



The sustainable approach of the Mundo buildings

Innovative projects in terms of
circularity, materials and energy

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mundolAB 



Presentation of the speakers


Frédéric Ancion is the founder and CEO of Mundo-Lab. He started the company in 2008 and is fighting for better circularity and a greener real estate world.

Julien Willem is the Project Manager of Mundo-Lab. He is the innovator and performer of all the Mundo Projects.

Mundo-Lab is an ethic real estate developer who rent to non-profit organisations to affordable rents.

They are active in Brussels, Antwerp, Louvain-la-Neuve and Namur. Their buildings are the result of a constant innovation in terms of sustainability and circularity.

Objectives

- 
- Expose the evolution & approach of an ethic real estate developer
 - Show concrete examples of circulation actions in our projects
 - Evoke the difficulties to take the circular actions to the end
 - Suggestions for a more circular construction sector

Contents



- I. Concept : Mundo-Lab
- II. Evolution : Our architectural approach since 2008
- III. Current state : Some recent examples of our approach
- IV. Our needs
- V. Conclusion



I. Mundo-Lab

The Mundo concept



- **Project started in 2008, by Brussels organizations**
 - To create business & conference centres
 - Dedicated to non-profit organizations and social businesses
 - Through acquisition and renovation of properties
- **Values in accordance with the social & environmental sector**
 - Sustainable renovation and management
 - Shared facilities and services
 - Accessibility, visibility, networking, synergies...
 - Affordable rents
 - Professional and flexible facilities



Namur



Madou



Louvain-la-Neuve



Mundo-Lab (ex-Ethical Property Europe)

2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | '22 | '23...

Ixelles/Elsene



Trône/Troon



Antwerpen



Official recognitions of our approach



→ Circular economy



→ Sustainable architecture



→ Biodiversity, sustainable management



II. Evolution

Our architectural approach since 2008

Initial approach : first renovation in Brussels in 2008

- **Sustainable materials** :
 - Natural paintings / sustainable wood / linoleum / cellulose / wood and hemp-wool / cellulose flocking (recycled paper) / fermacell ...
 - Choice of the materials through different tools (NIBE...)
- On-site sorting of the **construction waste**
- **Low energy building** : Complete insulation of the envelope (facades, windows, roof) + dual flow ventilation with heat recovery + wood pellet boiler
- Collaboration with **social companies**
- Transformation of the external parking into a **biodiversity garden**
- Label : **exemplary building** (Brussels-Capital Region)



Insulation



New roof

Evolution of the architectural approach

Namur

- Passive building
- Reclaimed furniture

Antwerpen

- Structure completely in wood (including staircase and lift shaft)
- Use of reclaimed materials : glass partitions, doors, sanitary elements

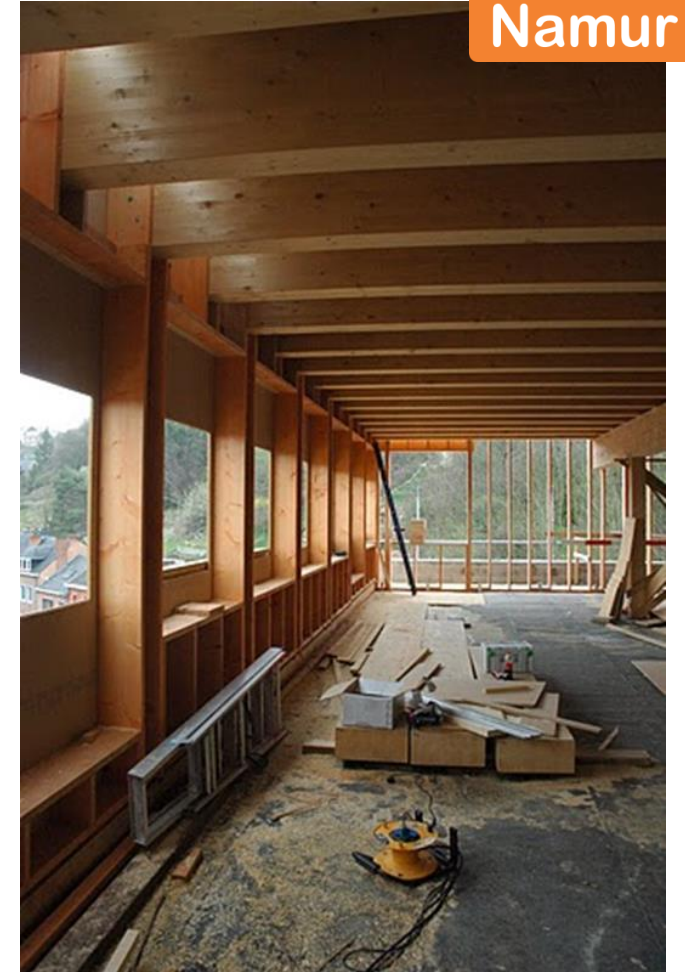
Madou (Brussels)

- Extended use of reclaimed materials: partitions, windows, doors, lighting (refit), furniture
- Building with easy to dismantle approach (partitions)
- All partitions in wood
- Label : **circular building** (Brussels-Capital Region)

Antwerpen



Namur



Madou





III. Current state

Some recent examples of our approach

Conception modularity : think for today and tomorrow

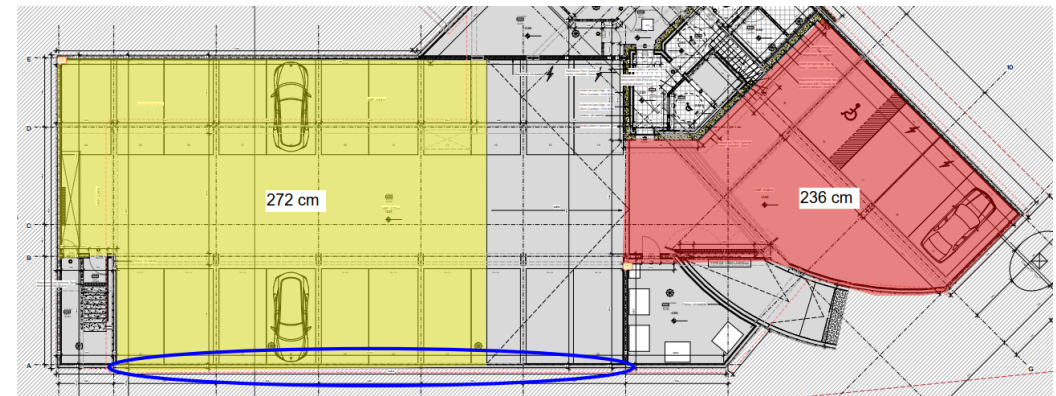
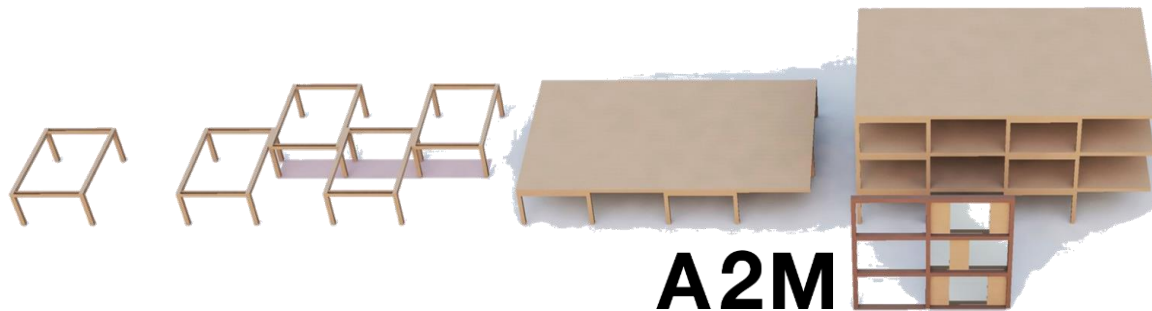
Building level :

- Parkings

Higher ceilings with few technics

Column-beams in the outdoor walls

- Lightweight wooden modules with bolted connections



Conception modularity : think for today and tomorrow

Room level :

- Every layer - 2,70 m module

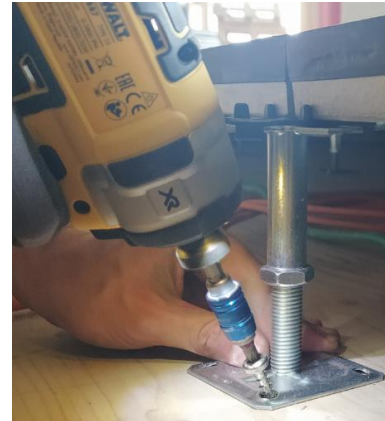
*Ceiling, Floors, Doors, Windows,
Ventilation, Heating,
Regulation*



Material level :

- Accessible connections

➔ Everything may move all the time



Material choice : reclaimed first - *Reuse of 60 tons of structural steel beams*



Process :
9 month



Process :
3 month



Material choice : reclaimed first — *Lights upgrade insitu & exsitu*

- Relamping insitu old lamps [450 T8 devices]
- Unmount exsitu and use it in new building [120 2xT5 devices]
- Pros : knowledge & repairability ; cost is mainly local labour



Material choice : reclaimed first — *Some technical equipments*

- Floorboxes [150 U – 300 data connections – 300 electrical connections] – Sanitary [30 U]
– False-Floors [1.250 m²] – False-Ceilings [300 m²]



Material choice : reclaimed first — *Our dry-walls*

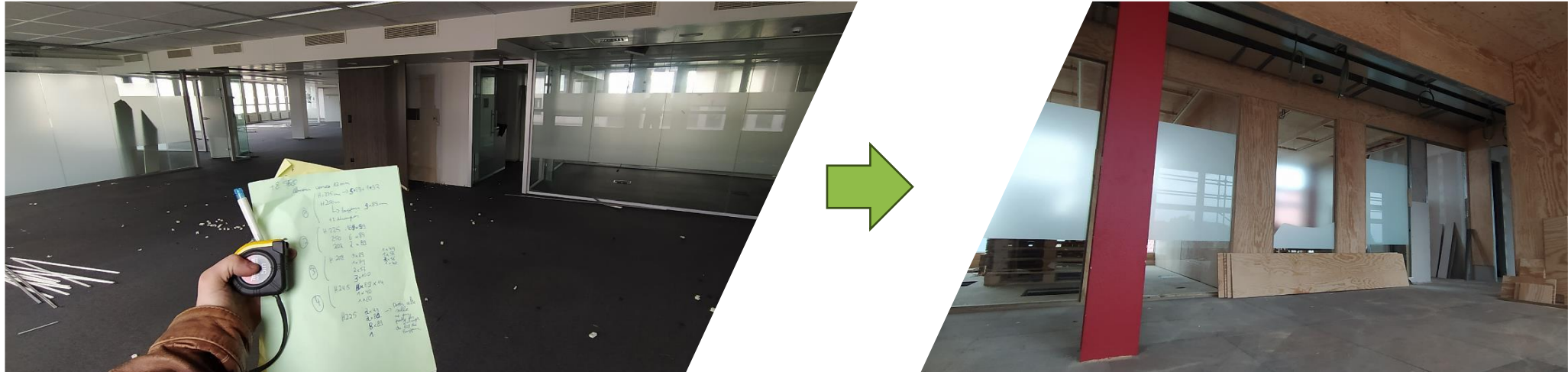
Unmounting & upgrading old dry wall :
done on **1.200 m²**

Reuse of frames, insulation & first plate
=> easy and cost-efficient if it is insitu



Material choice : reclaimed first — *Our dry-walls*

- The glazed panels could be either inserts of double-glazed windows [120 U] or reclaimed panels cut at the right size [300 m²]



- Reclaimed doors : in Mundo LLN : 85 U on 112

Material choice : What if we need to use new products ?

- **Wood** ! Certifications ?

PEFC, FSC, Nature Plus, Blue Angel ?

- **Bio-sourced** as much as possible but not only.

Example of insulation panels with petrochemical-sourced binder

- The difficult **balance** :

EPD – reuse possibilities – labels - € - ...



IV. Our needs

- **A more organized and profesional reclaimed material sector**
- **Softer rules** for reclaimed materials and tools to make it circulate all around EU
 - Ex : Firedoors EI1 & EI2
- **Financial incentive** : low VAT on reclaimed materials, call for projects ...
- Should be mandatory :
 - **Complete inventory** before demolition or rehabilitation
 - A real calculation to measure the **impact of a demolition/reconstruction**

V. Conclusion

- Circular innovation on the field is **possible** but **not always easy** and
 - has direct impact on global gaz emissions
 - is replicable on other scales
 - can apply to almost every part of the buildings
 - needs pragmatism
- [**Building – Dismounting – Reuse**] Should think of those together
- The **practical details** are as important as the theory
- **Public authorities** should be more coercive in **prohibiting building demolitions**
- A real-estate developer has the keys to make more than greenwashing !

Thank you for your attention !



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