



Building circular in Brussels: an overview through 14 inspiring projects

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Context:

- **Be Circular – Be Brussels** call for projects: 1 of the 111 measures of the Brussels Regional Program for a Circular Economy (BRPCE)
- Goals for ‘Construction’ category:
 - Financial and technical support of contractors → **transition of the sector towards circular economy**
 - Demonstrate by the example → **new standards in the construction sector**
 - Collect data on material flows → opportunities for **economic development of the Region**
 - Collect feedback on difficulties → **lift obstacles**
 - Putting **people first**

Circular Construction project:

- The result of a global thought aiming to a **better management of material and human resources**

Table 2. Applied circular measures – Management of human and material resources

Circular measures	Details of circular measures	Projects where the measure is applied
Management of human resources		
Integrated team management	Bringing the stakeholders together from the beginning of the project	2-5-6-7-9-11
Local workers	Focusing on the workforce coming from the Brussels-Capital Region	1-2-4-6-7-8-9-10-12-13
Training of workers	Developing the knowledge and know-how of the workers	1-2-6-7-8-9-10-12-13-14
Collaborations/partnerships	Promoting collaboration and partnerships among companies to close the loops	4-6-10-11-13-14
Social economy sector	Integrating companies with a social purpose in the process	6-11-12
Management of material resources		
Preservation of existing buildings	Promoting renovation of buildings	All
Design for change and disassembly	Designing adaptable and reversible buildings in order to extend their lifetime and allow reuse of their components	2-3-4-6-7-8-12-13-14
Reuse	Giving a second life to construction materials	All
Management of (de)construction waste	Lowering the amount and the impact of (de)construction waste	4-6-7-8-9-11-14

Laureates

Table 1. List of the 14 awarded circular projects

Project number	Project name	Main contractor	Type of work	Building type	Project size (approx.)
1	Petite Suisse	Max Stockmans	Extension	Housing	50 m ²
2	Clos Dupont	Eco Construct Groupe	Extension	Housing	55m ²
3	VLA	VLA-Architecture	Renovation	Offices	120 m ²
4	CoPost	Max Stockmans	Renovation	Housing	135 m ²
5	Warland	Global Art Concept	Renovation	Housing	150 m ²
6	Dethy	Bruno Duheym	Renovation	Housing and offices	270 m ²
7	Dépôt Leemans	DRTB	Extension	Housing and offices	300 m ²
8	Mouchérons	Florian Girault	Renovation	Housing	325 m ²
9	Boondaël	Ilinye Iliya	Renovation	Housing and shops	1000 m ²
10	Deswaef	Gillion Construct	Renovation	Culture	1000 m ²
11	Tivoli	BPC	Renovation & extension	Housing	1800 m ²
12	Tour à Plomb	Jacques Delens	Renovation	Culture	3000 m ²
13	Debatty	Gillion Construct	Renovation	Housing & kindergarten	5000 m ²
14	Horta-ONSS	Louis De Waele	Renovation	Offices	43000 m ²

In the paper, focus on 4 challenging measures:

- Material resources:
 - Reuse of materials
 - Design for Change and Disassembly
 - Human resources:
 - Training of workers
 - Partnerships
- Introduction of each measure
- Illustration through a couple of Circular Construction Projects
- Sum up levers and obstacles

Reuse of materials

- On-site reuse / off-site reuse / incoming reclaimed materials / potential reuse of materials
- Projects: Warland [[Global Art Concept](#)] / Debatty [[Gillion Construct](#)]/ Horta-ONSS [[Entreprises Louis De Waele](#)]



Figure 2. Warland - Incoming reclaimed materials: wooden flooring and marble

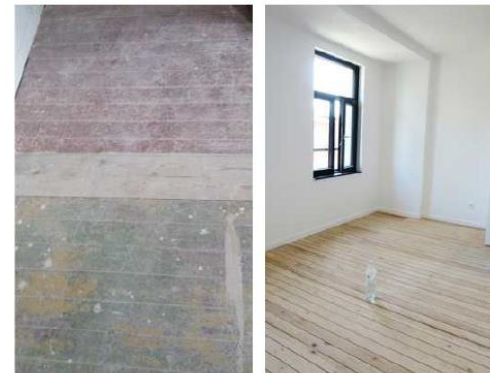


Figure 3. Debatty – wooden floor before and after renovation



Figure 4. Horta-ONSS – repackaging of insulation for off-site reuse.

Reuse of materials

➤ Levers:

- Sensitivity of stakeholders to the issue of reuse
- Completion of pre-demolition inventory
- Plan for reuse
- Membership network reclaimed materials
- Just-in-time
- ...

➤ Obstacles:

- Uncertainty on construction site schedule and related costs
- Regulatory requirements (energy performance, safety,...)
- ...

Conclusion

- **Transfer** of investments related to **material resources to human resources**
- Need for **creativity** and efforts to implement principles of circularity on site
- Once the first step has been taken, companies keep working in a circular dynamic
- Circular construction projects help to target the needed **additional measures to support and assist stakeholders**



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