

Iceland
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C+D

5/SGS #2 - C+D

Close the loop by Disclosing the benefits of buildings' deconstruction and materials re-use

September 2020 – November 2022

CERIS : Civil Engineering Research
and Innovation for
Sustainability



TÉCNICO
LISBOA

DECIVIL
DEPARTAMENTO DE ENGENHARIA
CIVIL, ARQUITECTURA E GEORRECURSOS

NORSUS

Norwegian Institute for
Sustainability Research

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Seminar " Improve data for module C and D", NHO, Oslo, 27 October 2022

Consortium



CERIS

Civil Engineering Research
and Innovation for
Sustainability



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CIVIL, ARQUITECTURA E GEORRECURSOS

- The C+D project is promoted by the “Civil Engineering Research and Innovation for Sustainability” - CERIS research centre from Instituto Superior Técnico of Universidade de Lisboa, in Portugal,

NORSUS

Norwegian Institute for
Sustainability Research

- And has the “Norwegian Institute for Sustainability Research” – NORSUS, from Norway, as a partner.



Background



The construction sector:

- makes an intensive use of primary resources;
- has a low level of circularity;
- has a great circularity potential.



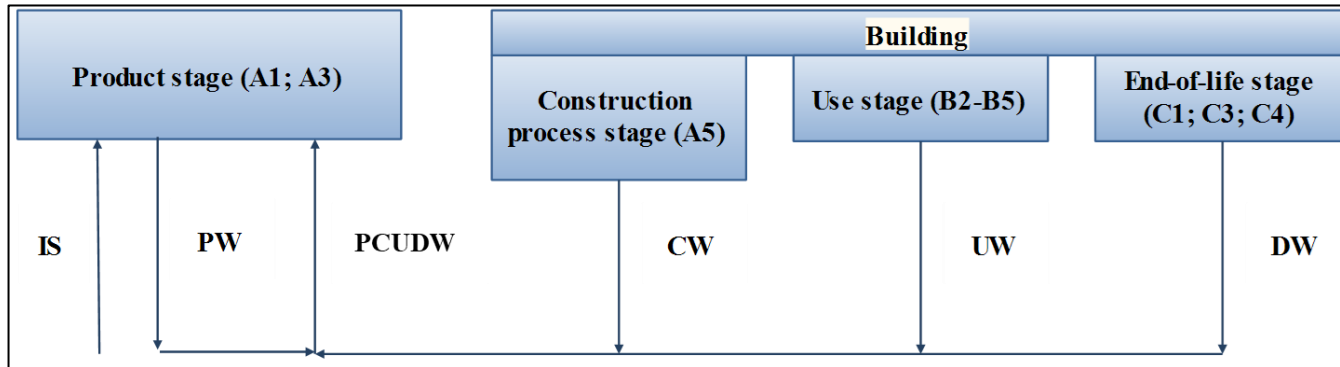
Traditional demolition is still the most common practice in Portugal.

However, selective demolition maximizes the re-use, or at least the recycling, of demolition waste.



Main aim

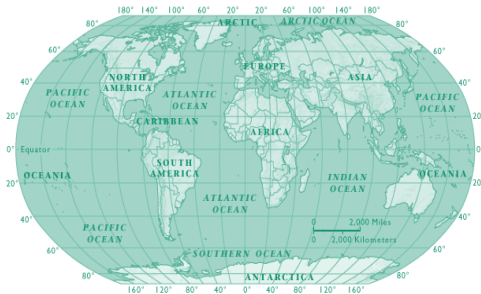
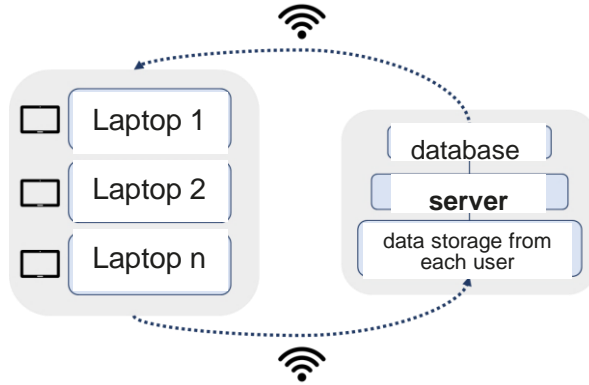
Develop the web-based **C+D platform** for calculating the **economic and environmental benefits** associated with the process of **deconstruction of buildings** and of **re-use of Construction and Demolition Waste (CDW, or C+D waste)**.



Waste flows from the production of construction materials (including industrial symbiosis), and from the construction, use, and demolition of buildings



Specific objectives



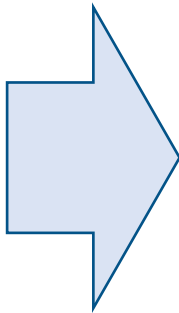
- Develop the C+D platform, which will be comprehensive, upgradeable and innovative, and that will include a circularity indicator;
- Make this platform available to the public in Portugal, Norway and other countries, in Portuguese and in English, along with a handbook in the same languages.

Activities

1. Development of databases of environmental and economic impacts
2. Collection of national and international data
3. Development of an indicator of the environmental and economic advantages of circularity
4. Development of the C+D platform
5. Development of the C+D handbook
6. Communication and dissemination of the results

Activities

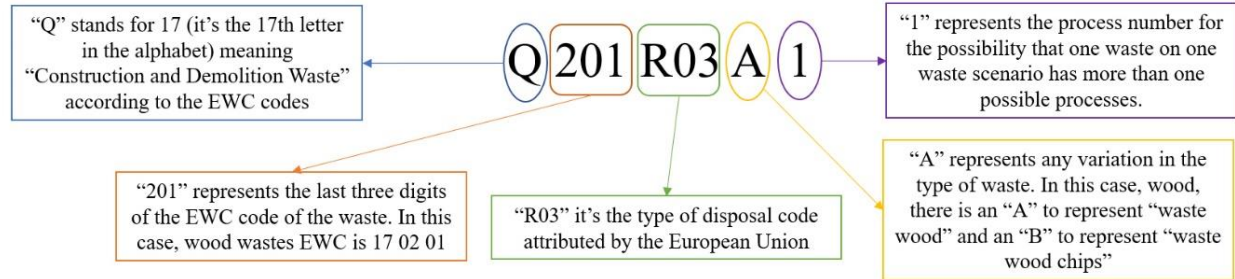
1. Development of databases of environmental and economic impacts
2. Collection of national and international data



Results

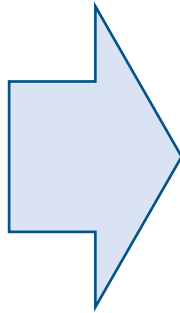
Antunes, A.; Martins, R.; Silvestre, J.D.; do Carmo, R.; Costa, H.; Júlio, E.; Pedroso, P. (2021) **Environmental Impacts and Benefits of the End-of-Life of Building Materials: Database to Support Decision Making and Contribute to Circularity.** *Sustainability*, 13, 12659. <https://doi.org/10.3390/su132212659>

Codification example:
Recycling of wood



Activities

1. Development of databases of environmental and economic impacts
2. Collection of national and international data

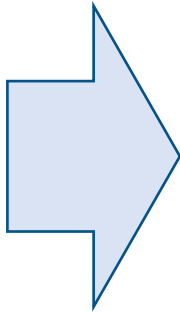


Results

Description	EWC	Demolition Construction Transport Disposal	Sorting Plant	Collection for Final Disposal	In Situ Reuse	Engineered landfill	Incineration on land	Use as fuel				
								R01	R03	R04	R05	
CONSTRUCTION AND DEMOLITION WASTES												
Concrete, Bricks, Tiles and Ceramics												
17 01												
Concrete	17 01 01	X - - X	Q101E01A1	Q101E02A1							Q101R05A1	
Bricks	17 01 02	X - - -	Q102E01A1	Q102E02A1							Q102R05A1	
Tiles and Ceramics	17 01 03	X - - -										
Mixture of, or separate fractions of concrete, bricks, tiles and ceramics containing hazardous substances	17 01 06	X - - -										
Mixture of concrete, bricks, tiles and ceramics other than 17 01 06	17 01 07	X - - -										
Wood, Glass and Plastic												
17 02												
Wood	17 02 01	X X X X				Q201D05A1	Q201D10A1	Q201R01A1	Q201R03A1			
Glass	17 02 02	X - X -	Q202E01A1	Q202E02A1		Q202D05A1	Q202D10A1					
Plastic	17 02 03	X - X X				Q205D05A1	Q203D10A1				Q203R05A1	
Glass, Plastic and Wood containing or contaminated with hazardous substances	17 02 04	X X X -										
Metals												
17 04												
Copper, Bronze, Brass	17 04 01	X - X -				Q401D05A1						
Aluminium	17 04 02	X - X -				Q402D05A1						
Lead	17 04 03	X - - -										
Zinc	17 04 04	X - - -										
Iron and Steel	17 04 05	X - X X	Q405E01C1	Q405E02C1		Q405D05B1	Q405D10B1				Q405R04C1	
Tin	17 04 06	X - - -										
Mixed metals	17 04 07	X - X -				Q407D05A1	Q407D10A1					
Metal waste contaminated with hazardous substances	17 04 09	X - X -										
Cables containing oil, coal tar and other hazardous substances	17 04 10	X - - -										
Cables other than those mentioned in 17 04 10	17 04 11	X - - -										
Insulation materials and Asbestos-containing construction materials												
17 06												
Insulation materials containing asbestos	17 06 01	X - - -										
Other insulation materials consisting of or containing hazardous substances	17 06 03	X X X -										
Insulation materials other than those mentioned in 17 06 01 and 17 06 03	17 06 04	X X X X	Q604E01A1	Q604E02A1		Q604D05A1	Q604D10B1				Q604R05A1	
Construction materials containing asbestos	17 06 05	X - - -										
Gypsum-based construction material												
17 08												
Gypsum-based construction materials contaminated with hazardous substances	17 08 01	X X X -										
Gypsum-based construction materials other than those mentioned in 17 08 01	17 08 02	X X X X	Q802E01B1	Q802E02B1		Q802D05A1					Q802R05B1	
Other construction and demolition wastes												
17 09												
Construction and demolition wastes containing mercury	17 09 01	X - - -										
Construction and demolition wastes containing PCB	17 09 02	X - - -										
Other construction and demolition wastes containing hazardous substances	17 09 03	X - - -										
Mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	17 09 04	X - - -				Q904D05A1						
MUNICIPAL WASTE												
20 (T)												
Separately collected fractions												
Paper and cardboard	20 01 01	X - - X	T101E01A1	T101E02B1		T101D05C1	T101D10C1			T101R03B1		
Other municipal wastes	20 03	X - - -										
Mixed municipal waste	20 03 01	X X X X				T301D05A1						

Activities

3. Development of an indicator of the environmental and economic advantages of circularity



Results

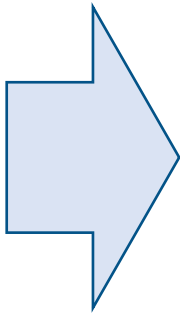
GOMES, R.; BASTOS, D.; SILVESTRE, J. D. **Development of an indicator of the environmental advantages of circularity of construction materials.** *Sustainability*. Submitted for publication January 2022

- quantify the environmental impact of the circularity potential of building materials
- considers the production (A1-A3) and end-of-life (C and D) phases of the material, and can be applied to different end-of-life scenarios
- it is divided in 3 parts, each one associated to a different stage of the material life cycle (production; service life; end of life)
- the results of each part of the expression vary between 0 and 1, and are then summed and divided by 3
- results in a value between 0 and 1, where higher values indicate greater circularity of the material

$$MECI = \frac{3 - \left(\frac{GWP_{A1-A3}}{GWP_{0\%RC}} \right) - \left(\frac{GWP_{C+D} + GWP_{A1-A3}}{GWP_{worst\ disposal} + GWP_{A1-A3}} \right) - \left(\frac{LC_{build} - LC_{material}}{LC_{build}} \right)}{3} \text{ per kg of material}$$

Activities

4. Development of the C+D platform
5. Development of the C+D handbook



Results: C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

Antunes, A.; Martins, R.; Silvestre, J.D.; do Carmo, R.; Costa, H.; Júlio, E.; Pedroso, P. (2021) **Environmental Impacts and Benefits of the End-of-Life of Building Materials: Database to Support Decision Making and Contribute to Circularity.** *Sustainability*, 13, 12659. <https://doi.org/10.3390/su132212659>

C+D Language: English Begin Session

Create Account

Create an account to obtain access to the Reserved Area.

* Name:

* Username:
Utilizador inválido, apenas letras minúsculas e números.

* Email:

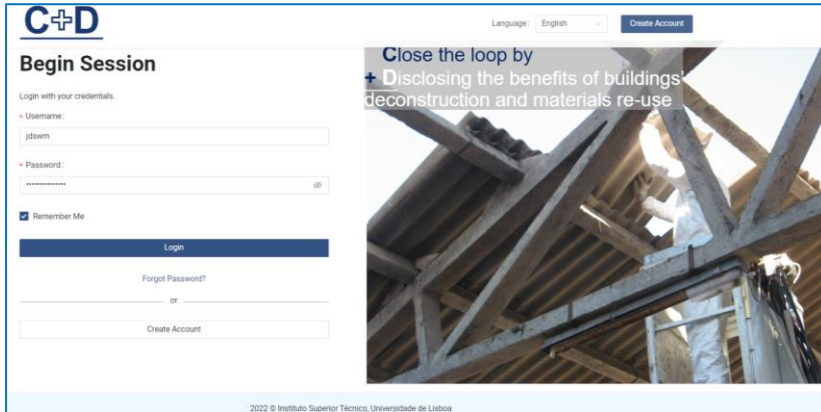
* Postal-Code and Address:

* Profile:

* Nif:

Close the loop by
+ Disclosing the benefits of buildings' deconstruction and materials re-use

C+D Platform for calculating the economic and environmental benefits and impacts of CDW management



ANTUNES, A.; MARTINS, R.; SILVESTRE, J. D.; CARMO, R. do; COSTA, H.; JÚLIO, E.; PEDROSO, P. (2021). Environmental impacts and benefits of the end-of-life of building materials: database to support decision making and contribute to circularity. Sustainability. 13, 12659, DOI: 10.3390/su132212659.3

Inputs			Outputs	
A	Create(B1)	B1	E	
		Location (B1.1)		CDW description (E1)
		Demolition/Desconstruction(B1.2)		Possible destinations (E2)
		Type of CDW (B1.3)		
		Quantity (B1.4)		
Generator (B)	Edit (B2)	B2	Environmental Impact (E3) (GWP e ADP (f.f.))	
		Demolition work reference (B2.1)		Demolition (E3.1)
		Demolition/Desconstruction (B2.2)		Transport (E3.2)
		Type of CDW (B2.3)		Processing (E3.3)
		Quantity (B2.4)	Impact avoided (E3.4)	
Consumer (C)			Total (E3.5)	
Operator (D)				

Figure 5. Online platform preview for the CDW generator profile.

Inputs			Outputs	
A	Create (C1)	C1	F	
		Location (C1.1)		CDW description (F1)
		Type of CDW (C1.2)		Location of CDW (F2)
		Quantity (C1.3)	Quantity of CDW (F3)	
Generator (B)	Edit (C2)	C2	Company information (F4)	
		Demolition work reference (C2.1)		Environmental Impact (F5) (GWP e ADP (f.f.))
		Type of CDW (C2.2)		Processing (F5.1)
		Quantity (C2.3)	Transport (F5.2)	
Consumer (C)			Total (F5.3)	
Operator (D)				

Figure 6. Online platform preview for the CDW consumer profile.



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- **User registration** (subject to validation):
 - Profile 1: buyer or seller of CDW
 - Profile 2: producer or purchaser of CDW

* Email:
Enter your email

* Postal-Code and Address:
_ _ - _ _

* Profile:
Select the profile

- Waste Management
- Designer, Contractor or Building owner

* Password:
.....

* Confirm password:
Confirm your password

Create Account

C+D Platform for calculating the economic and environmental benefits and impacts of CDW management


- Profile 1 (Waste management operator- WMO):

- CDW seller
- CDW buyer/services provider

The screenshot shows the C+D platform interface. On the left, a sidebar menu is open, showing 'Marketplace' at the top, followed by 'Construction Work' (highlighted with a blue box) and 'Service'. Two blue arrows point from the 'Construction Work' menu item to the text 'CDW seller' and 'CDW buyer/services provider' in the list to the left. On the right, the 'Construction' profile page is displayed, featuring a 'Create' button and a table with columns for 'Name' and 'Address'.

Name	Address
Central 1	Avenida Rovisco Pais 1
Central 2	Rua Fausto Guedes Teixeira 27

The screenshot shows a table titled 'Waste to Produce' with columns for 'Waste to Produce', 'Amount', 'Measurement Unit', 'Photo', and 'Actions'. The table contains one row for 'Concrete' with an amount of 35 and measurement unit 'ton - Tons'. A photo of concrete blocks is shown in the 'Photo' column. The 'Actions' column contains buttons for 'Check Marketplace', 'Edit', and 'Delete'.

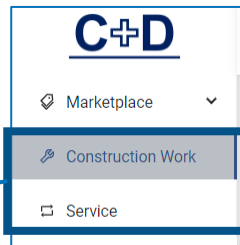
Waste to Produce	Amount	Measurement Unit	Photo	Actions
Concrete	35	ton - Tons		Check Marketplace Edit Delete



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 1 (WMO):

- CDW seller



Check Marketplace

Details

Distance:

Estimated Date: 2022-09-29

Waste

Waste Type: Concrete

Amount: 35 ton - Tons

Prices

	Client	Code	Service Type	Waste Type	Distance (Km)	Environmental Impacts	Total Price (€)
+	LucianaTest	Q101R05A1	Inorganic subs. recycling/ reclaim	Concrete	16.59	2	272933.16
+	ARIEL TESTE	Q101E01A1	Sorting Plant	Concrete	16.20	2	35071.46



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 1 (WMO):

- CDW buyer/services provider

C+D
Marketplace ▾
Construction Work
Service

Code	Waste Type	Service Type	Price (€)	Measurement Unit	Actions
D05	Iron and Steel	Specially engineered landfill	20	ton - Tons	Check Marketplace Edit Delete
D05	Concrete	Specially engineered landfill	100	ton - Tons	Check Marketplace Edit Delete
R04	Iron and Steel	Metal recycling/reclaim	0	ton - Tons	Check Marketplace Edit Delete



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 1 (WMO):

Check Marketplace

Details

Distance:

Estimated Date:

Waste

Waste Type: Concrete

Amount: ton - Tons

Prices

	Construction	Waste Type	Amount	Measurement Unit	Distance (Km)	Environmental Impacts	Total Price (€)
+	hjkjh	Concrete	223	ton	154.71	1	4346.93
+	Site1	Concrete	150	ton	153.36	1	2898.59
-	Obra Coimbra	Concrete	1	ton	33.24	1	4.19

Shipping Price (€)	GWP Transport	NRE Transport	Client's Mail
4.19	6.65	123.00 <input type="button" value="See Email"/>

C+D

- Marketplace
- Construction Work**
- Service

- CDW buyer/services provider



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW buyer

- CDW producer

The screenshot shows the C+D platform interface. On the left, a 'Marketplace' dropdown menu is open, showing three options: 'Waste', 'Services', and 'Construction Work'. The 'Construction Work' option is highlighted with a blue box, and a blue arrow points from it to the text 'CDW producer'. The 'Waste' option is also highlighted with a blue box, and a blue arrow points from it to the text 'CDW buyer'. On the right, the 'Construction' section is visible, featuring a 'Create' button and a table with two columns: 'Name' and 'Address'. The table contains two rows of data:

Name	Address
Site1	Avenida Rovisco Pais
Obra Coimbra	Avenida Dias da Silva

C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer

* Name:

* Postal-Code and Address:
Coimbra, Coimbra, Coimbra, Avenida Dias da Silva

Make contact available in the waste Marketplace:

Waste to Produce Waste to Consume

Waste to Produce	Amount	Measurement Unit	Photo	Actions
Concrete	1	ton - Tons		<input type="button" value="Check Marketplace"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>
Iron and Steel	1	ton - Tons		<input type="button" value="Check Marketplace"/> <input type="button" value="Edit"/> <input type="button" value="Delete"/>

C+D

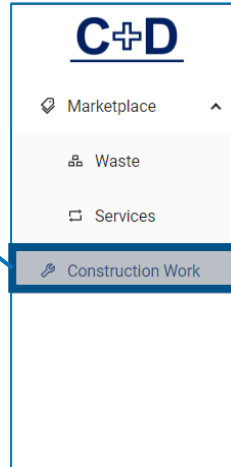
- Marketplace ^
- Waste
- Services
- Construction Work**



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer




Waste to Produce

* Waste Type:
17 01 01 - Concrete

Amount:
35 ton - Tons

* Estimated Date:
2022-09-29

Photo:
Upload Photo 

Own Transport:

Cancel Save

C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer

C+D

- Marketplace
- Waste
- Services
- Construction Work**

Check Marketplace

Details

Distance:

Estimated Date: 2022-09-23

Waste

Waste Type: **Concrete**

Amount: **1 ton - Tons**

Prices

	Client	Code	Service Type	Waste Type	Distance (Km)	Environmental Impacts	Total Price (€)
+	JDSWM	Q101D05A1	Special engineered landfill	Concrete	33.24	2	104.19
+	JDSWM	Q101R05A1	Inorganic subs. recycling/ reclaim	Concrete	33.24	2	4.19



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer

C+D

- 📍 Marketplace ^
- 🗑️ Waste
- 🏠 Services
- 🔧 Construction Work

Client	Code	Service Type	Waste Type	Distance (Km)	Environmental Impacts	Total Price (€)	
☐ JDSWM	Q101D05A1	Special engineered landfill	Concrete	33.24	2	104.19	
Prices							
Shipping Price (€)	Service Price (€)	Price (€/ton)	Client's Mail				
4.19	100.00	100 See Email				
GWP Costs							
GWP Transport		GWP Service		GWP Total			
6.65		10.00		16.65			
NRE Costs							
NRE Transport		NRE Service		NRE Total			
123.00		250.00		373.00			
+	JDSWM	Q101R05A1	Inorganic subs. recycling/ reclaim	Concrete	33.24	2	4.19



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer

C+D

- Marketplace ^
- Waste
- Services
- Construction Work**

Client	Code	Service Type	Waste Type	Distance (Km)	Environmental Impacts	Total Price (€)
+ JDSWM	Q101D05	Special engineered landfill	Concrete	33.24	2	104.19
[-] JDSWM	Q101R05	Inorganic subs. recycling/ reclaim	Concrete	33.24	2	4.19

Prices			
Shipping Price (€)	Service Price (€)	Price (€/m3)	Client's Mail
4.19	0.00	0 <input type="button" value="See Email"/>

GWP Costs			
GWP Transport	GWP Service		GWP Total
6.65	-10.00		-3.35

NRE Costs			
NRE Transport	NRE Service		NRE Total
123.00	-193.00		-70.00

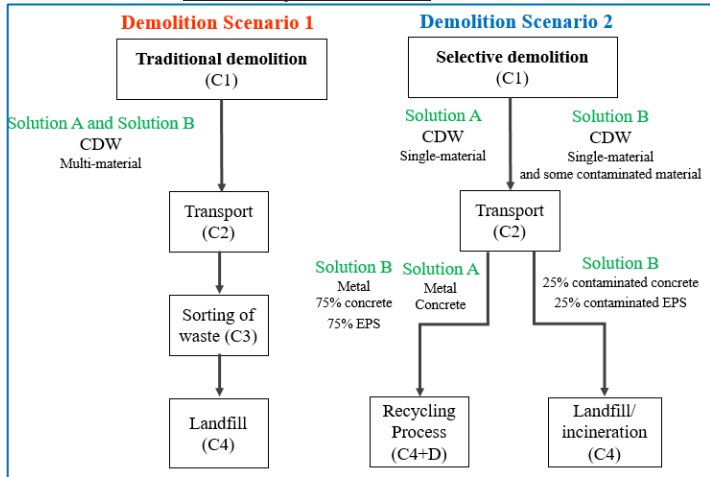


C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

ANTUNES, A.; MARTINS, R.; SILVESTRE, J. D.; CARMO, R. do;
 COSTA, H.; JÚLIO, E.; PEDROSO, P. (2021). Environmental impacts and benefits of the end-of-life of building materials: database to support decision making and contribute to circularity. Sustainability. 13, 12659, DOI: 10.3390/su132212659.3

- Profile 2 (Designer, Contractor or Owner):

- CDW producer



Inputs			Outputs					
A	B	B1	Concrete (E1)					
		Coimbra (B1.1)	Possible destinations (E2)					
		Deconstruction (B1.2)	Name	Localization	Services			
		17 01 01(B1.3)	Operator 1	Ferreira a Nova	- Collect; - Transport; - Recycling (R5)			
		37500 kg (B1.4)	Operator 2	Portunhos	- Collect; - Transport; - Processing (R12); - Landfill (D1)			
			Environmental Impact (H4) (GWP e ADP (f.f.))					
			Stage - Process					
Generator (B)	Edit (B2)	B2	Company Indicators C1 - SD C1 - TD C2 - Tr C3 - Pr C4+D - Rc C4 - Lf Total					
		Demolition work reference(B2.1)	Operator 1	GWP (kgCO ₂ eq)	466,5	138,2	150	616,5
		Demolition/Deconstruction (B2.2)		ADP (f.f.) (MJ)	9322,5	2165,1	2066,3	11388,8
Consumer (C)		Type of CDW (B2.3)		GWP (kgCO ₂ eq)	559,8	66,7	338,3	398,7
		Quantity (B2.4)	Operator 2	ADP (f.f.) (MJ)	13983,8	1044,8	5756,3	9289,7
Operator (D)								29029,7



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer

C+D

- Marketplace ^
- Waste
- Services
- Construction Work**

Client	Code	Service Type	Waste Type	Distance (Km)	Environmental Impacts	Total Price (€)
JDSWM	Q405D05B1	Special engineered landfill	iron and steel	33.24	2	24.19
Prices						
Shipping Price (€)	Service Price (€)	Price (€/ton)	Client's Mail			
4.19	20.00	20	<input type="button" value="See Email"/>		
GWP Costs						
GWP Transport	GWP Service	GWP Total				
6.65	60.00	66.65				
NRE Costs						
NRE Transport	NRE Service	NRE Total				
123.00	660.00	783.00				
+ JDSWM	Q405R04C1	Metals and metallic compounds recycling/ reclaim	33.24	2	4.19	



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer

Client	Code	Service Type	Waste Type	Distance (Km)	Environmental Impacts	Total Price (€)	
+	JDSWM	Q405D05B1	Special engineered landfill	iron and steel	33.24	2	24.19
☐	JDSWM	Q405R04C1	Metals and metallic compounds recycling/ reclaim	33.24	2	4.19	

Prices			
Shipping Price (€)	Service Price (€)	Price (€/ton)	Client's Mail
4.19	0.00	0 See Email

GWP Costs			
GWP Transport	GWP Service	GWP Total	
6.65	-1730.00	-1723.35	

NRE Costs			
NRE Transport	NRE Service	NRE Total	
123.00	-17400.00	-17277.00	

C+D

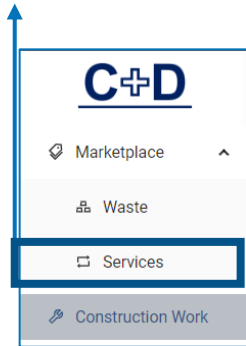
- 🏠 Marketplace ^
- 🗑️ Waste
- 🔧 Services
- 🔨 Construction Work



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Profile 2 (Designer, Contractor or Owner):

- CDW producer



The screenshot displays the C+D platform interface for a service profile. The 'Radius (Km)' slider is highlighted with a blue box. The 'Details' section is highlighted with a blue box, showing the following information:

- Service: Code: Q405R04C1
- Client: LucianaTest
- Address: Rua Piteiras casa
- 2870-446 Montijo, Setúbal
- LucianaTest
- Code: Q405R04C1
- Distance: 16.92
- Price: € 777.00
- Waste Type: Iron and Steel
- Service Type: Metal recycling/ reclaim
- Measurement Unit: m³ - Cubic Meters

The 'Construction' section is highlighted with a blue box, showing the following information:

- Construction
- Distance: 16.92
- Code: Q405R04C1
- Waste
- Service Type: Metal recycling/ reclaim
- Waste Type: Iron and Steel
- Measurement Unit: m³ - Cubic Meters



C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- Short-term developments:

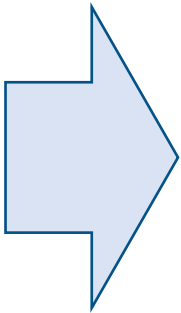
- Ongoing **validation** process with designers, contractors, owners and CDW operators
- Editorial and formatting **correction**
- Presentation of all possible end-of-life options, including the **environmental and economic potential of selective demolition**
- Integration of the **indicator of environmental and economic advantages of circularity**
- Accounting of generated **environmental and economic savings**
- Database **registration**
- Finalization of the C+D platform **handbook**

C+D Platform for calculating the economic and environmental benefits and impacts of CDW management

- **Future developments:**
 - **Dissemination** of the C+D platform and handbook to their potential users
 - **C+D platform** - incorporate: impacts of the demolition operation; link to **Waste Prevention and Management Plan**; re-use of construction products
 - **Selection of the deconstruction technique** (demolition) that minimizes environmental and economic impacts
 - **Promotion of construction solutions** with greater potential for reuse (or recycling)
 - **Reduction in the production of CDW** and **increase in the recovery** of secondary materials
 - **Dissemination** of the knowledge produced in courses at university level

Activities

6. Communication and dissemination of the results



Results

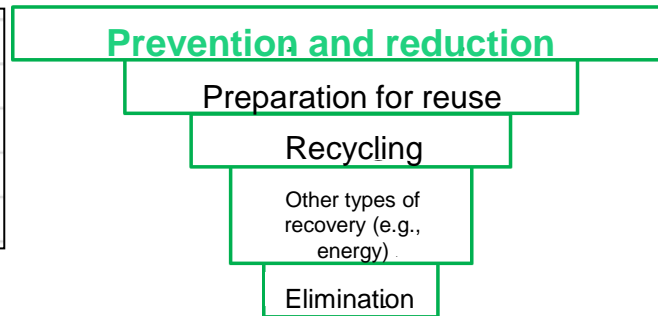
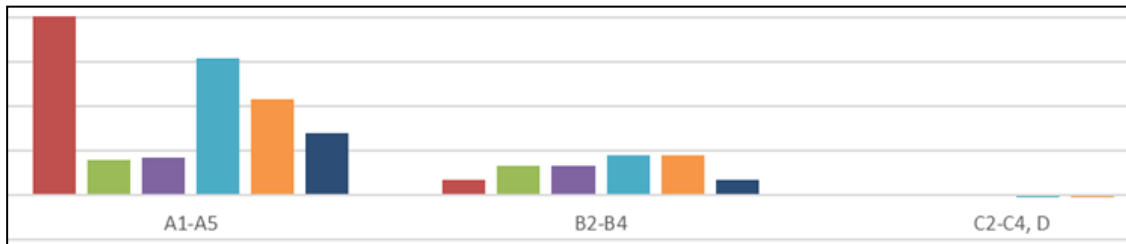
- **Project website:** *cplusd-platform.pt*
- **News on the EEA grants website and video presentation of the project:** *youtu.be/mquqmtLCVYE*
- **Participation in Portugal Smart Cities Summit 2020**
- **Interview for *Construção Magazine***
- **Development of the project's visual identity:**



- ***Closing seminar at IST, in Portugal, 27 September 2022*** (more than 80 participants)
- ***Closing seminar in Oslo, 27 October 2022***

Contribution to the program (1/3)

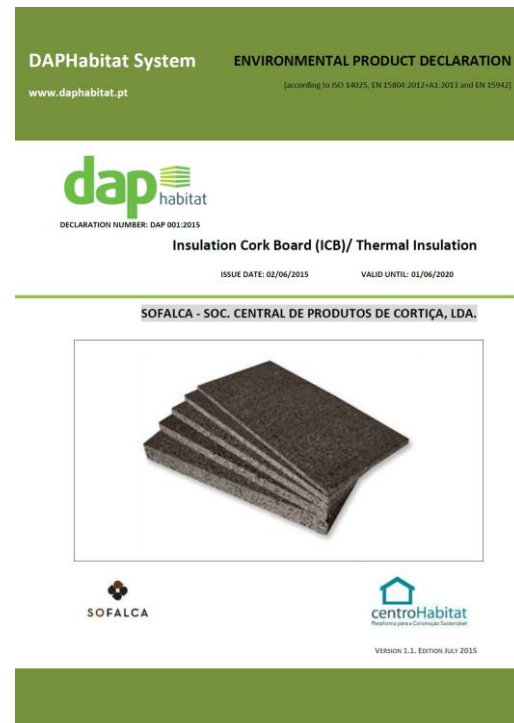
By calculating and disseminating these **environmental and economic impacts** through C+D platform to the stakeholders that can influence the decisions at the **end of life of buildings**, it is expected the **adoption of the best practices according to the principle of the waste management hierarchy**.



Contribution to the program (2/3)



The figures of the environmental **impacts at the end of life of each construction material** are also necessary to develop their **environmental Declarations and Footprints**.



Contribution to the program (3/3)

The C+D project therefore promotes the **circular economy of the construction sector**

and its results will create new **business opportunities** at the end of life stage of buildings

and will contribute for a **higher rate of CDW reuse**.



About the EEA Grants

Through the Agreement on the European Economic Area (EEA), Iceland, Liechtenstein and Norway are partners in the internal market with the Member States of the European Union.

As a means of promoting a continued and balanced strengthening of economic and trade relations, the parties to the EEA Agreement have established a multi-annual financial mechanism, known as EEA Grants.

EEA Grants are aimed at reducing social and economic disparities in Europe and strengthening bilateral relations between these three countries and the beneficiary countries.

For the period 2014-2021, a total contribution of €2.8 billion has been agreed for 15 beneficiary countries. Portugal will benefit from a sum of €102.7 million.

Find out more at eeagrants.gov.pt.



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Thank you for your attention!

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