

# The Multi tower

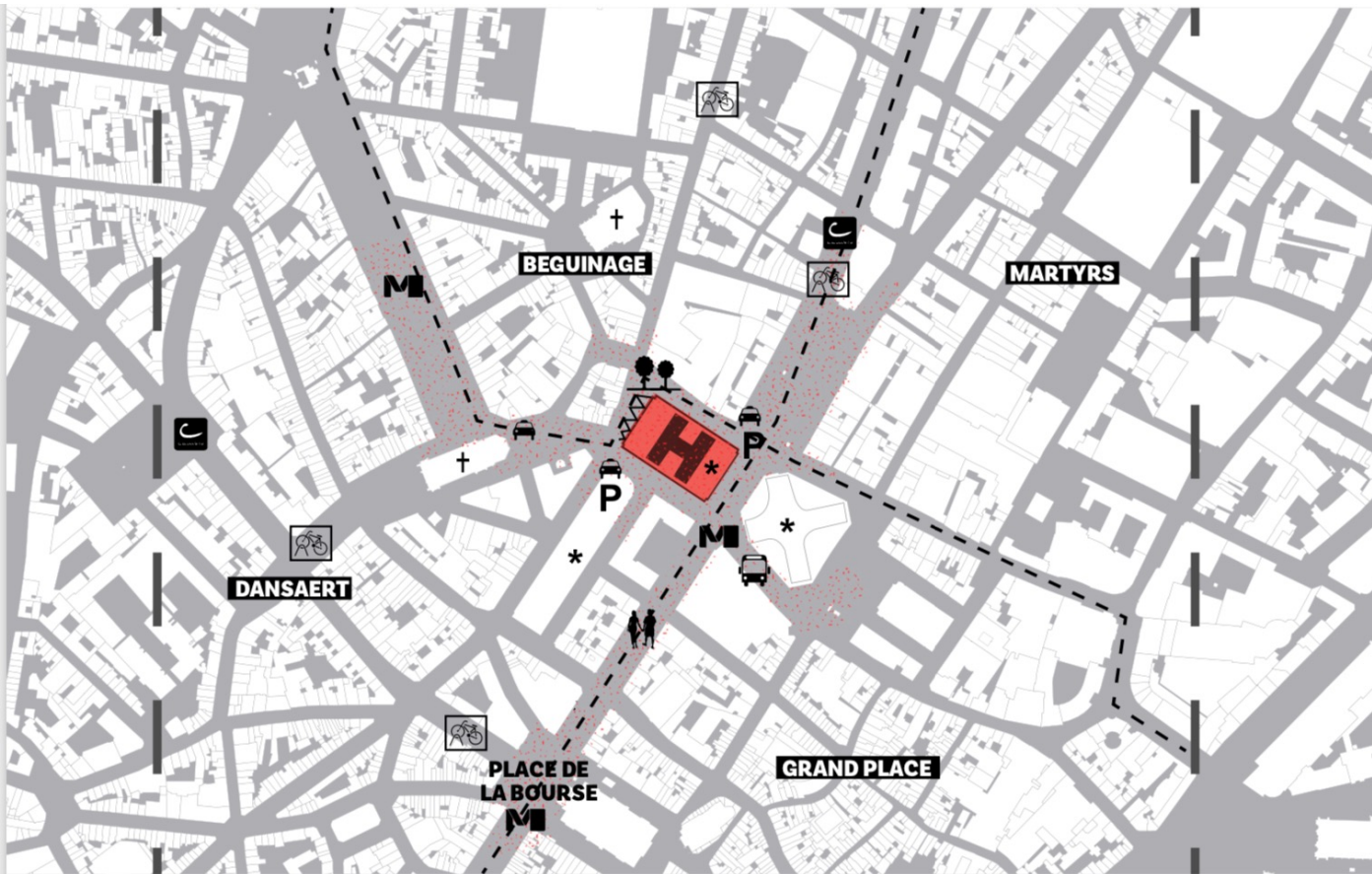
An example of urban mining in a large scale redevelopment



WHITEWOOD

# The Context

The inner-city of Brussels



voet-



groen-  
ruimte



wijkgrens



belangrijke  
gebouwen



probleemzone



metro



bus



taxi en collectas



overdekte  
parking



cambio



villo





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BE-EXEMPLARY - 22/10/2019



Up to 60% of the waste on landfills  
Up to 20% of CO<sub>2</sub> for construction  
Up to 25% of truck transportation

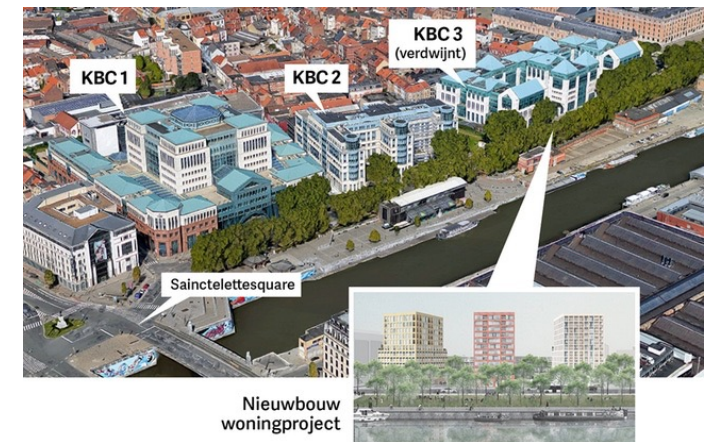
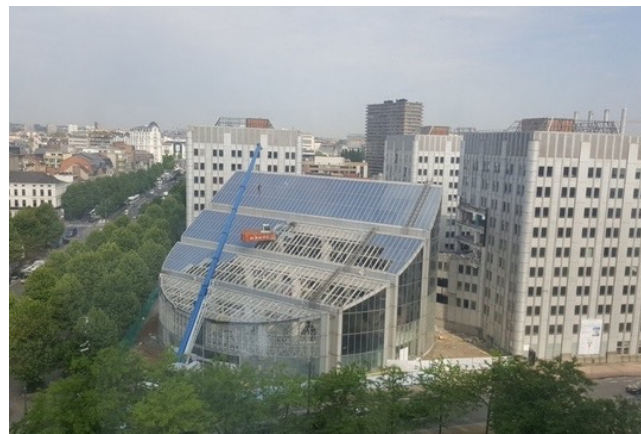


Highway



Pedestrian

<https://www.sum.be>



Life expectation < 25y ?

<https://www.jaspers-eyers.be>  
<https://www.bruzz.com>



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# Multi Tower

## The story of a team

**CONIX RDBM**  
— ARCHITECTS

**RotorDC**  
Deconstruction & Consulting



**DE MEUTER**



**WIDNELL EUROPE** S.A./N.V.  
Construction & Engineering Cost Consultants

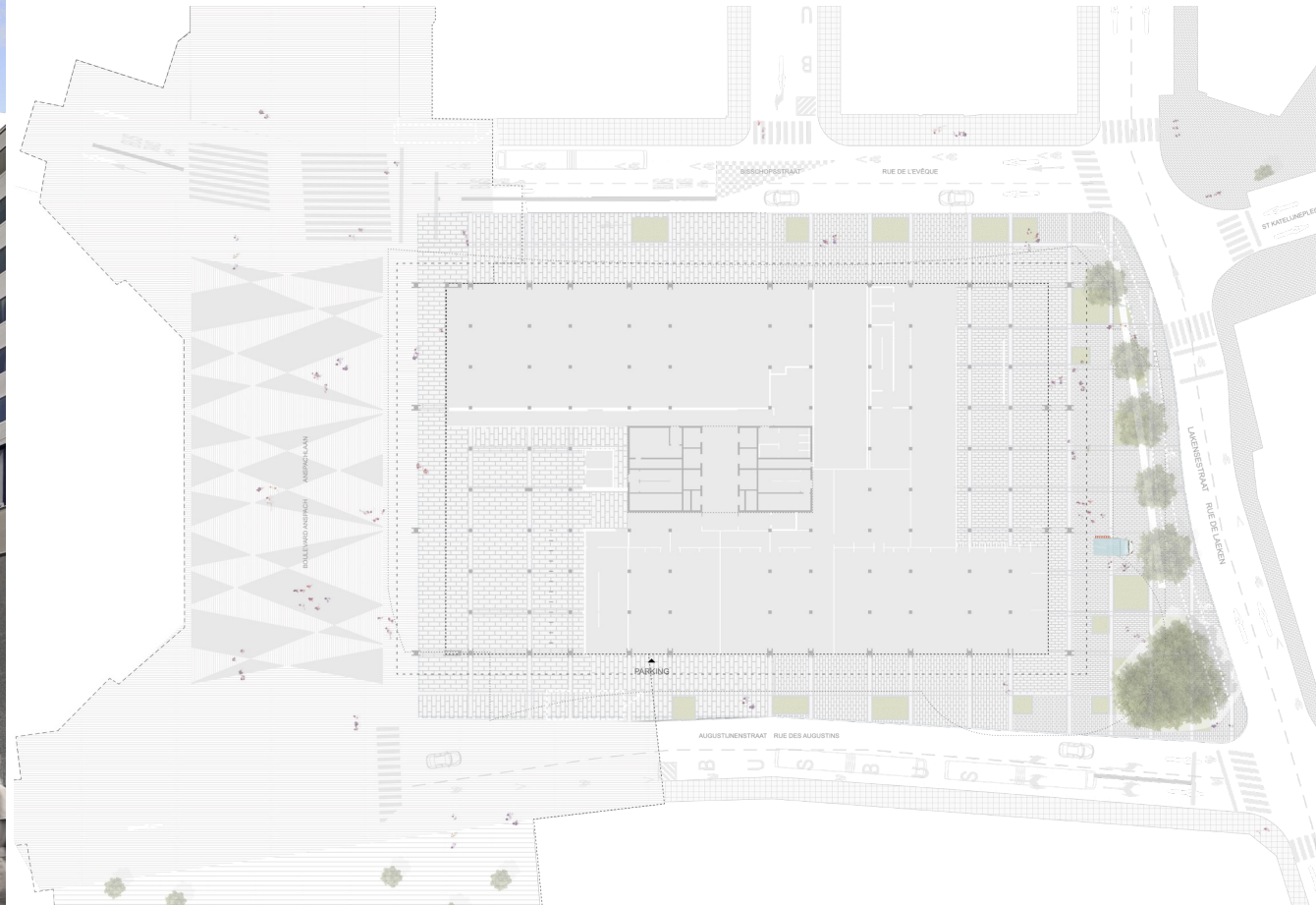




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# Urban Approach

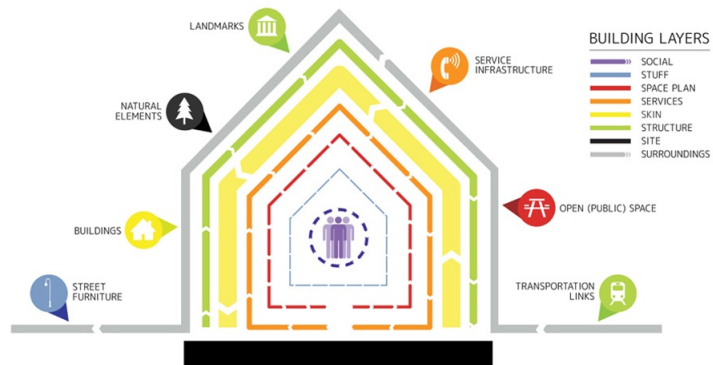
## Embracing the piétonnier





# Circular Economy

## The three aspects of the Multi Tower



CIRCULAR DESIGN



USE AND  
UTILIZATION



URBAN MINING



# Urban Mining

## Quantification and ambitions

Loten	hoeveelheid	herkomst	Berekening gewichtspercentage	
			eenheidsgewicht	gewicht
Gevelprofielen aluminium	600 pc	in situ	7 kg/pc	4200 kg
Gevelelementen blauwe hardsteen	280 m²	in situ	250 kg/m²	70000 kg
Granieten vloer J. Wabbes	300 m²	ex situ	110 kg/m²	33000 kg
Hexagonale plafondelementen M. Lambrichs	400 pc	ex situ	4 kg/pc	1600 kg
Technische vloertegels	10000 m²	ex situ	28 kg/m²	280000 kg
Vals plafond, geperforeerd staal	720 m²	in situ	4 kg/m²	2880 kg
Gelijmd-gelamelleerd hout trap toren	58 m³	ex situ	400 kg/m³	23200 kg
Gelijmd-gelamelleerd hout trap lobby's sokkel	20 m³	ex situ	400 kg/m³	8000 kg
Sanitair (keramiek): hangtoilet	154 pc	in+ex situ	25 kg/pc	3850 kg
Sanitair (keramiek): urinoir	37 pc	in+ex situ	20 kg/pc	740 kg
Saintair: urinoir scheidingswand	22 pc	in+ex situ	12 kg/pc	264 kg
Sanitair (keramiek): uitgietbak	1 pc	in+ex situ	17 kg/pc	17 kg
Sanitair (keramiek): lavabo's	100 pc	in+ex situ	10 kg/pc	1000 kg
Brandwerende deuren WTC 3	30 pc	ex situ	50 kg/pc	1500 kg
Deurklinken	400 pc	in+ex situ	0.5 kg/pc	200 kg
Andere soorten ijzerwerk	200 pc	ex situ	0.2 kg/pc	40 kg
"Raak" lampen	100 pc	product	1.3 kg/pc	130 kg
Betegeling omgeving (steen? klinkers? ... )	500 m²	ex situ	200 kg/m²	100000 kg
Motoren van de liften	6 pc	in situ	? kg/pc	kg

**89 %** of the Multi Tower will be composed of reused materials, including the structure (which dominates this number)



**2-3%** of all the “new” materials placed in the Multi tower are coming from Urban Mining.

Measured in **kg / m² / €**



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# Urban Mining Type 1

In-situ reuse





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# Urban Mining Type 2

## Other-site reuse





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## Urban Mining Type 3

On site up-cycling

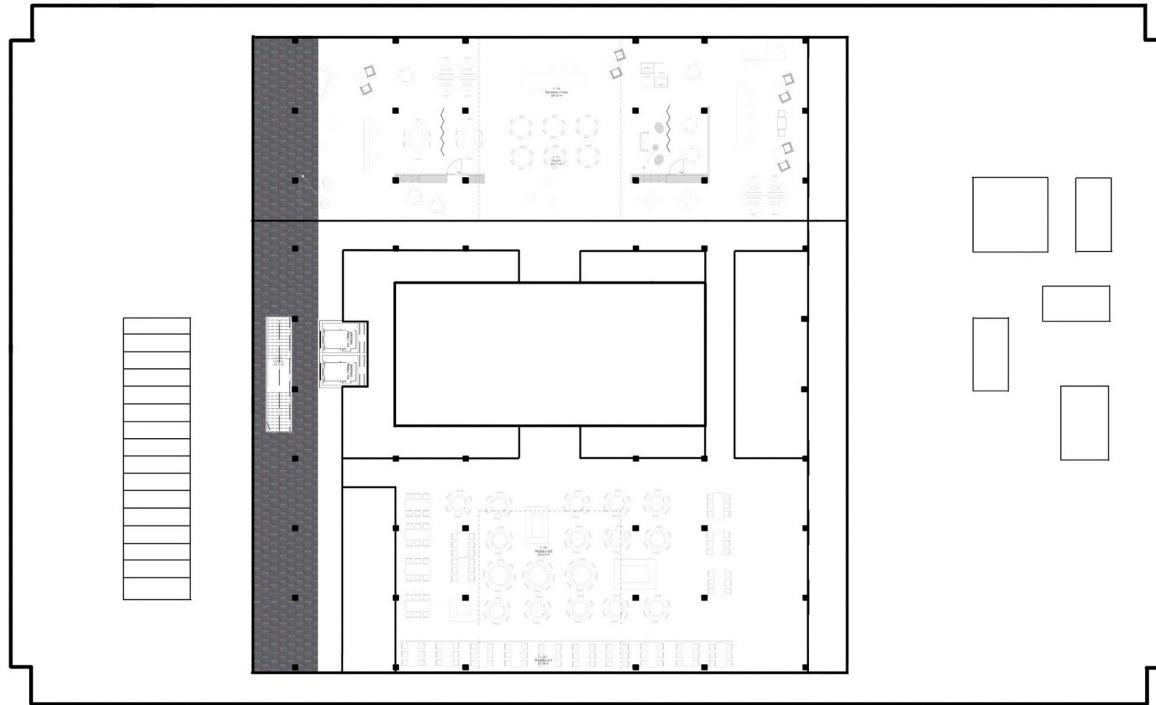




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## Urban Mining Type 4

Exceptional pieces from external sites



Bâtiment BNP Paribas: pierre bleue Jules Wabbes;

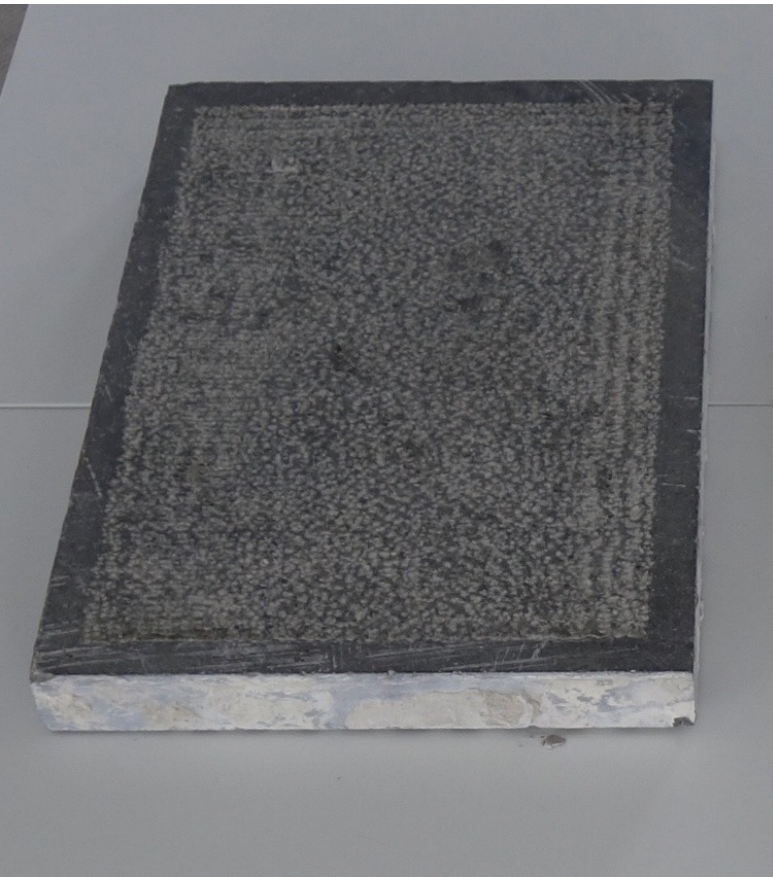




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## Urban Mining Type 5

Generic pieces from external sites





# Urban mining

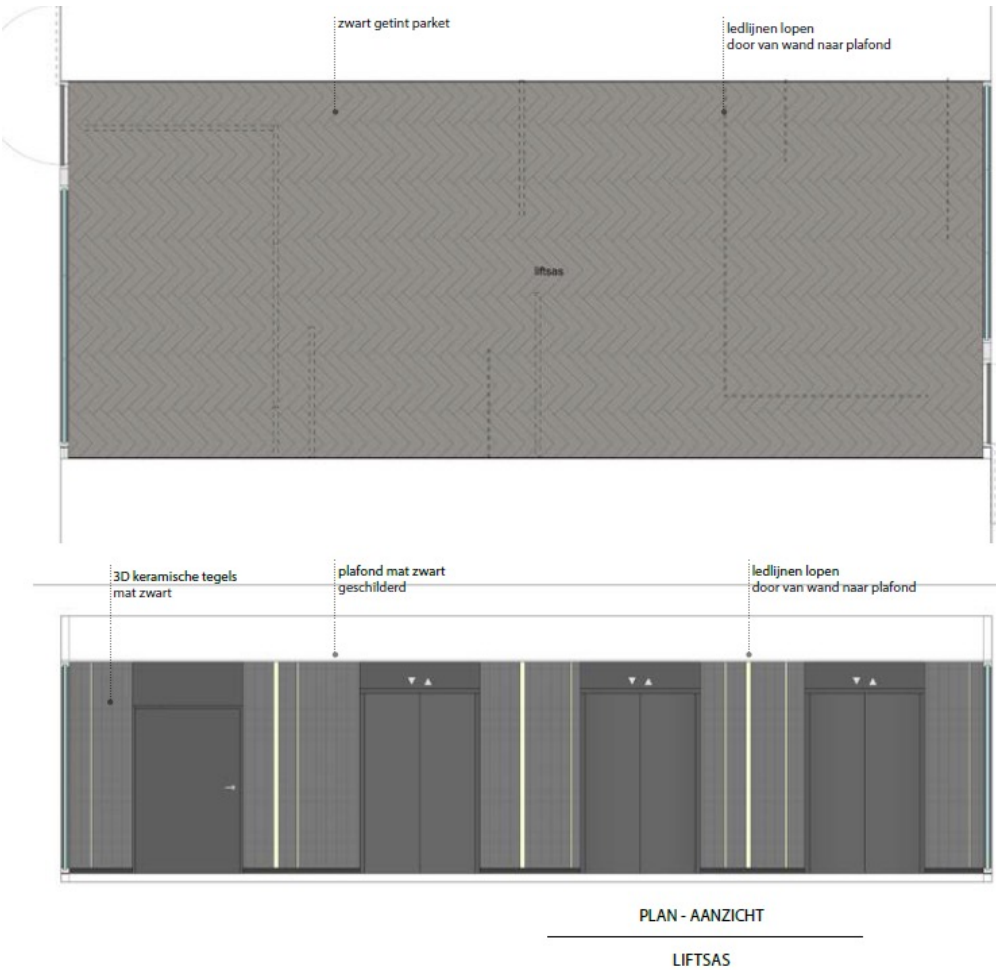
What next?



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# Tenant Involvement

## Marketing Urban Mining

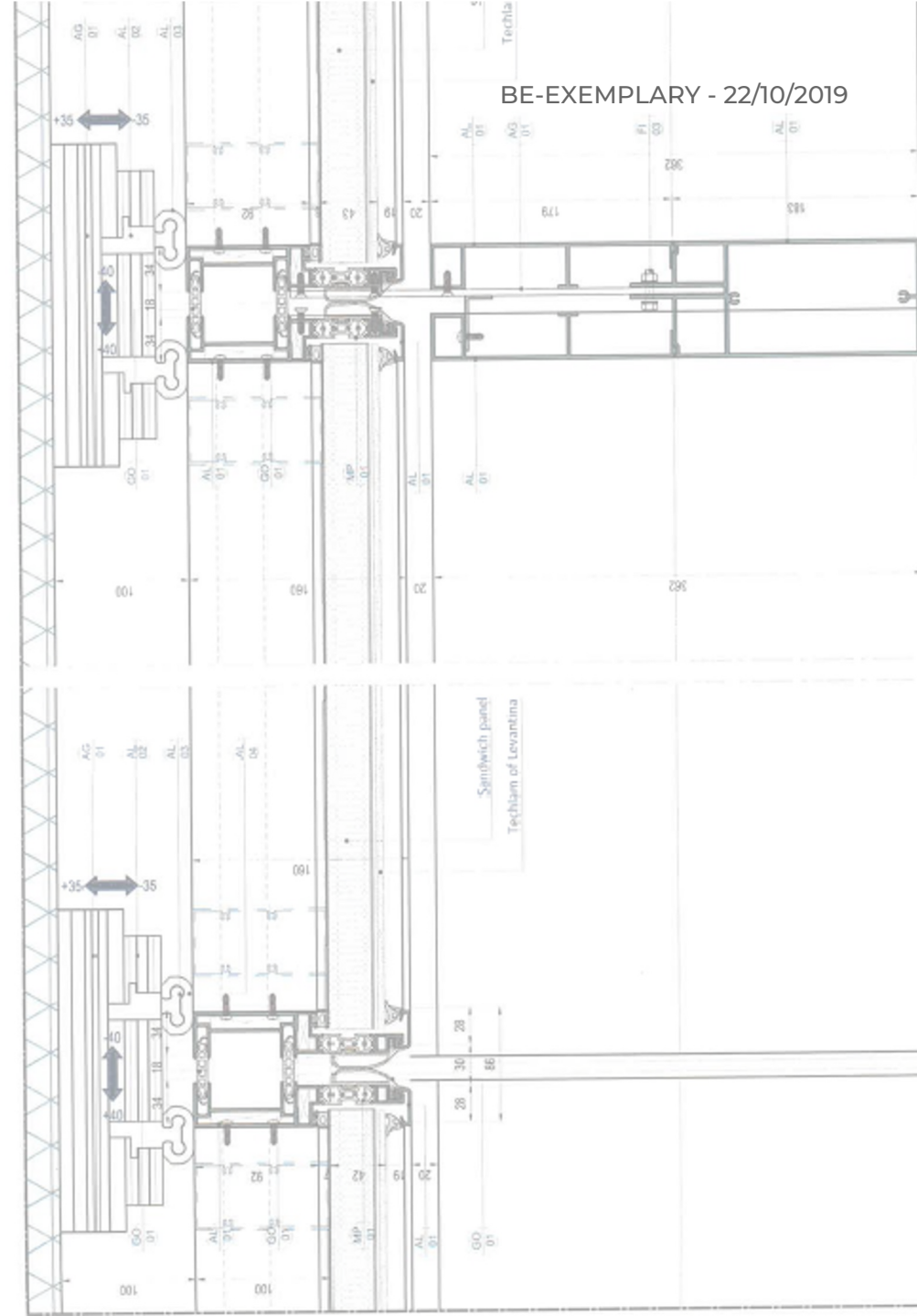


PRODUCT	Circular buildings, with a sophisticated look. A corporate product with clear global sustainable goals.
PROMOTION	Social media, professional publications, showroom & exhibition space
PRICE	A balanced approach, resulting in higher quality and sustainability, for the same price.
PLACE	Brokers and websites (immo)



# Circular design

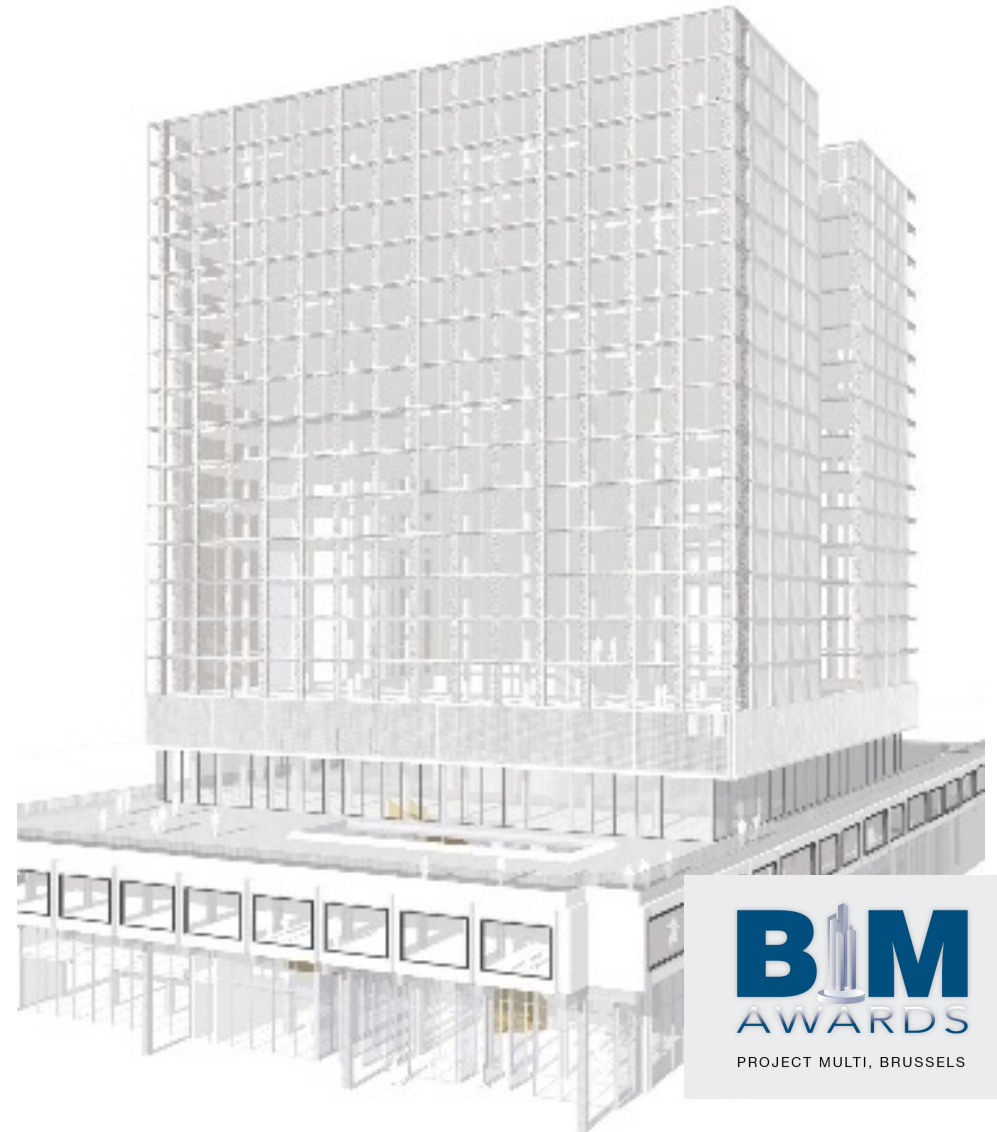
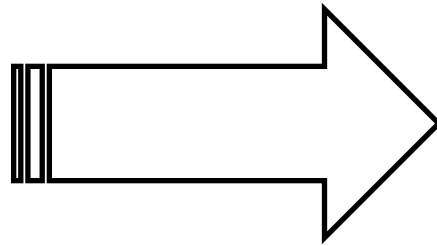
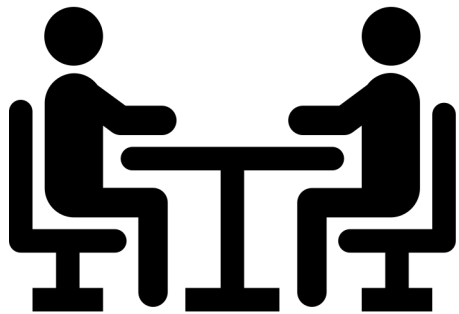
A wide-angle view of a modern office interior. The space features large windows on the left side, providing a view of a city street and buildings. The office is furnished with desks, chairs, and a computer monitor. Two people are visible in the background, one standing and one sitting at a desk.





# Digitalisation

Data to bring Urban Mining to a new scale





# Thank you

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