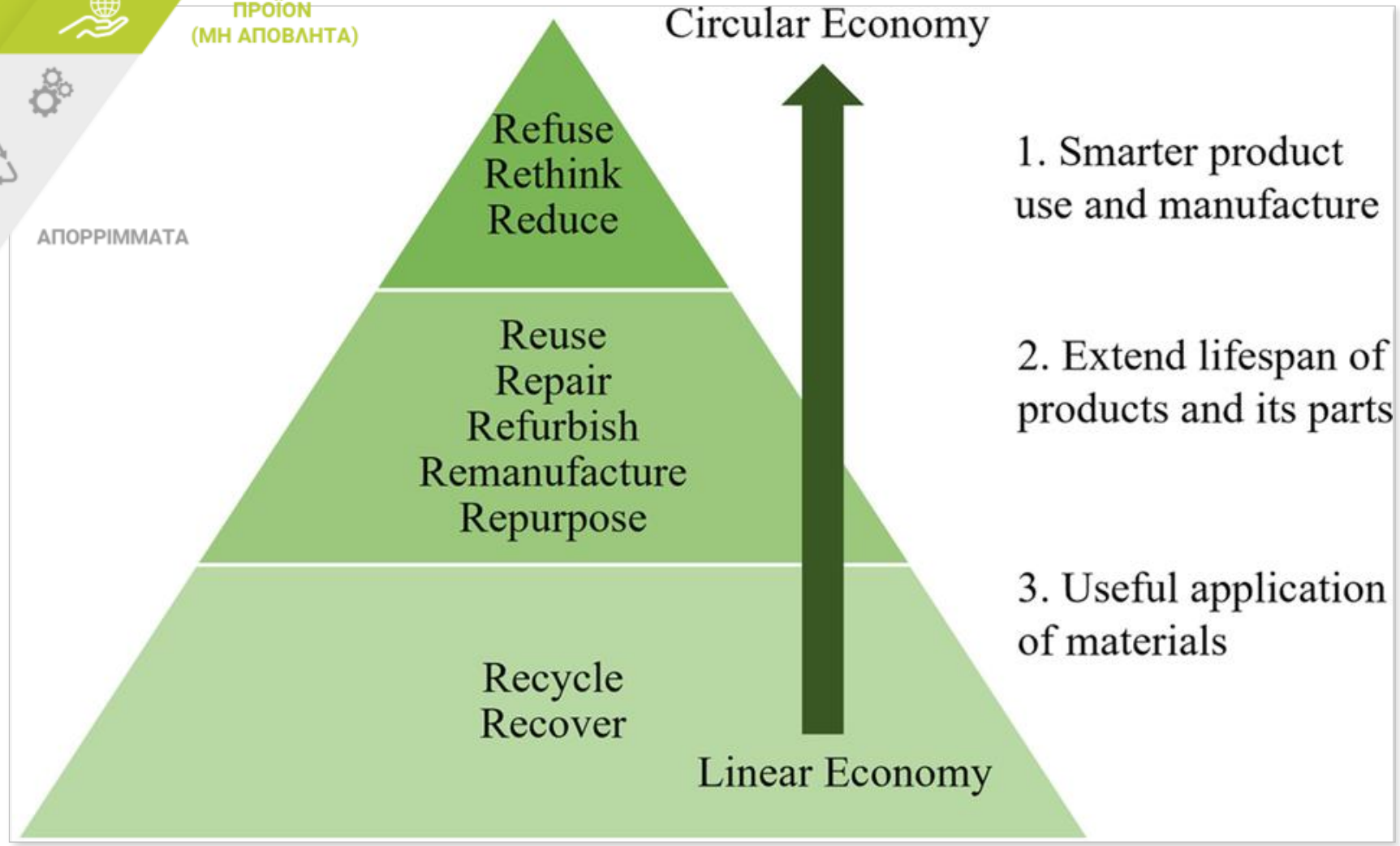


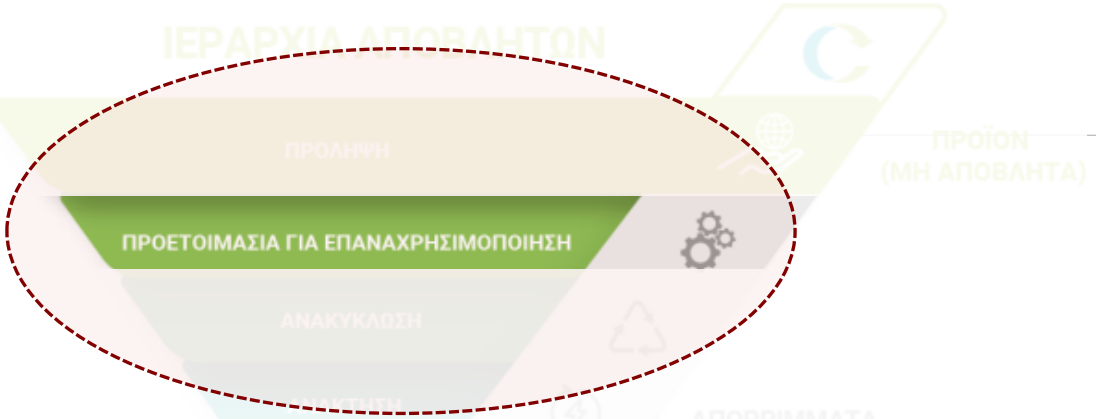
R-STRATEGIES: RE-CYCLE >>> RE-USE >>> RE-DUCE

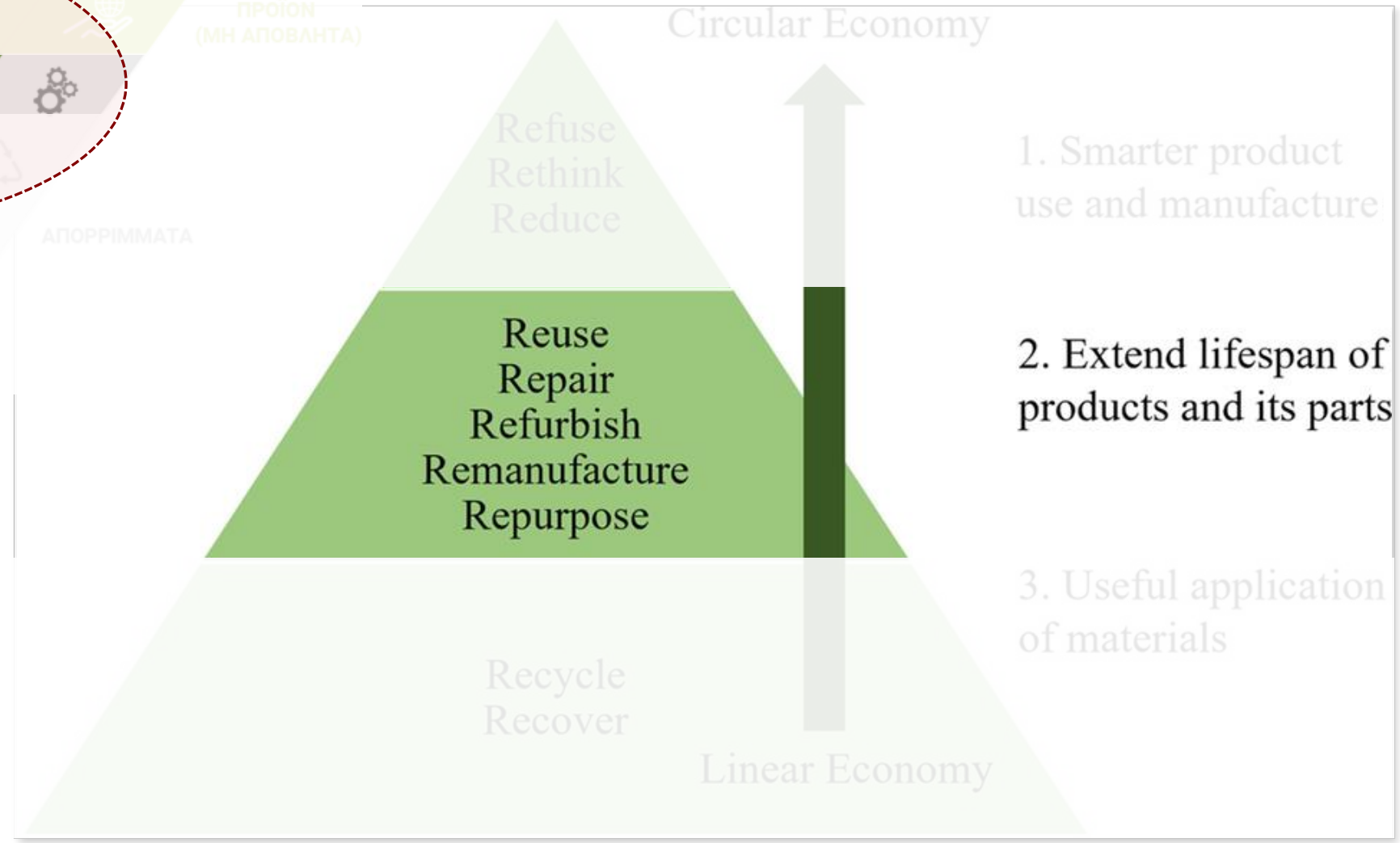


R-STRATEGIES: RE-CYCLE >>> RE-USE >>> RE-DUCE


ΙΕΡΑΡΧΙΑ ΑΠΟΒΛΗΤΩΝ
ΠΡΟΛΗΨΗ
ΠΡΟΕΤΟΙΜΑΣΙΑ ΓΙΑ ΕΠΑΝΑΧΡΗΣΙΜΟΠΟΙΗΣΗ
ΑΝΑΚΥΚΛΩΣΗ
ΑΝΑΚΤΗΣΗ
ΑΠΟΡΡΙΨΗ
ΠΡΟΪΟΝ
(ΜΗ ΑΠΟΒΛΗΤΑ)
ΑΠΟΡΡΙΜΜΑΤΑ


Circular Economy
Refuse
Rethink
Reduce
Reuse
Repair
Refurbish
Remanufacture
Repurpose
Recycle
Recover
Linear Economy
1. Smarter product use and manufacture
2. Extend lifespan of products and its parts
3. Useful application of materials


ΙΕΡΑΡΧΙΑ ΑΠΟΒΛΗΤΩΝ
ΠΡΟΛΗΨΗ
ΠΡΟΪΟΝ
(ΜΗ ΑΠΟΒΛΗΤΑ)
ΠΡΟΕΤΟΙΜΑΣΙΑ ΓΙΑ ΕΠΑΝΑΧΡΗΣΙΜΟΠΟΙΗΣΗ
ΑΝΑΚΥΚΛΩΣΗ
ΑΠΟΡΡΙΜΜΑΤΑ
ΑΠΟΡΡΙΨΗ


Circular Economy
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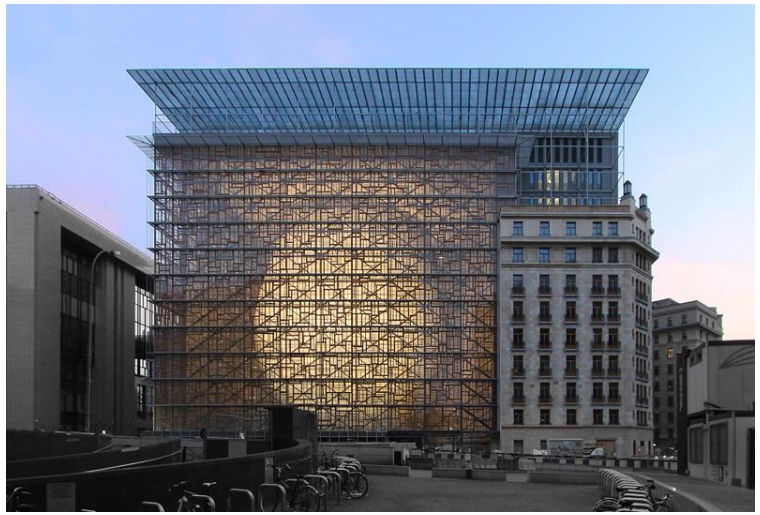
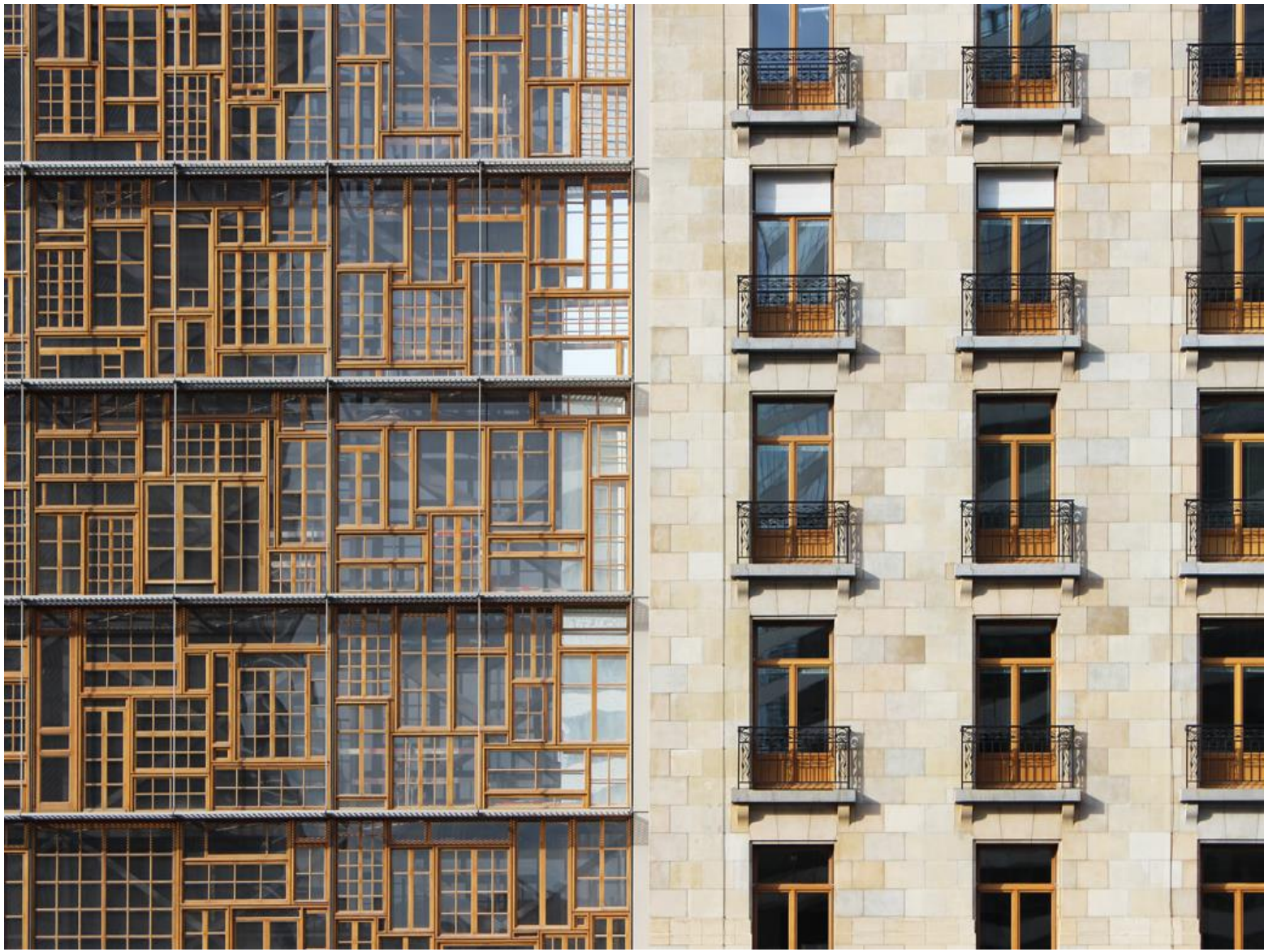
Remanufacture
Repurpose
Recycle
Recover
Linear Economy
1. Smarter product use and manufacture
2. Extend lifespan of products and its parts
3. Useful application of materials

[reuse]
επαναχρησιμοποίηση
ως στρατηγική σχεδιασμού

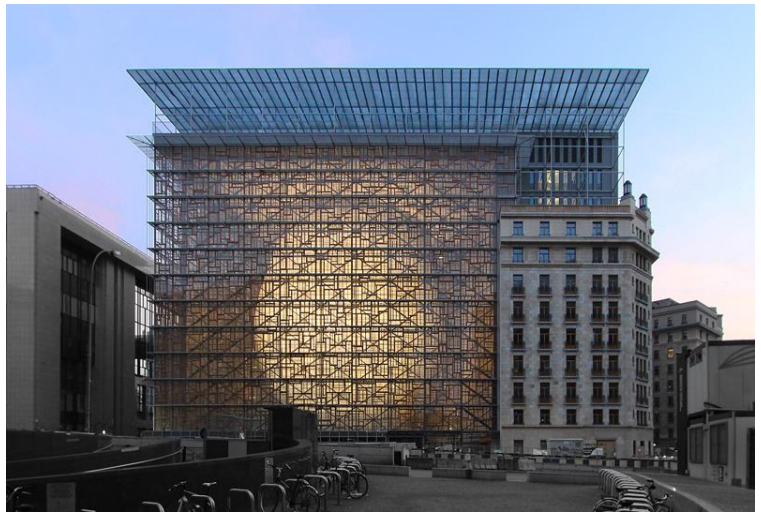
«Επιπλέον, σε έναν πλανήτη, όπου διαρκώς αυξάνεται ο πληθυσμός και η κλιματική κρίση είναι ήδη εδώ, ***δεν μπορούμε, πλέον, να θεωρούμε τα υλικά, τα οποία υπό συνθήκες είναι επαναχρησιμοποιούμενα, ως απόβλητα****. Σκοπός μας είναι να διευρύνουμε τη λίστα με τα επαναχρησιμοποιούμενα* […]»

ΔΙΑΧΕΙΡΙΣΗ ΑΠΟΒΛΗΤΩΝ: ΑΠΟΛΟΓΙΣΜΟΣ 2019 – 2024,
ΜΕΤΑΡΡΥΘΜΙΣΗ ΣΤΗΝ ΑΝΑΚΥΚΛΩΣΗ, ΟΔΙΚΟΣ ΧΑΡΤΗΣ ΜΕΧΡΙ ΤΟ 2030
ΗΜΕΡΙΔΑ ΥΠΕΝ. 11 ΙΟΥΛΙΟΥ 2024





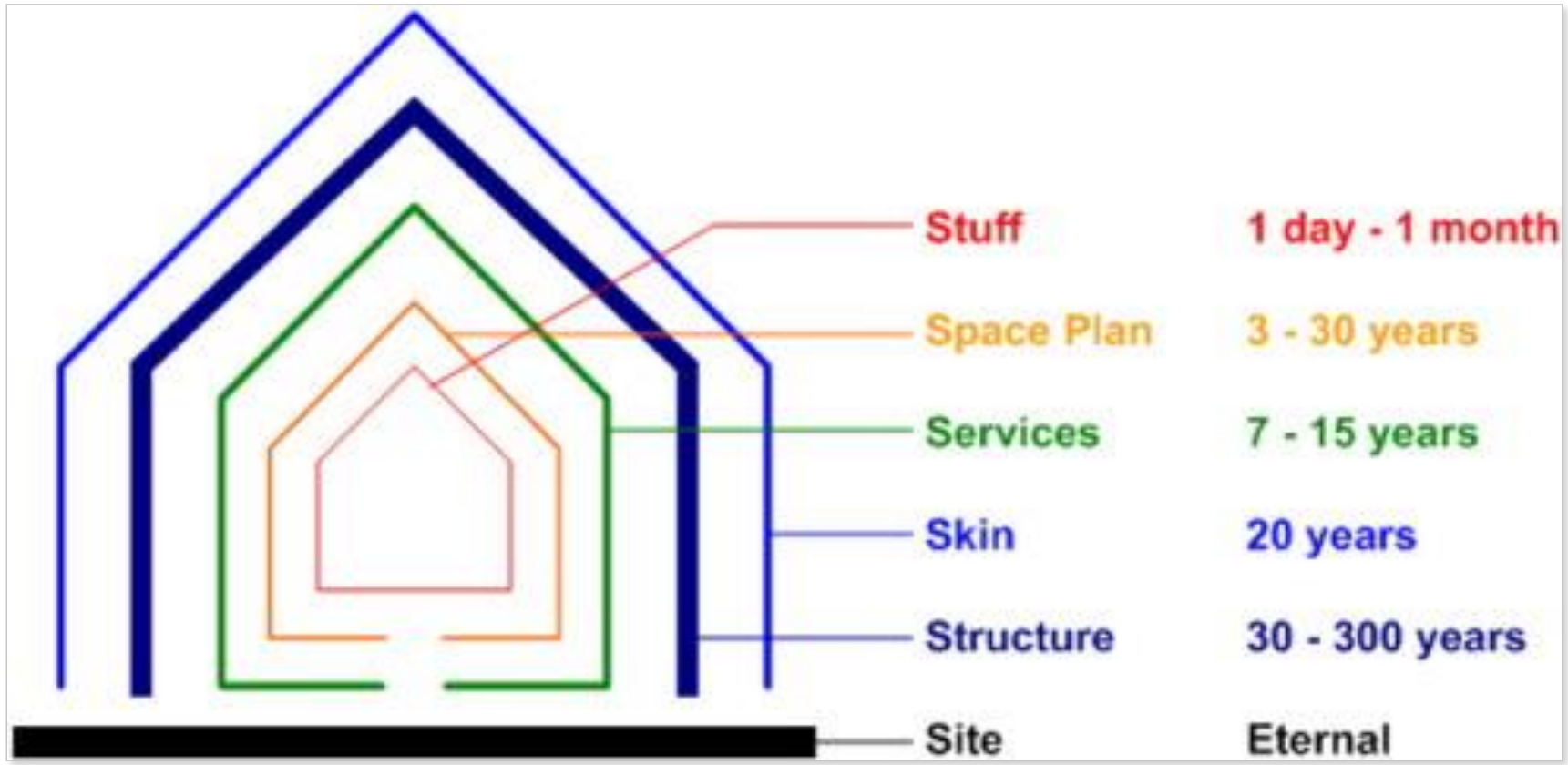
EUROPEAN COUNCIL. BRUSSELS, BELGIUM. PHILIPPE SAMYN & PARTNERS. 2013.

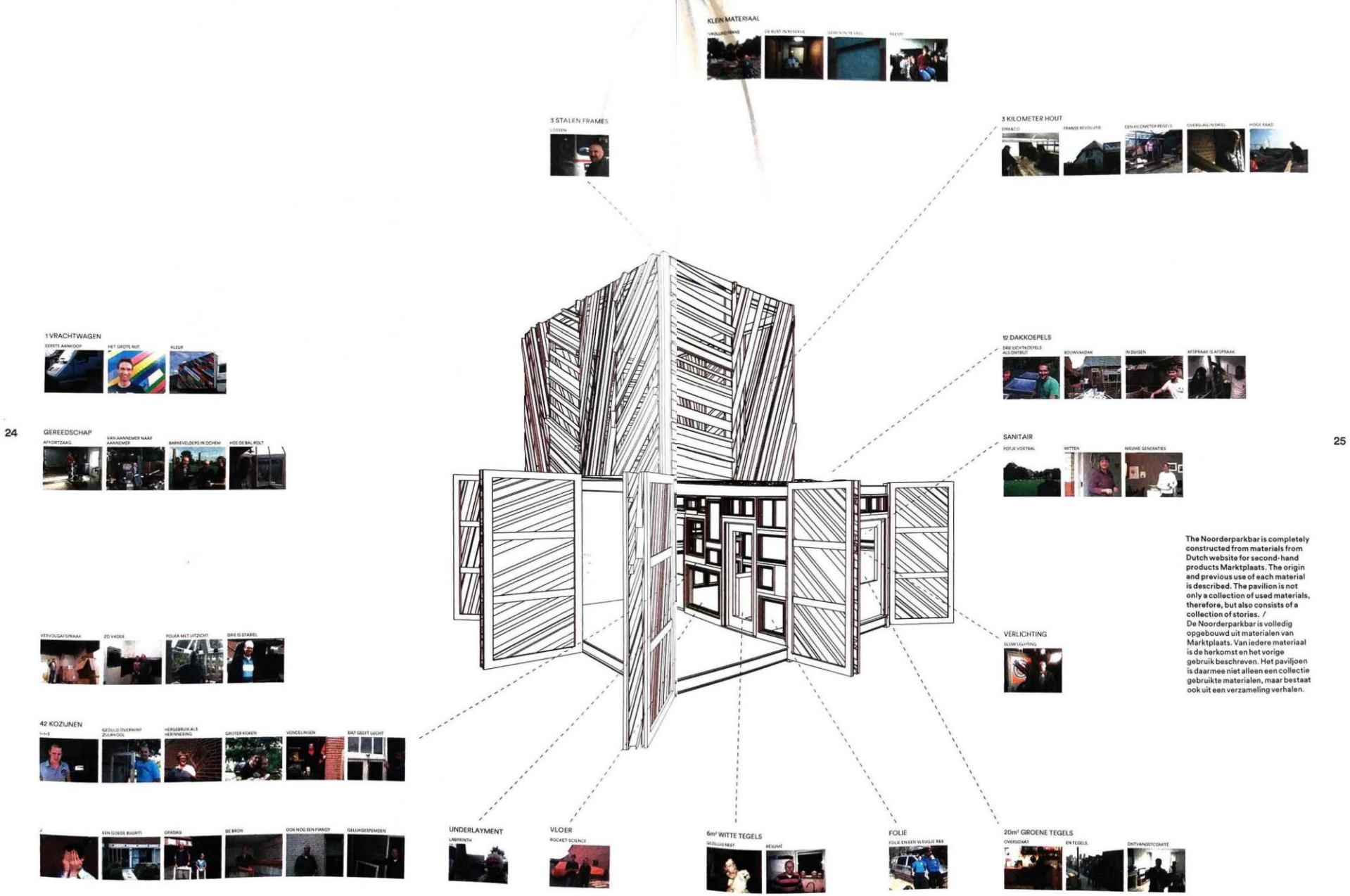


"Following EU recommendations about energy savings, many old buildings across Europe will change their window frames for double glazing in the next few years. In the context of a sustainable development approach, it is decided to restore some of those millions of old though still efficient window frames, and re-use them in this project. The new double facade, made of a harmonized patchwork of re-used wooden windows with simple crystal-like single glazing (from the different European countries) […] will be both a practical and philosophical statement about ***the re-use of these traditional construction elements****, expressing the European diversity of cultures."*

Philippe SAMYN & PARTNERS

EUROPEAN COUNCIL. BRUSSELS, BELGIUM. PHILIPPE SAMYN & PARTNERS. 2013.


Stuff
1 day - 1 month
Space Plan
3 - 30 years
Services
7 - 15 years
Skin
20 years
Structure
30 - 300 years
Site
Eternal

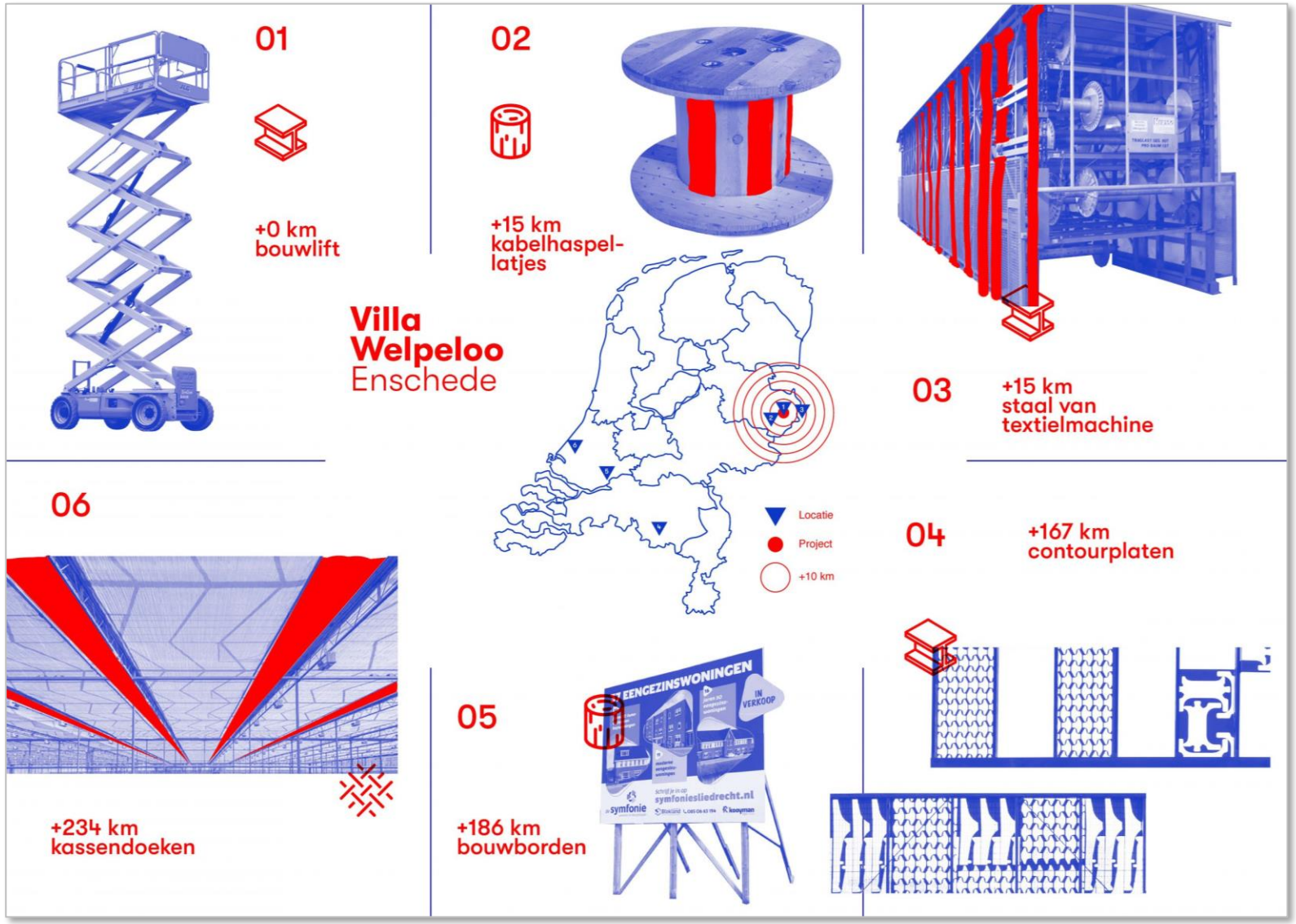


The Noorderparkbar is completely constructed from materials from Dutch website for second-hand products Marktplaats. The origin and previous use of each material is described. The pavilion is not only a collection of used materials, therefore, but also consists of a collection of stories. /
De Noorderparkbar is volledig opgebouwd uit materialen van Marktplaats. Van iedere materiaal is de herkomst en het vorige gebruik beschreven. Het paviljoen is daarmee niet alleen een collectie gebruikte materialen, maar bestaat ook uit een verzameling verhalen.

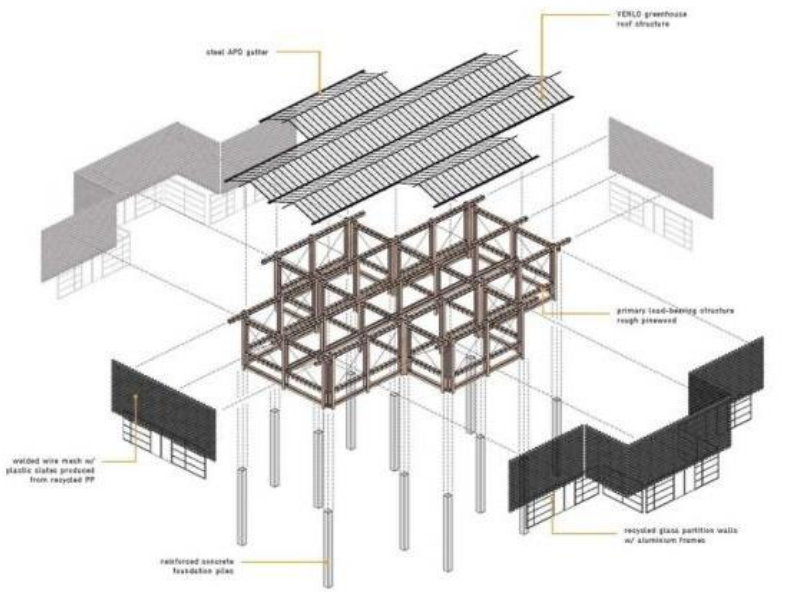
NOORDERPARKBAR [100% MARKTPLAATS]. AMSTERDAM, NETHERLANDS. SLA. 2012.

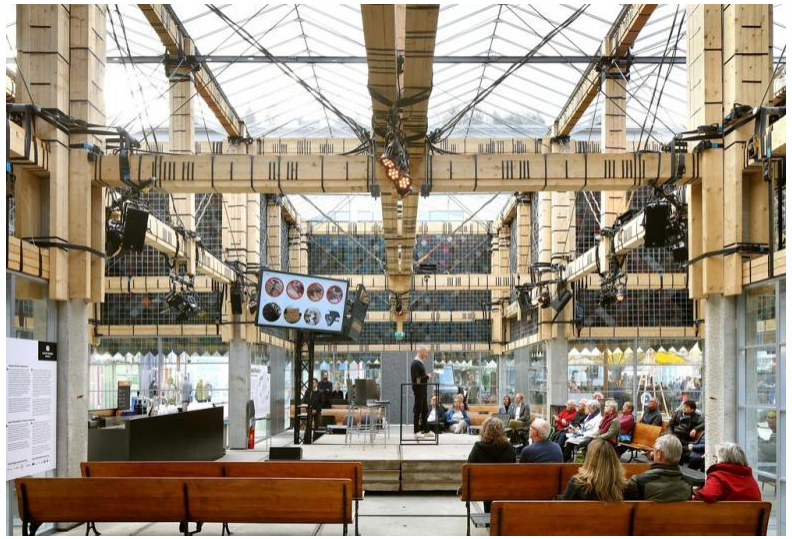
NOORDERPARKBAR [100% MARKTPLAATS]. AMSTERDAM, NETHERLANDS. SLA. 2012.

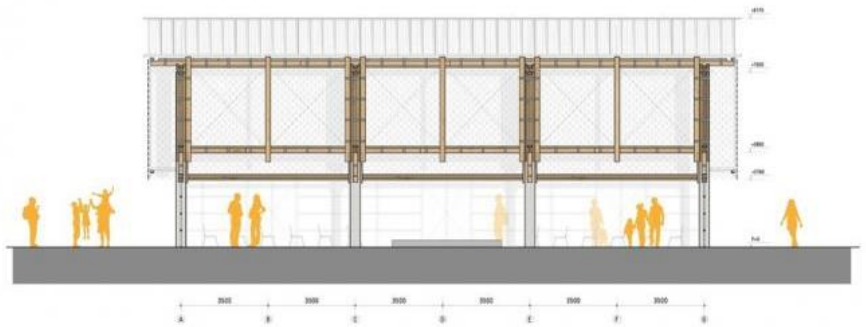
NOORDERPARKBAR [100% MARKTPLAATS]. AMSTERDAM, NETHERLANDS. SLA. 2012.

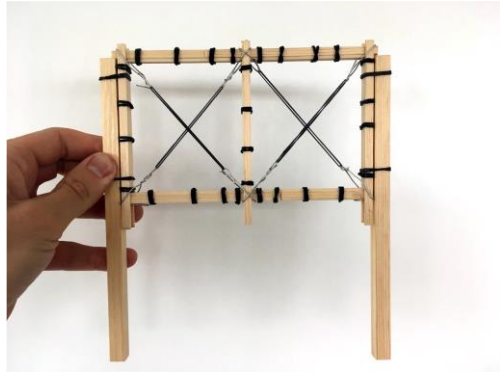


VILLA WELPELOO . ENTSCHEDE, NETHERLANDS. SUPERUSE STUDIOS. 2009

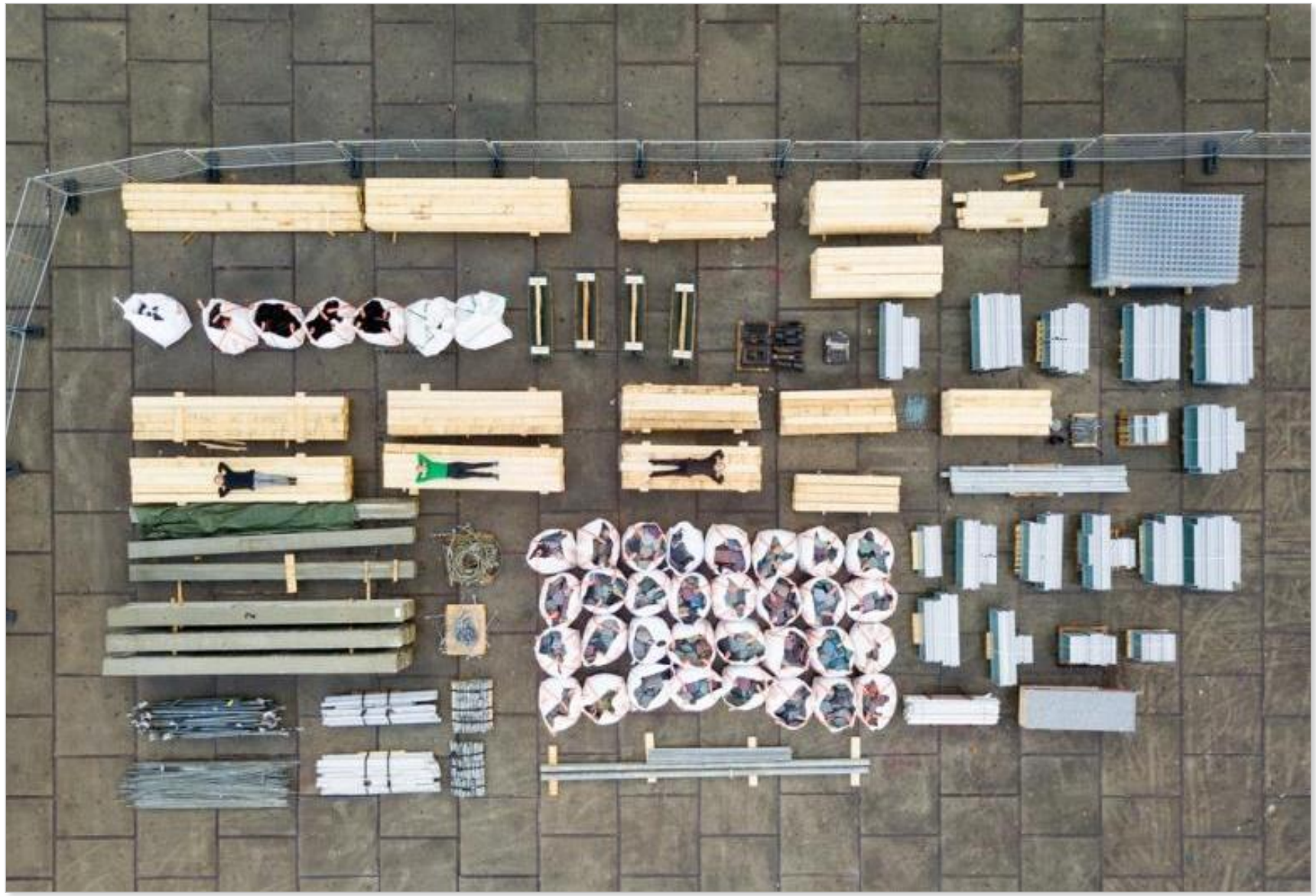




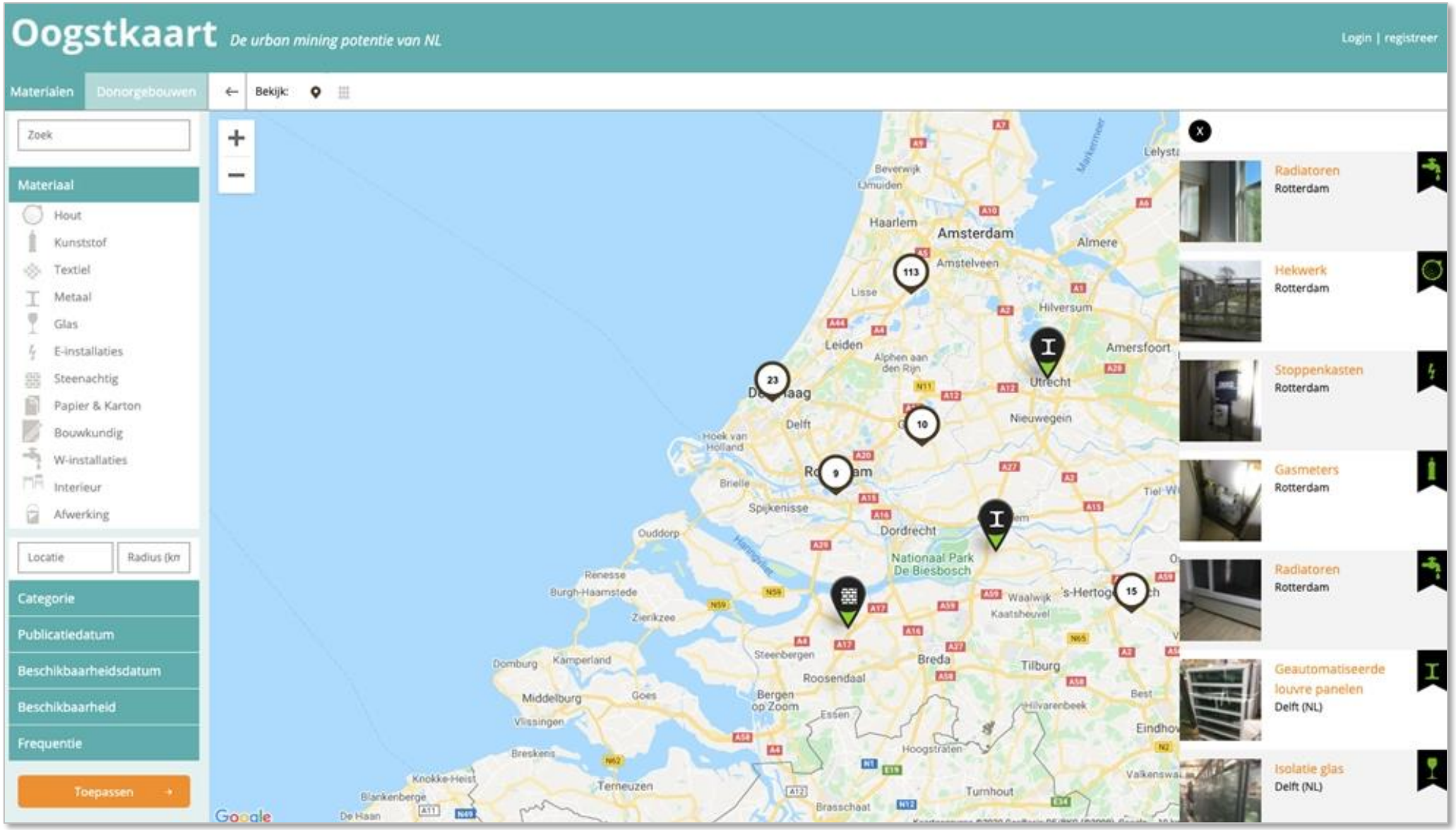


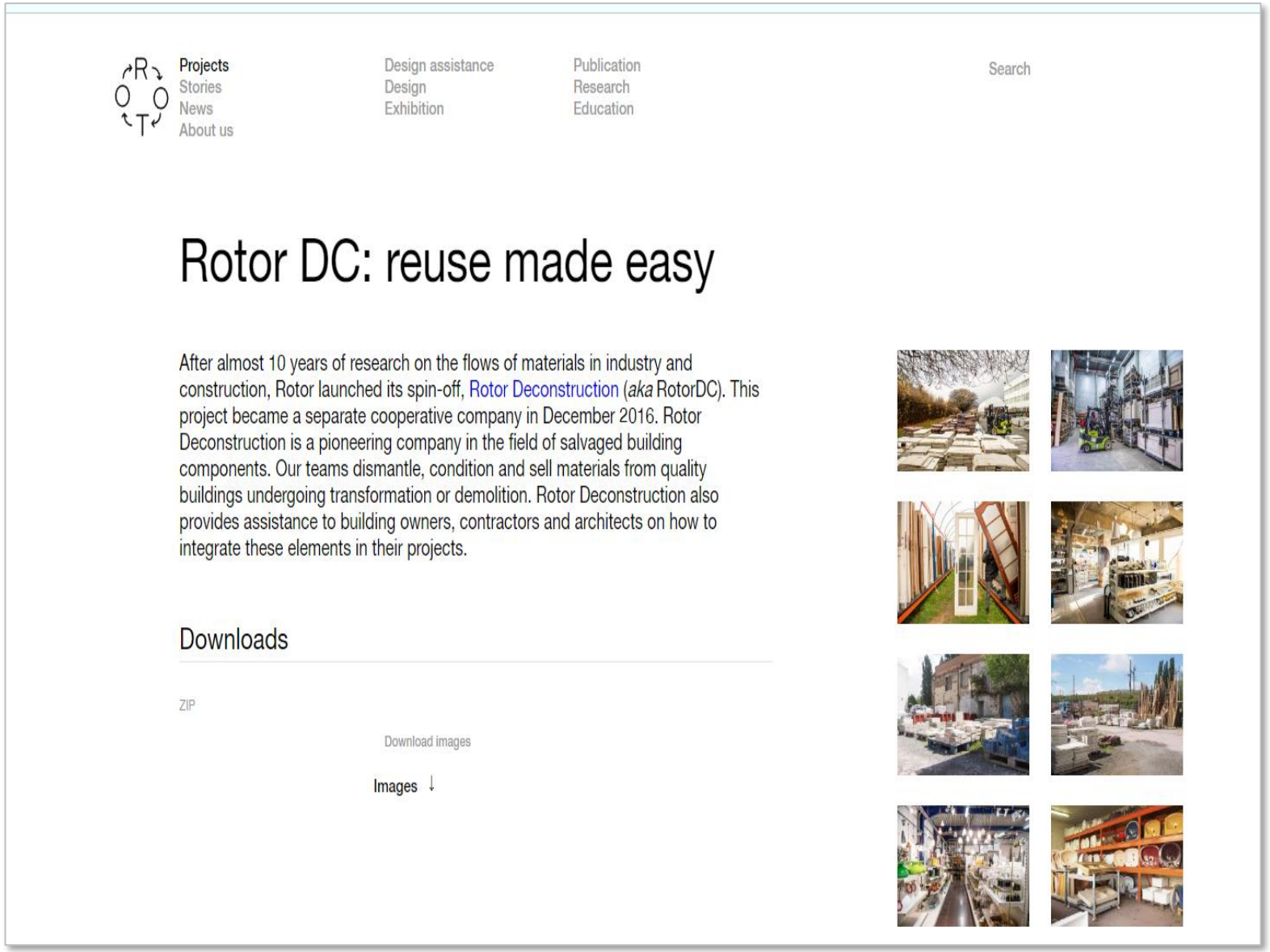


PEOPLE'S PAVILION. SLA. EINDHOVEN, NETHERLANDS. 2017.



PEOPLE'S PAVILION. SLA. EINDHOVEN, NETHERLANDS. 2017.


Oogstkaart
De urban mining potentie van NL
Login | registreer
Materialen
Donorgebouwen
Bekijk:
Zoek
Materiaal
Hout
Kunststof
Textiel
Metaal
Glas
E-installaties
Steenachtig
Papier & Karton
Bouwkundig
W-installaties
Interieur
Afwerking
Locatie
Radius (km
Categorie
Publicatiedatum
Beschikbaarheidsdatum
Beschikbaarheid
Frequentie
Toepassen
Amsterdam
Haarlem
Almere
Amstelveen
Hilversum
Leiden
Amersfoort
Utrecht
Delft
Nieuwegein
Dordrecht
Nationaal Park De Biesbosch
Breda
Tilburg
Roosendaal
Bergen op Zoom
Middelburg
Vlissingen
Terneuzen
Turnhout
Radiatoren
Rotterdam
Hekwerk
Rotterdam
Stoppenkasten
Rotterdam
Gasmeters
Rotterdam
Radiatoren
Rotterdam
Geautomatiseerde louvre panelen
Delft (NL)
Isolatie glas
Delft (NL)



Projects
Stories
News
About us

Design assistance
Design
Exhibition

Publication
Research
Education

Search

Rotor DC: reuse made easy

After almost 10 years of research on the flows of materials in industry and construction, Rotor launched its spin-off, Rotor Deconstruction (*aka* RotorDC). This project became a separate cooperative company in December 2016. Rotor Deconstruction is a pioneering company in the field of salvaged building components. Our teams dismantle, condition and sell materials from quality buildings undergoing transformation or demolition. Rotor Deconstruction also provides assistance to building owners, contractors and architects on how to integrate these elements in their projects.

Downloads

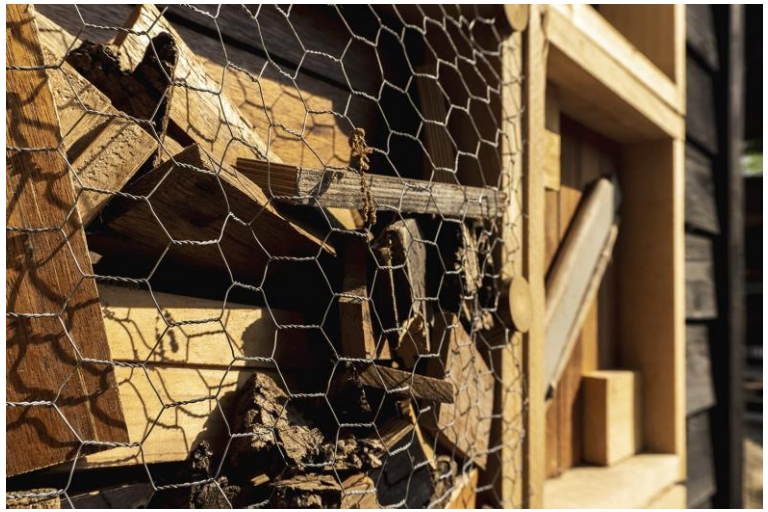
ZIP

Download images

Images ↓

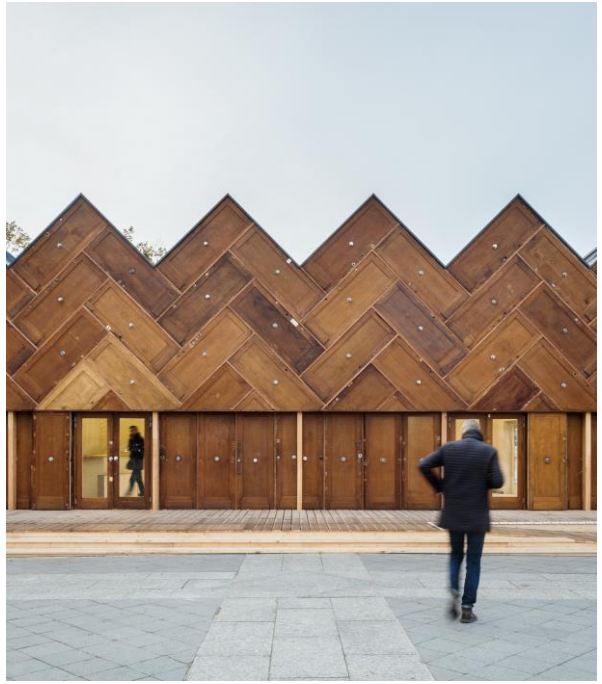
ROTOR. BRUSSELS, BELGIUM. 2005.

BLUECITY OFFICES. ROTTERDAM, NETHER4LANDS. SUPERUSE STUDIOS. 2017.



BOOMTOREN. HOF VAN CARTESIUS, UTHRECHT, NETHERLANDS. ARCHIFRE. 2020.

ESPRESSO BAR STERK. SUPERUSE STUDIOS. DELFT, NETHERLANDS. 2007.



About Partners Workshops Studios Research Events Contact

Crafting Circularity

Rethinking Sustainable Design and Construction in Architecture Education

CIRC-ARCH aims to connect circular construction strategies to architectural education by establishing a novel integration of teaching methods based on an availability-based design methodology implemented in practical design & build workshops and design studios. The project has three phases, each dedicated to one aspect of circular construction: reuse of materials, components and buildings, and will involve basic research, shared or individual design studios, and a series of shared design & build workshops. The expected results include a blueprint for the integration of circular construction thinking in design & build workshops and design studios, comprehensive knowledge of the variety of circular design approaches and practices in Europe, practical knowledge through full-scale demonstrators, and detailed documentation of educational formats and prototypes.

Co-funded by the European Union

University of Antwerp

UNIVERSITÄT LIECHTENSTEIN

Amsterdamse Hogeschool voor de Kunsten

NTNU
Norwegian University of Science and Technology

ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΙΑΣ
UNIVERSITY OF THESSALY

- **CRAFTING CIRCULARITY:**

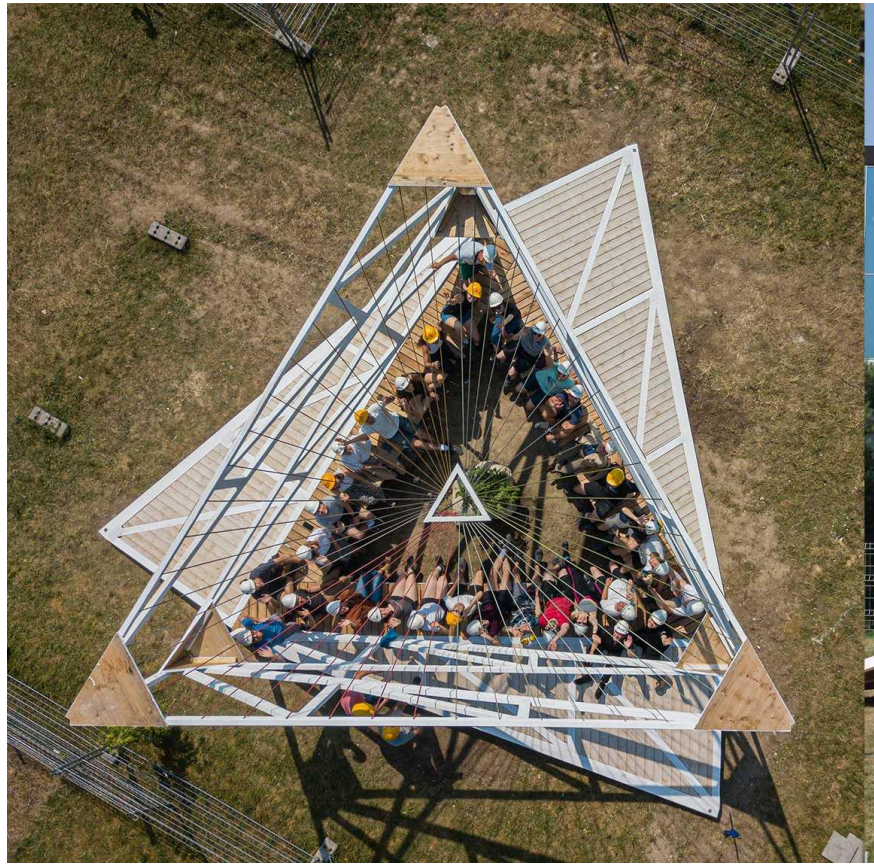
  Rethinking Sustainable Design and Construction in Architecture Education

Co-funded by the European Union

EPHEMERAL PERMANENCE. SUMMER SCHOOL. AALBORG 2022.

MAINTENANCE 1:1 PAVILION. SUMMER SCHOOL. VENICE 2023.

INFO KIOSK. SUMMER SCHOOL. TRONDHEIM 2020.



DESIGN STUDIOS

3x

DESIGN-BUILD WORKSHOPS

THEORETICAL SEMINARS

ARCHITECTURE EDUCATION

MAPPING

CONSTRUCTION INDUSTRY

ΕΠΑΝΑΧΡΗΣΙΜΟΠΟΙΗΣΗ

υλικών – στοιχείων – δομών

AMSTERDAM | NL
CIRCULAR TOLERANCE
MARCH 2023

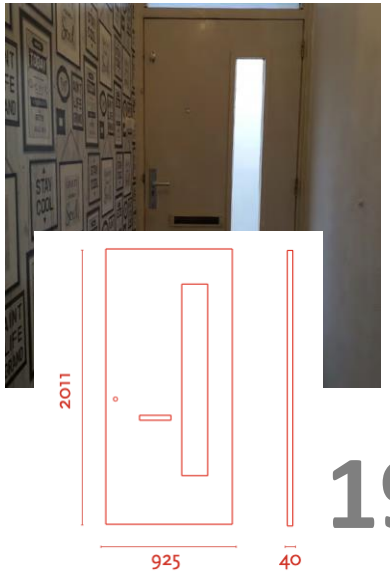
TRONDHEIM | NO
FROM BUILDING TO BUILDING
SEPTEMBER 2023

VOLOS | GR
LAYERS OF PERMANENCE
VOLOS APRIL 2024

AMSTERDAM | NL
CIRCULAR TOLERANCE
MARCH 2023

TRONDHEIM | NO
FROM BUILDING TO BUILDING
SEPTEMBER 2023

VOLOS | GR
LAYERS OF PERMANENCE
VOLOS APRIL 2024



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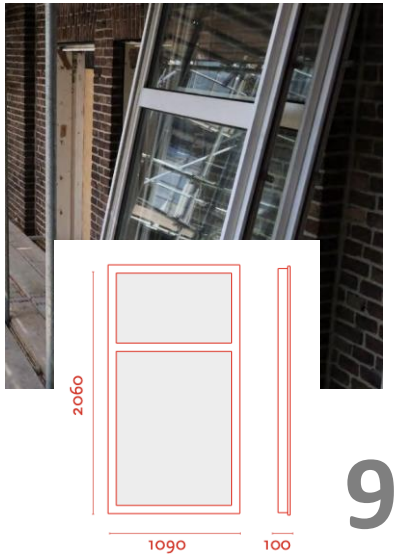
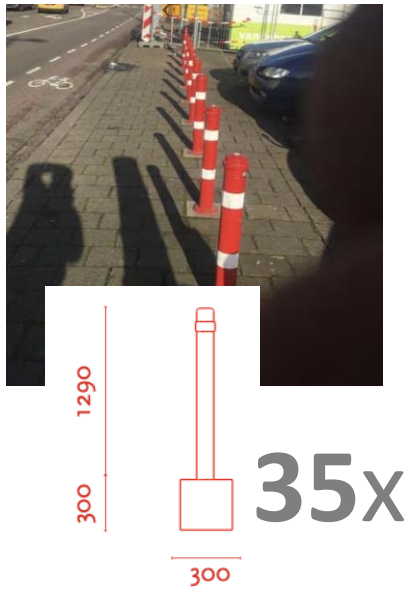


96x

17x



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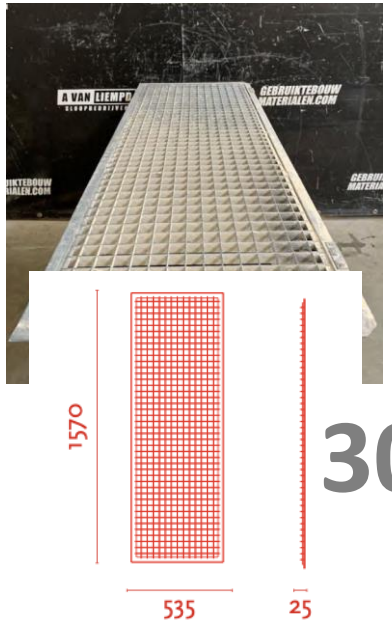

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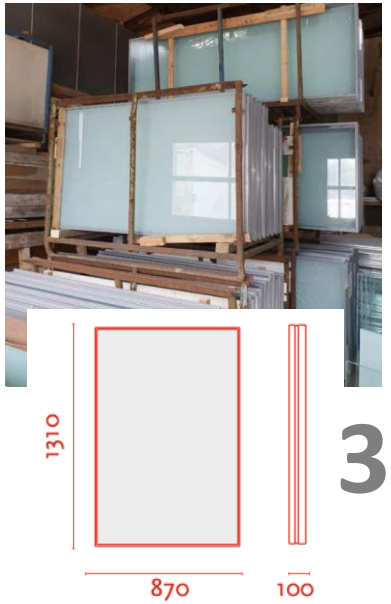

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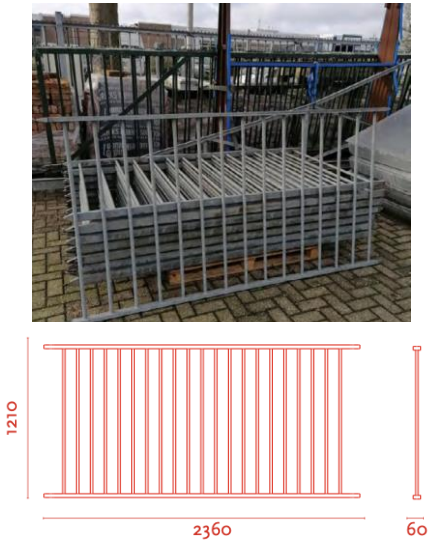

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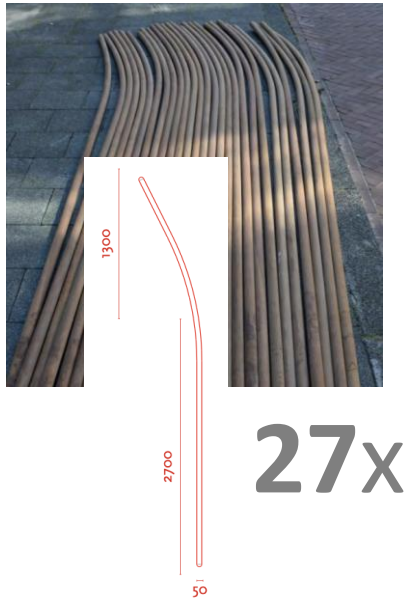


27x

AMSTERDAM | NL
CIRCULAR TOLERANCE
MARCH 2023

TRONDHEIM | NO
FROM BUILDING TO BUILDING
SEPTEMBER 2023


CREATIVES
ARE THE
NEW
ATHLETES





AMSTERDAM | NL
CIRCULAR TOLERANCE
MARCH 2023

VOLOS | GR
LAYERS OF PERMANENCE
VOLOS APRIL 2024

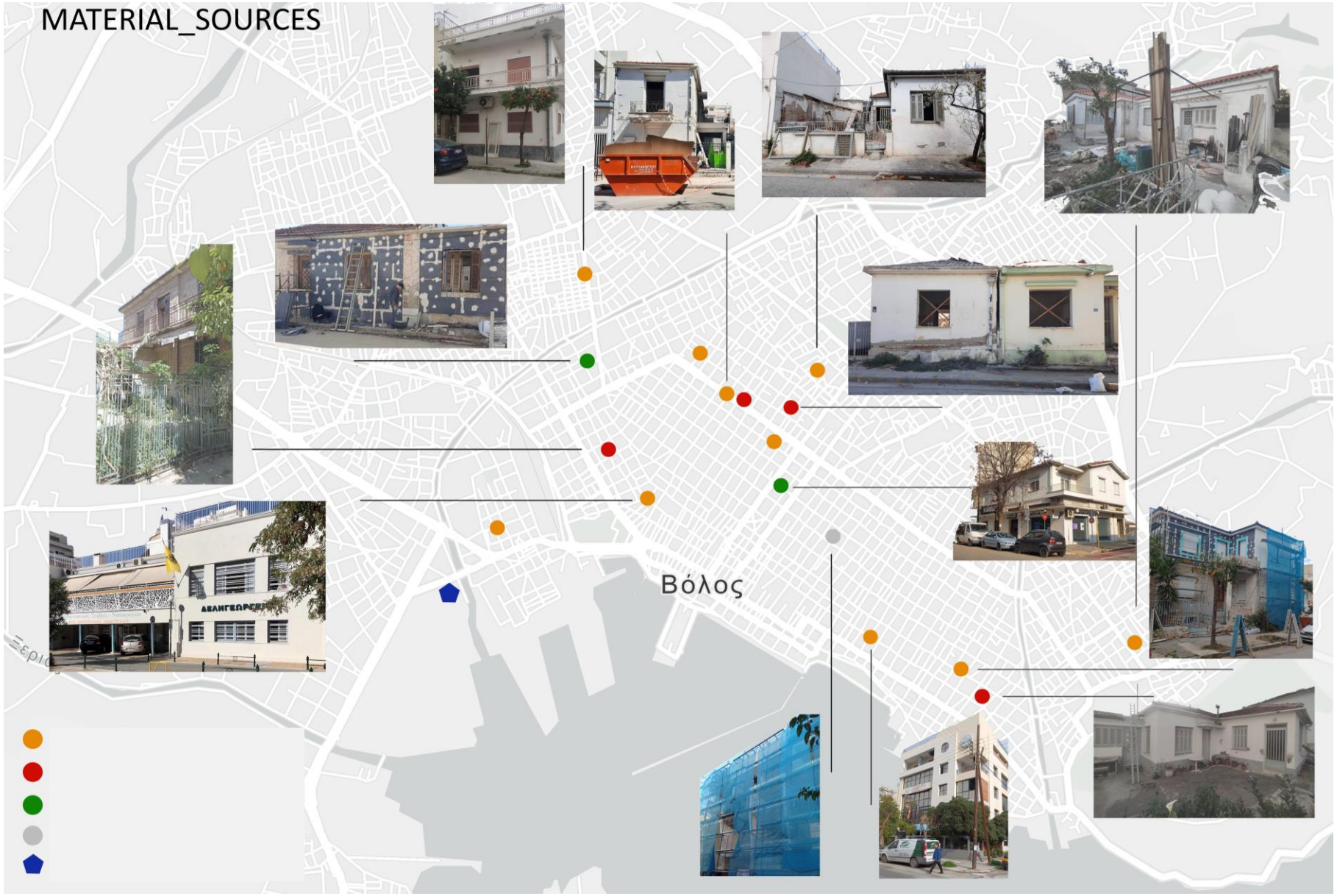
+

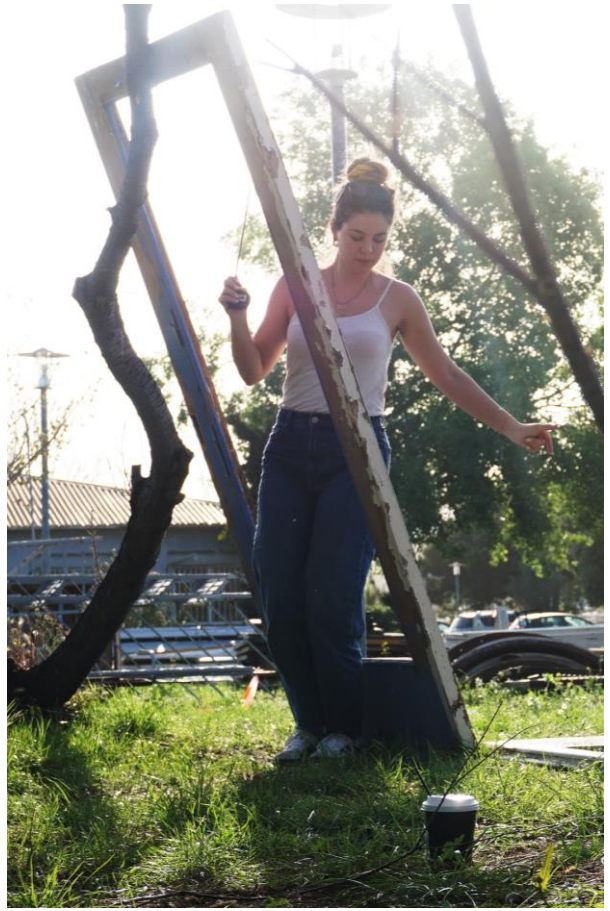

SOURCES
4.
ΠΗΓΕΣ


ΔΗΜΟΤΙΚΟ ΘΕΑΤΡΟ ΒΟΛΟΥ

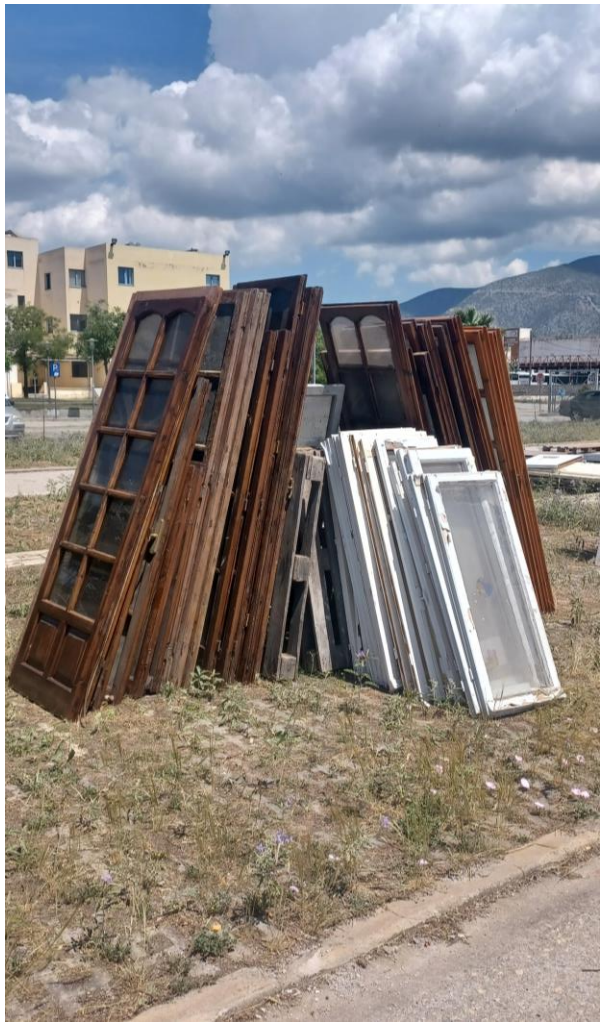

914
LIEBHERR


ΠΕΡΙΦΕΡΕΙΑ ΘΕΣΣΑΛΙΑΣ Π.Ε.ΜΑΓΝΗΣΙΑΣ & ΣΠΟΡΑΔΩΝ
ΔΝΣΗ ΜΕΤΑΦΟΡΩΝ & ΕΠΙΚΟΙΝΩΝΙΩΝ

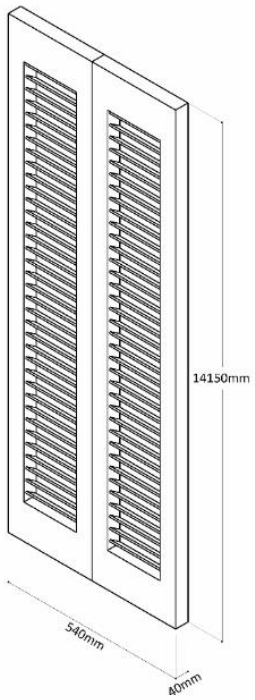

MATERIAL_SOURCES
Βόλος








II_T1
(02)



ISOMETRIC DRAWING

ELEMENT (3/4 VIEW)

ELEMENT (FRONT VIEW)

ELEMENT (SCALE)

DETAIL A

DETAIL B

DETAIL C

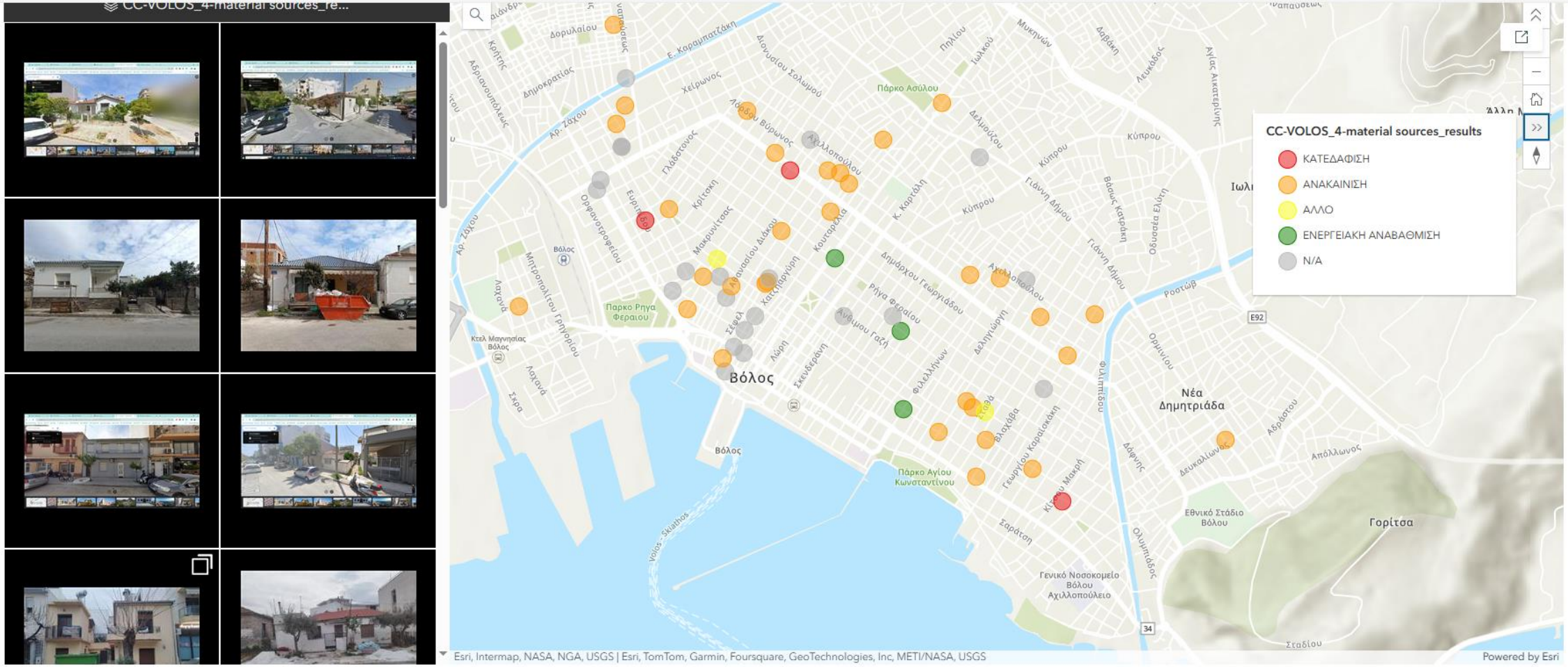
B046-05-02-FE03- |

#FE03 C_GREY M_WOOD tfragkou Mar 11

PIECES 5

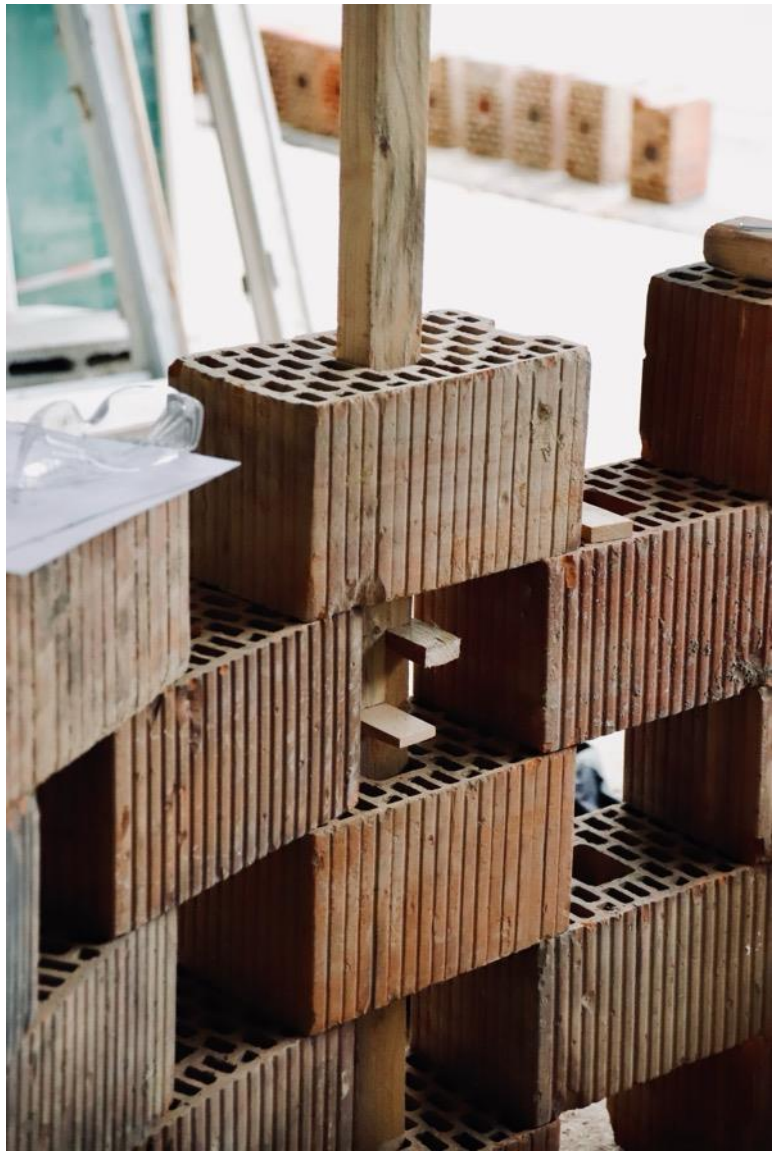
B046-05-02-FE03-

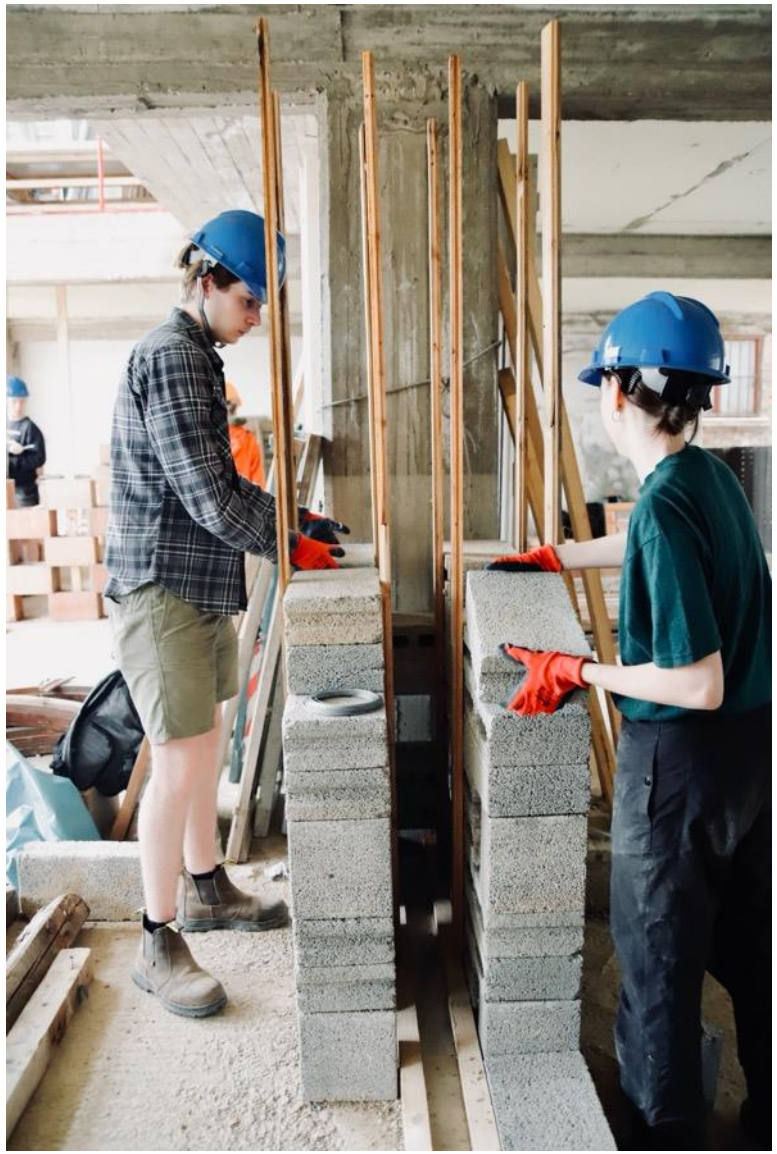
Frame 113/161 Stop

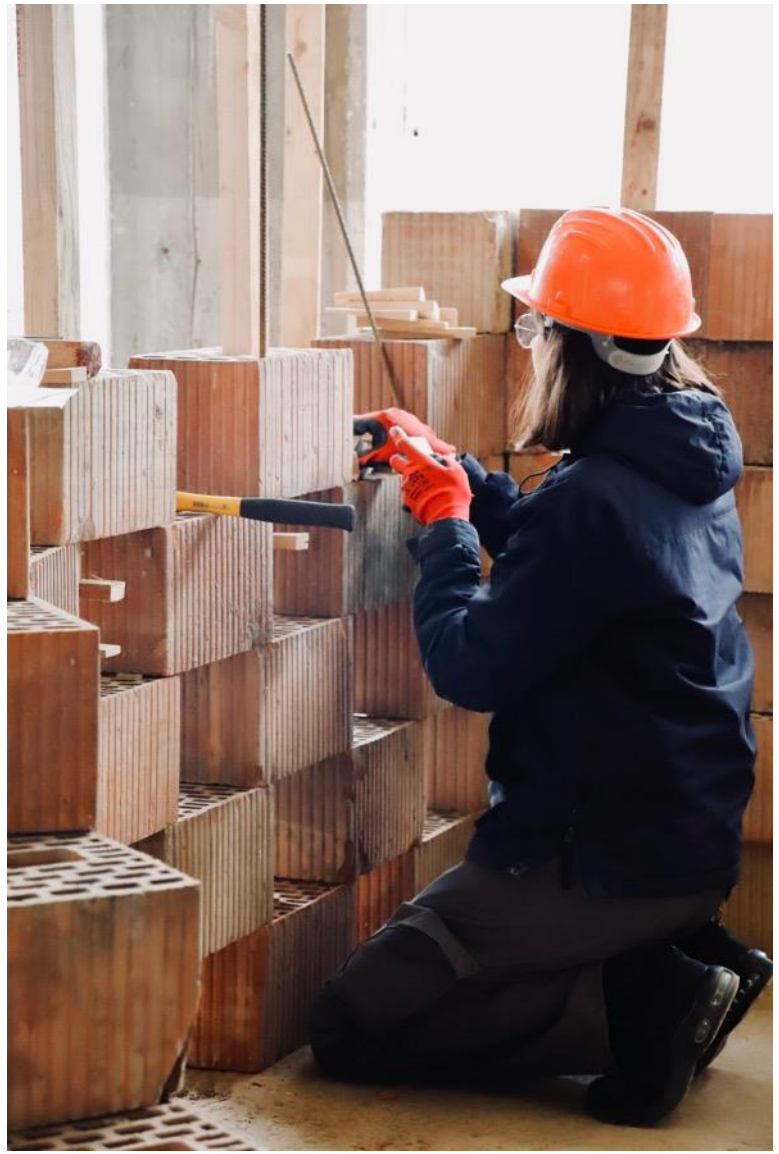


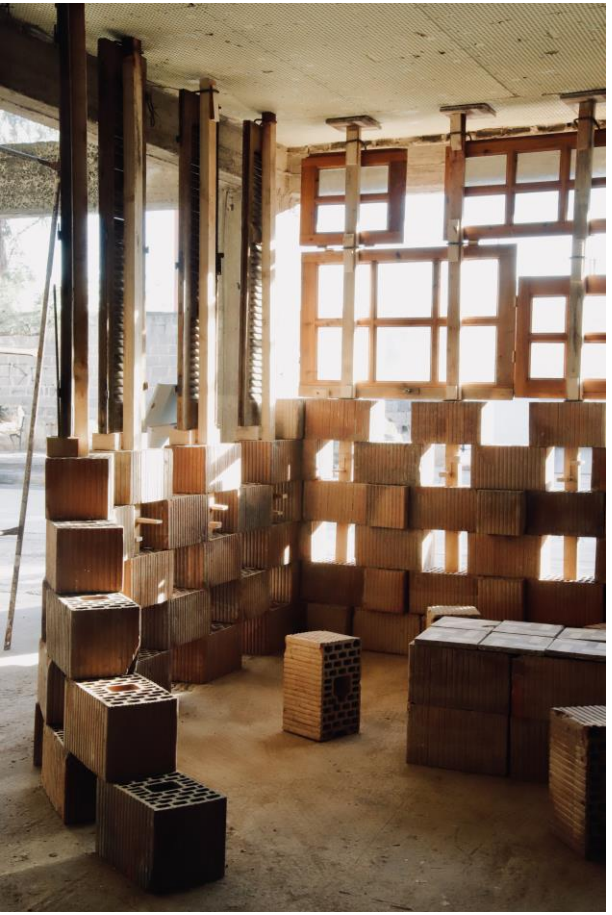
ΚΑΤΕΔΑΦΙΣΕΙΣ, ΑΝΑΚΑΙΝΙΣΕΙΣ, ΕΝΕΡΓΕΙΑΚΕΣ ΑΝΑΒΑΘΜΙΣΕΙΣ

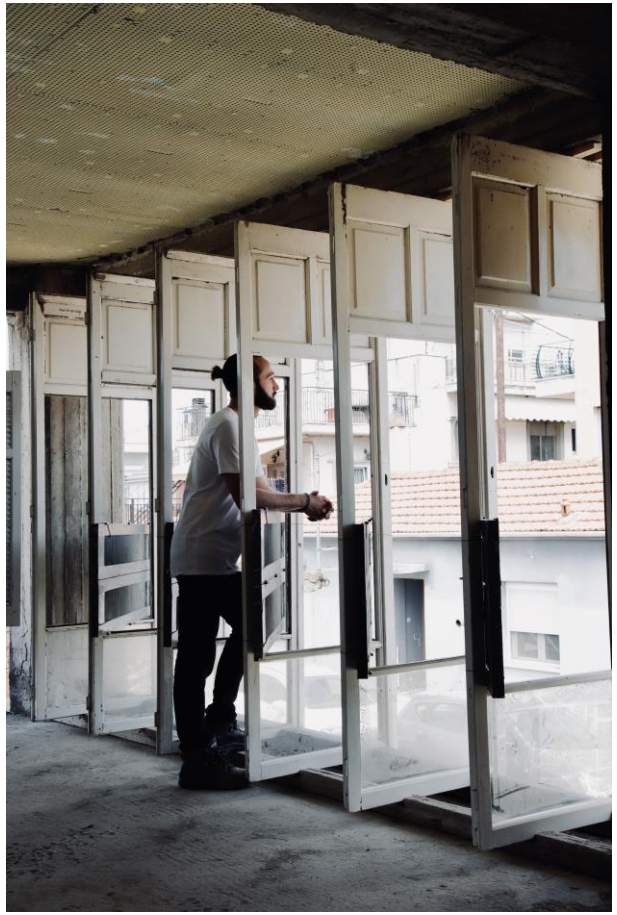
vs. INFORMAL CHANNELS …

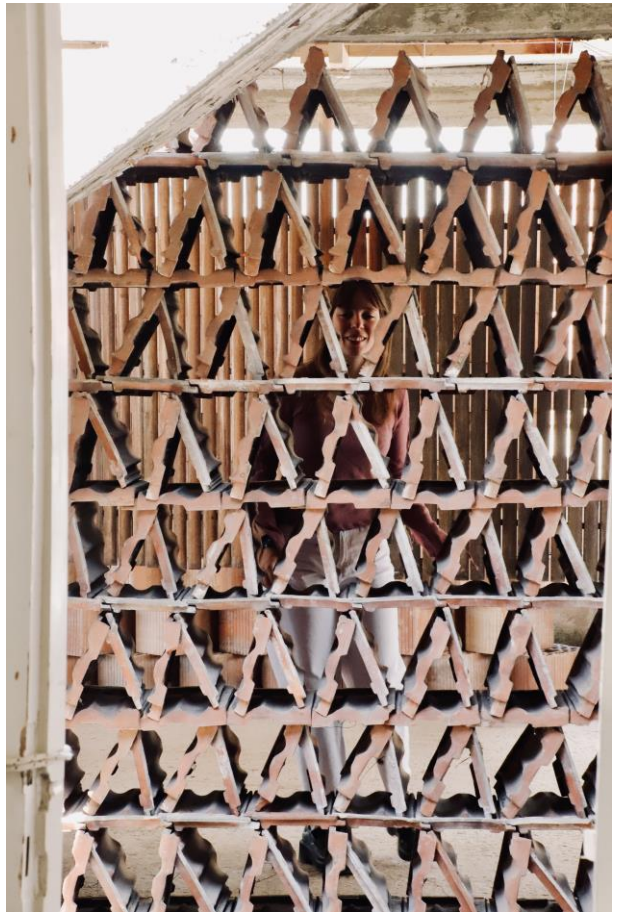






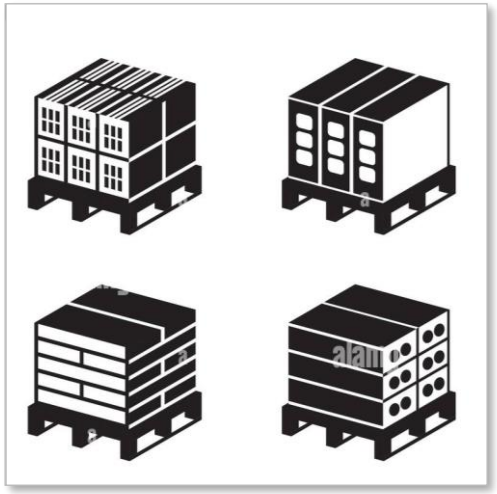






ΝΟΜΟΘΕΣΙΑ

ΕΦΟΔΙΑΣΤΙΚΗ ΑΛΥΣΙΔΑ



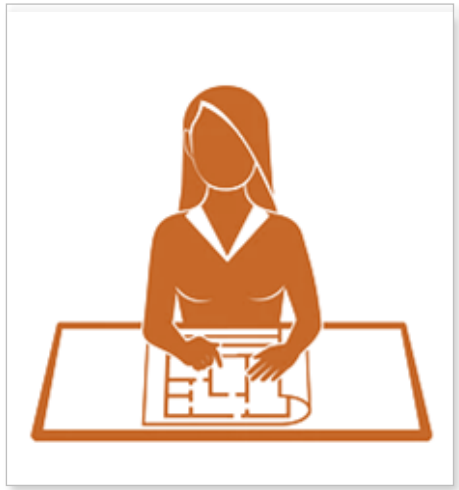
ΦΥΣΙΚΗ ΠΑΡΟΥΣΙΑ

ΣΥΝΤΗΡΗΣΗ/ ΕΠΙΣΚΕΥΗ

ΕΚΠΑΙΔΕΥΣΗ

ΕΠΙΛΕΚΤΙΚΗ ΚΑΤΕΔΑΦΙΣΗ

ΔΙΑΔΙΚΤΥΑΚΗ ΠΑΡΟΥΣΙΑ



ΣΧΕΔΙΑΣΜΟΣ