

SCALING UP BIOBASED BUILDING IN THE NETHERLANDS

& the businesscase perspective

**URBAN
CLIMATE
ARCHITECTS**



1901

2023

Introduction

Who am I?

Architect director of Urban Climate Architects
BREEAM Expert
Building-life ambassador DGBC
Member Advisory board Built by Nature



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Urban Climate Architects

Nature loving Architects and Urbanists

Founded in 2009

Offices in Delft, Groningen and Wroclaw

25 professionals

Working on projects in the City

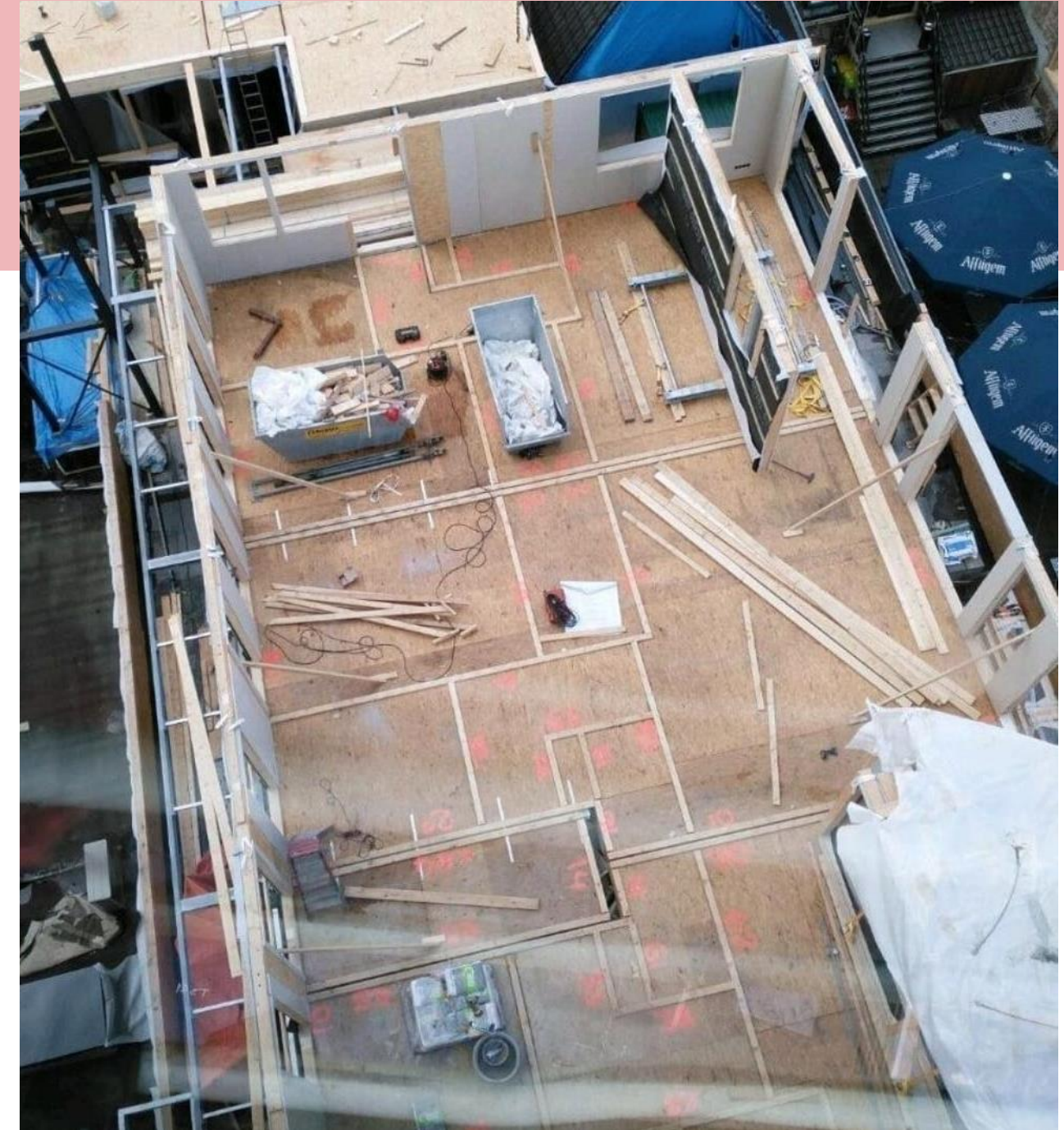
We design to make a positive impact!

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Designing for people

Circular renovations and transformations



Renovating, transforming and adding new elements to existing buildings to bring more life, joy and laughter in the city

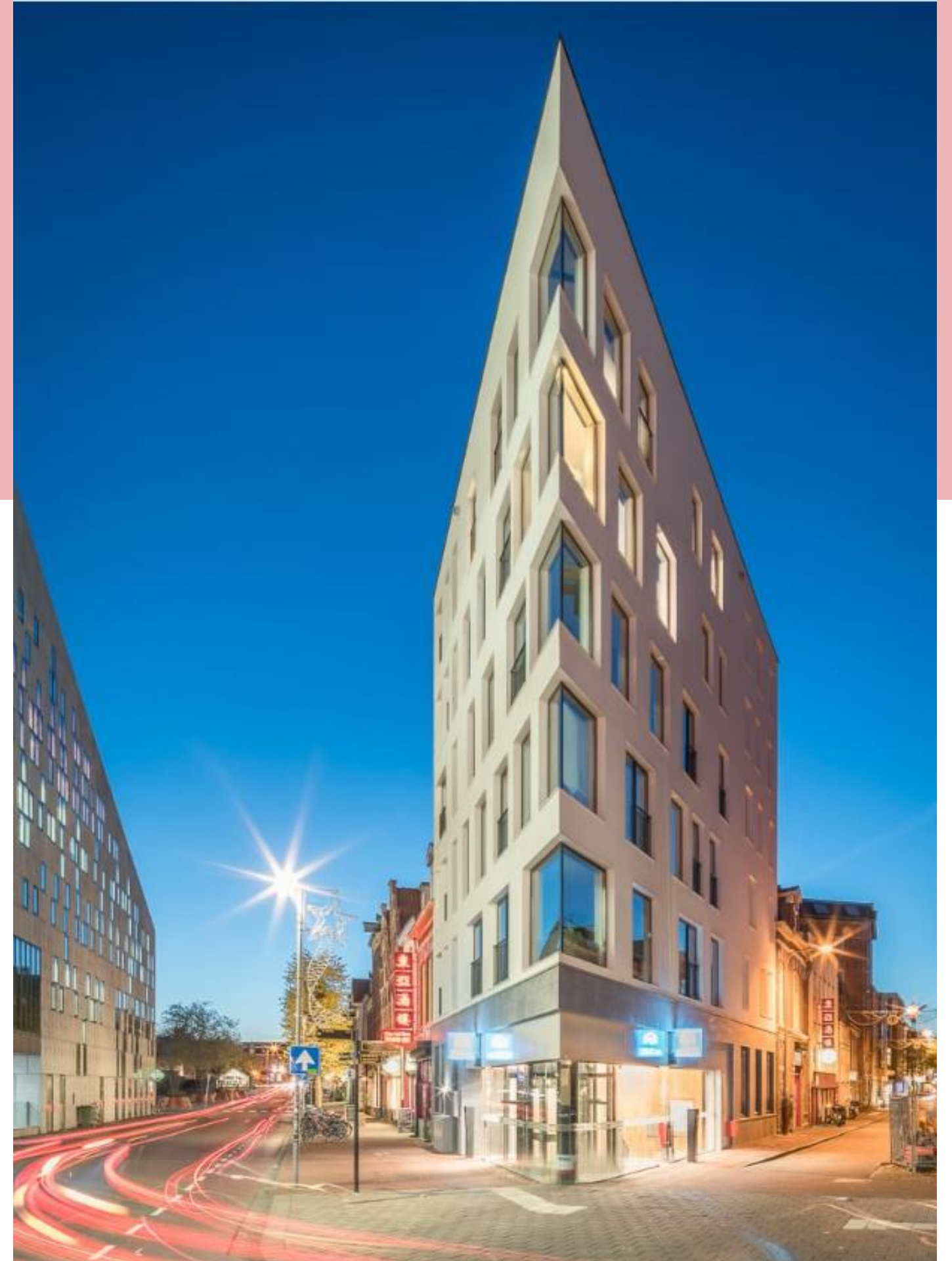
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Optoppen

Our roots



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Transforming and extending

Re-using what we can



Transformation office building into
apartments, Leiden (NL)

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To create new quality



Designing for people

Biobased new buildings



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Molslaan apartments

Our first CLT project in 2019



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Salvation Army

The first wooden care-building in NL



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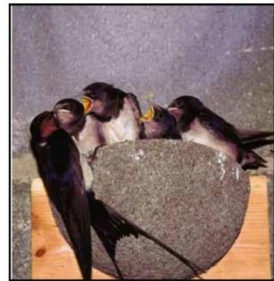
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The Urban Woods

The highest wooden residential project in NL

De boompot wordt op maat gemaakt met geïntegreerde nesten voor vogels en insecten. Dit zal een perfecte habitat voor deze soorten creëren - in de schaduw van een boom en omgeven door groen.

nesten voor vogels en insecten
boxen opgenomen in het ontwerp van boompot



geprefabriceerd
duurzaam & modulair
bouw



Twee huishoudens samen in één 'frame'



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**THE
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WOODS**

Obstacles to solve

Timber myths

Wood burns!
Wood is noisy
Wood is expensive
Is there enough wood to build all our houses?

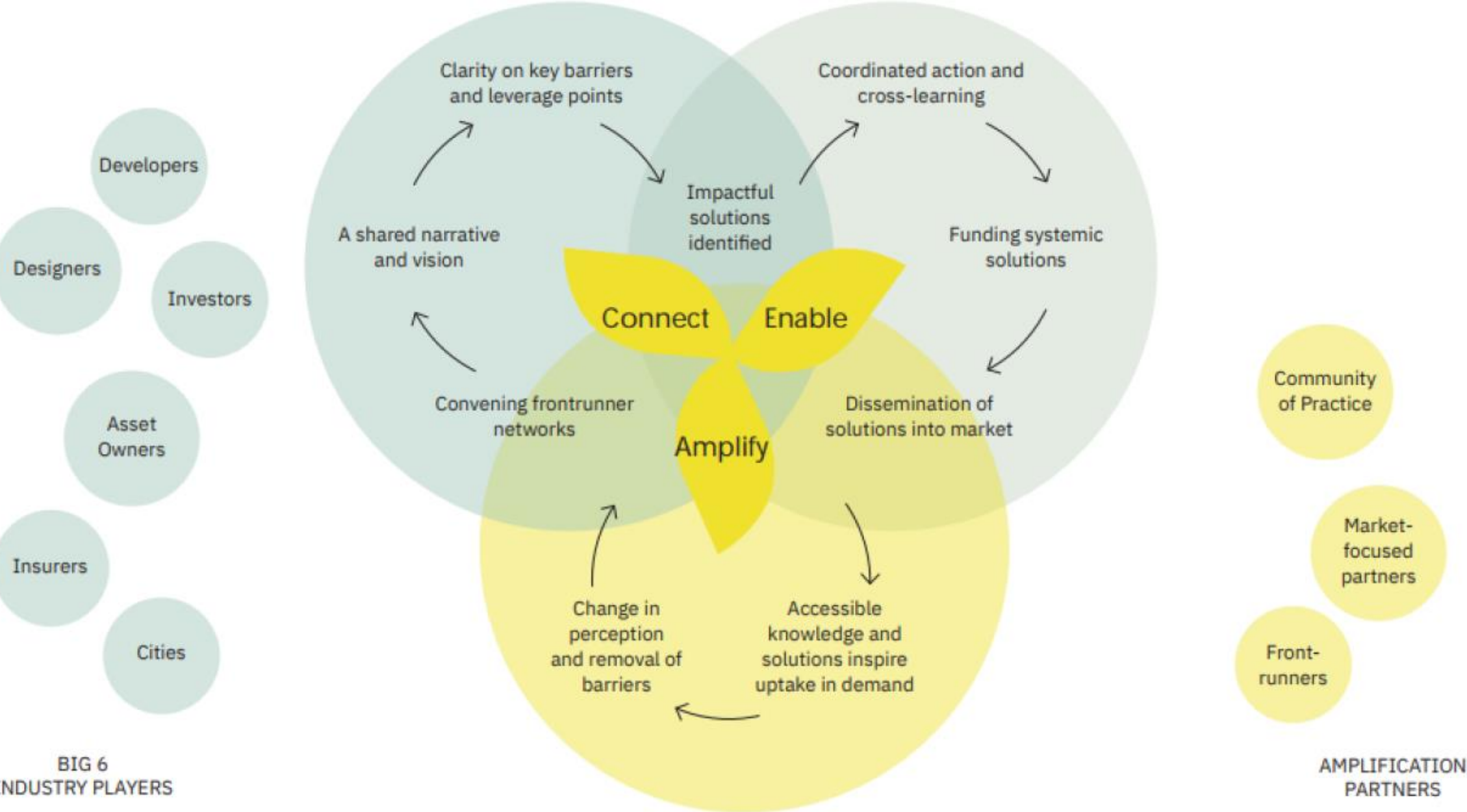
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Built by Nature

Network and grant-making fund



BIG 6
INDUSTRY PLAYERS

AMPLIFICATION
PARTNERS

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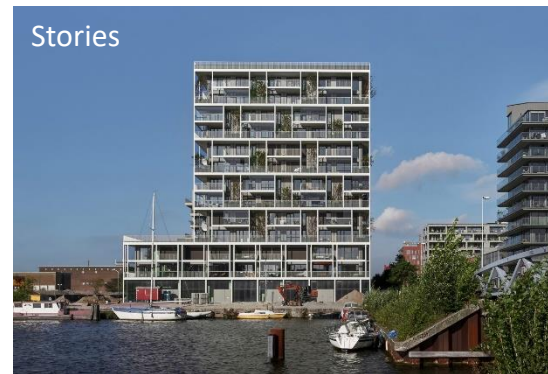
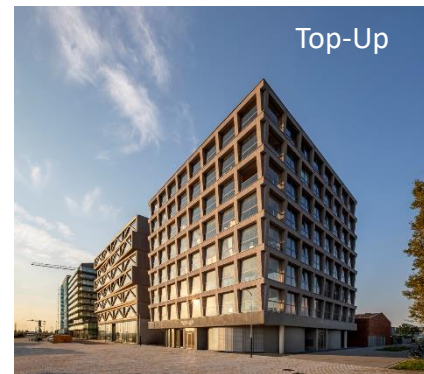


Work in unison with nature

Built by Nature is a network and grant-making fund dedicated to accelerating the timber building transformation in Europe: radically reducing embodied carbon; safely storing carbon in our buildings for generations; and sequestering carbon by championing forest stewardship and regeneration.

Built by Nature

Research project to scale up wood building in NL



The project:

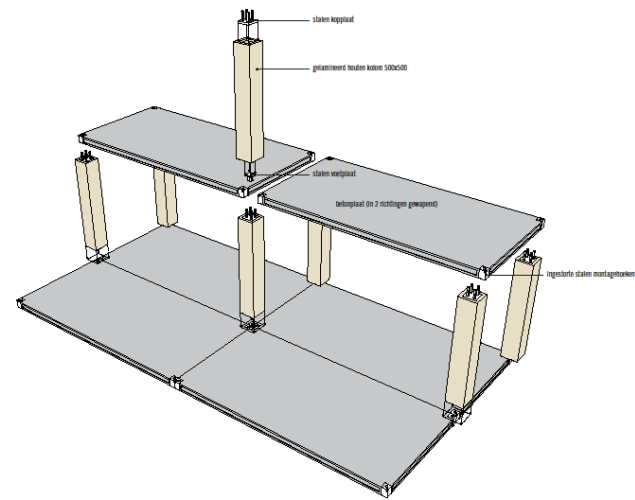
- 1) Analyse projects
- 2) Organize typologies
- 3) Which solutions?
- 4) What obstacles?
- 5) Discuss with Experts
- 6) Set a new standard
- 7) LOD 500 details
- 8) Present in October
- 9) Share with the world!



Built by Nature

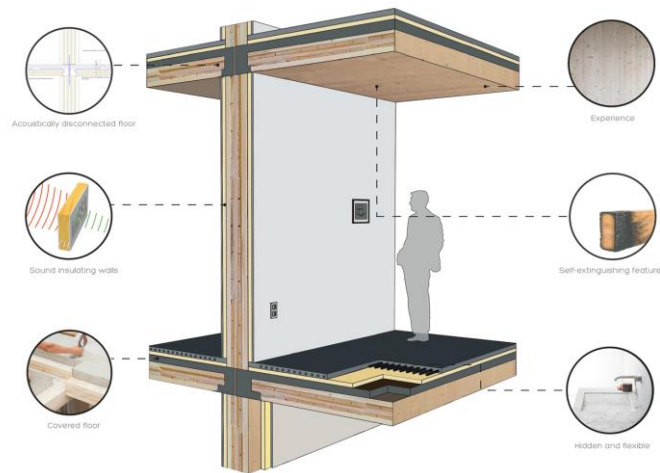
Different typologies

Hybrid (concrete core + floors)

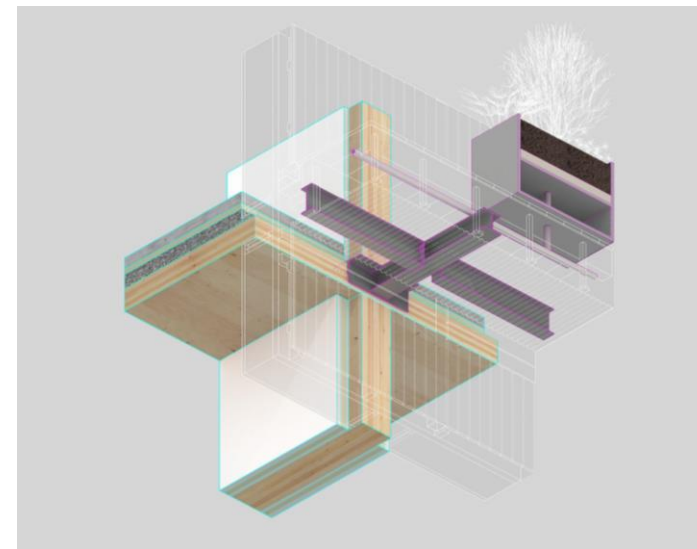


constructie & montageprincipe CO2D systeem met houten kolommen

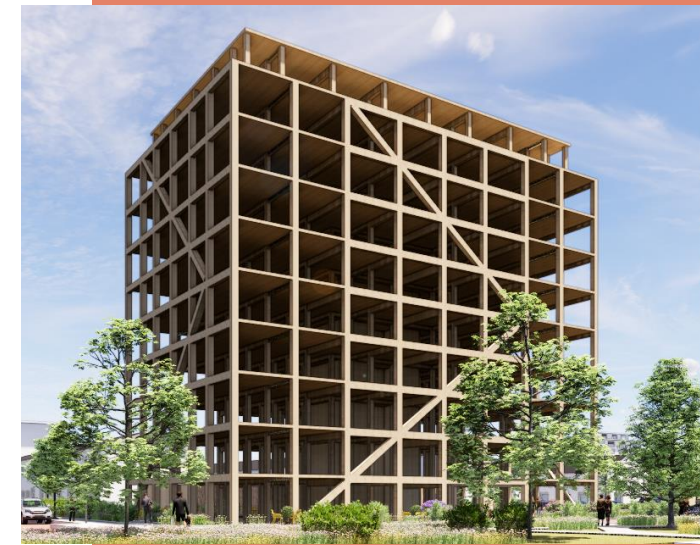
Hybrid (concrete core + top floor)



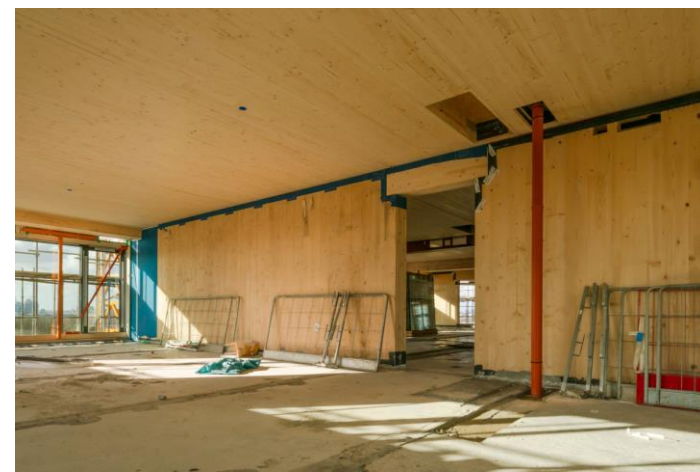
2D slabs (CLT)



2D elements (column/beam)



Top-Up, Amsterdam



HAUT, Amsterdam



Stories, Amsterdam



The Urban Woods, Delft

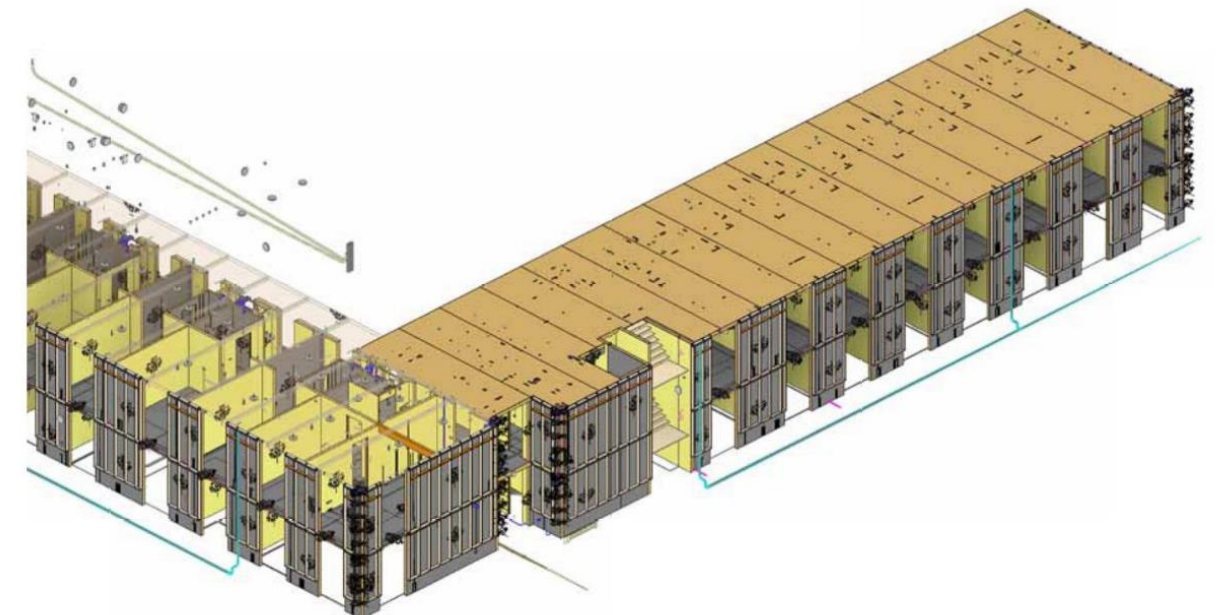
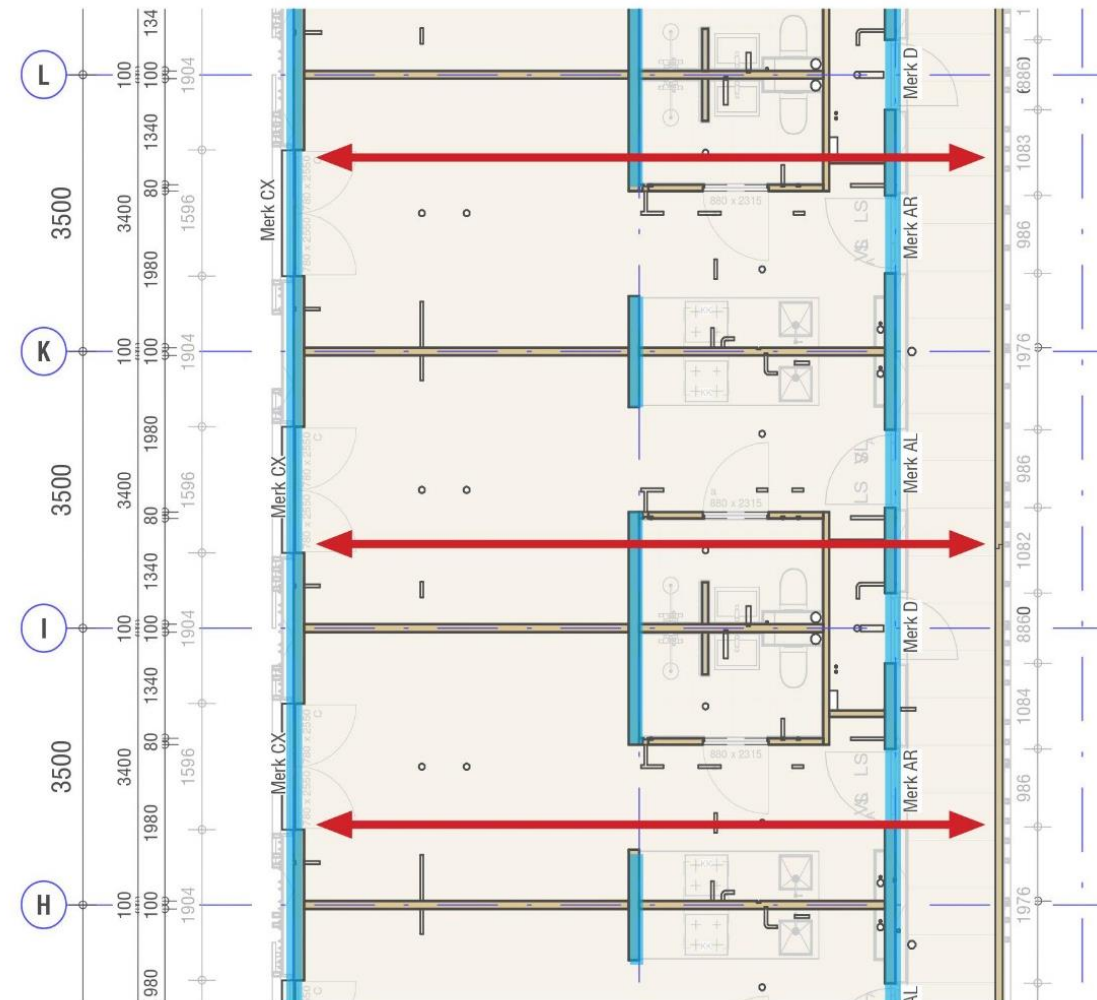


Biobased Businesscases

It starts with an efficient design

- Efficient spann
- Use standard panel sizes
- Simple detailing
- Use floors as galery
- Flexibility
- Prefabricate elements

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Biobased businesscases

More than just the building costs

Building costs +5-10%

More simple/lighter foundation
Or extra floors
More expensive on building materials
More simple on installations

Building time

Up to 50% faster in building time
Less heavy equipment (cranes)
Shorter building site costs
Less staff on site
Easier to build

TCO

Demountable
Flexibel to the future
Faster cash flow
Less interest during construction

Financing of Biobased buildings

Wood funds for investors

Syntrus Achmea woofdund, 5% more value on wood
Part of ESG strategy of investors



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Financing of Biobased buildings

Biobased mortgages

Dutch banks offer lower mortgages rates for biobased houses;

- Triodos bank -0,15%
- ASN bank 2.500-30.000,-- euro advantage

Triodos  Bank

asn  bank

Financing of Biobased buildings

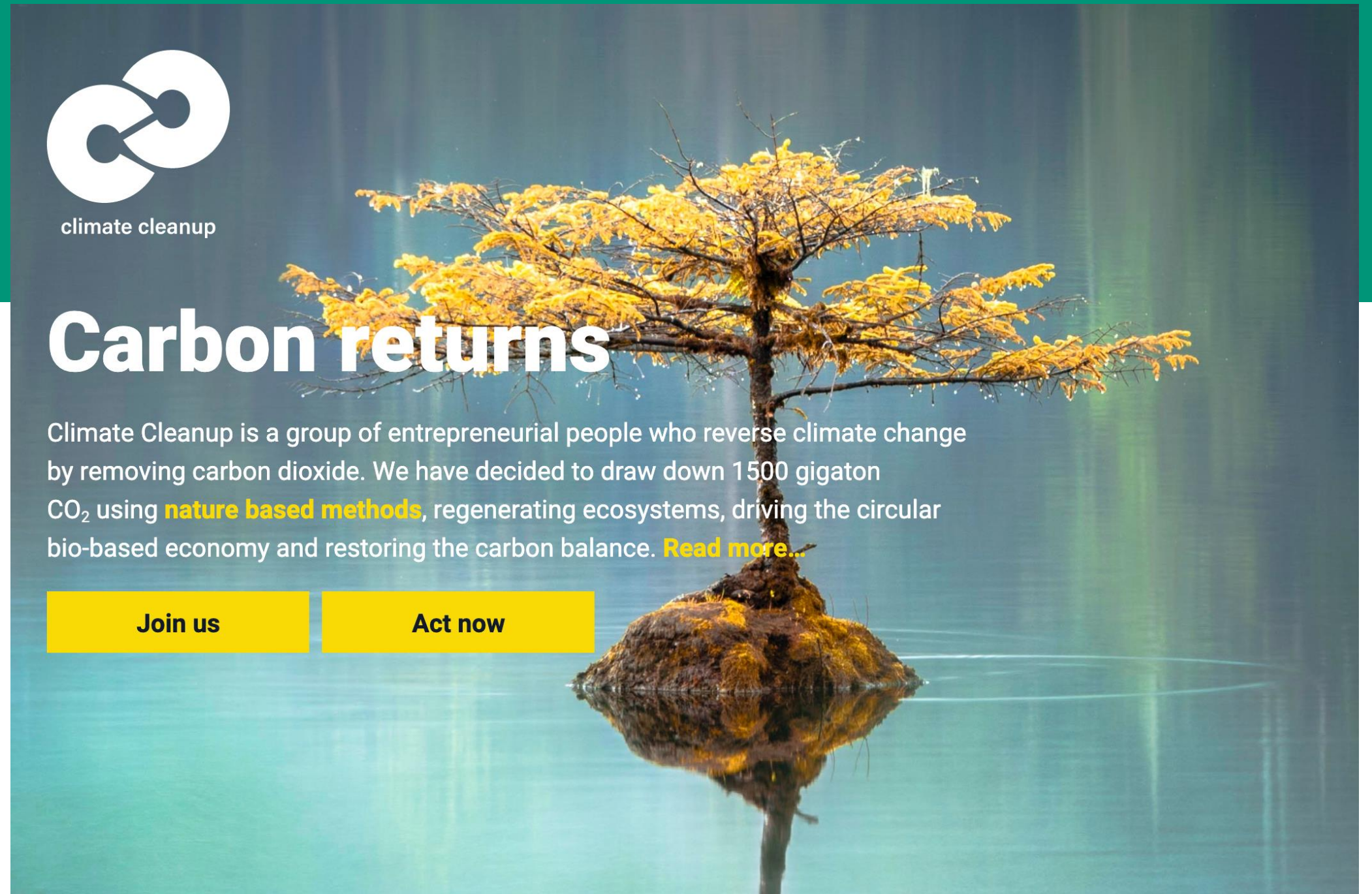
CO2 prizing

Create value with co2 storage in biobased materials

Example; 2400m² BVO building has m³ woodproducts which stores 570ton CO₂ x 140 euro/ton =

79,800 euro's in value

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The advertisement features a central image of a tree with yellow autumn leaves growing from a rock in a body of water. The background is a soft, teal-colored gradient. In the top left corner, there is a white logo consisting of two interlocking circles with a dot in the center, and the text "climate cleanup" below it. The main headline "Carbon returns" is in large, bold, white font. Below the headline, there is a paragraph of text in white font. At the bottom, there are two yellow buttons with black text: "Join us" and "Act now".

climate cleanup

Carbon returns

Climate Cleanup is a group of entrepreneurial people who reverse climate change by removing carbon dioxide. We have decided to draw down 1500 gigaton CO₂ using **nature based methods**, regenerating ecosystems, driving the circular bio-based economy and restoring the carbon balance. [Read more...](#)

[Join us](#) [Act now](#)

Financing of Biobased buildings

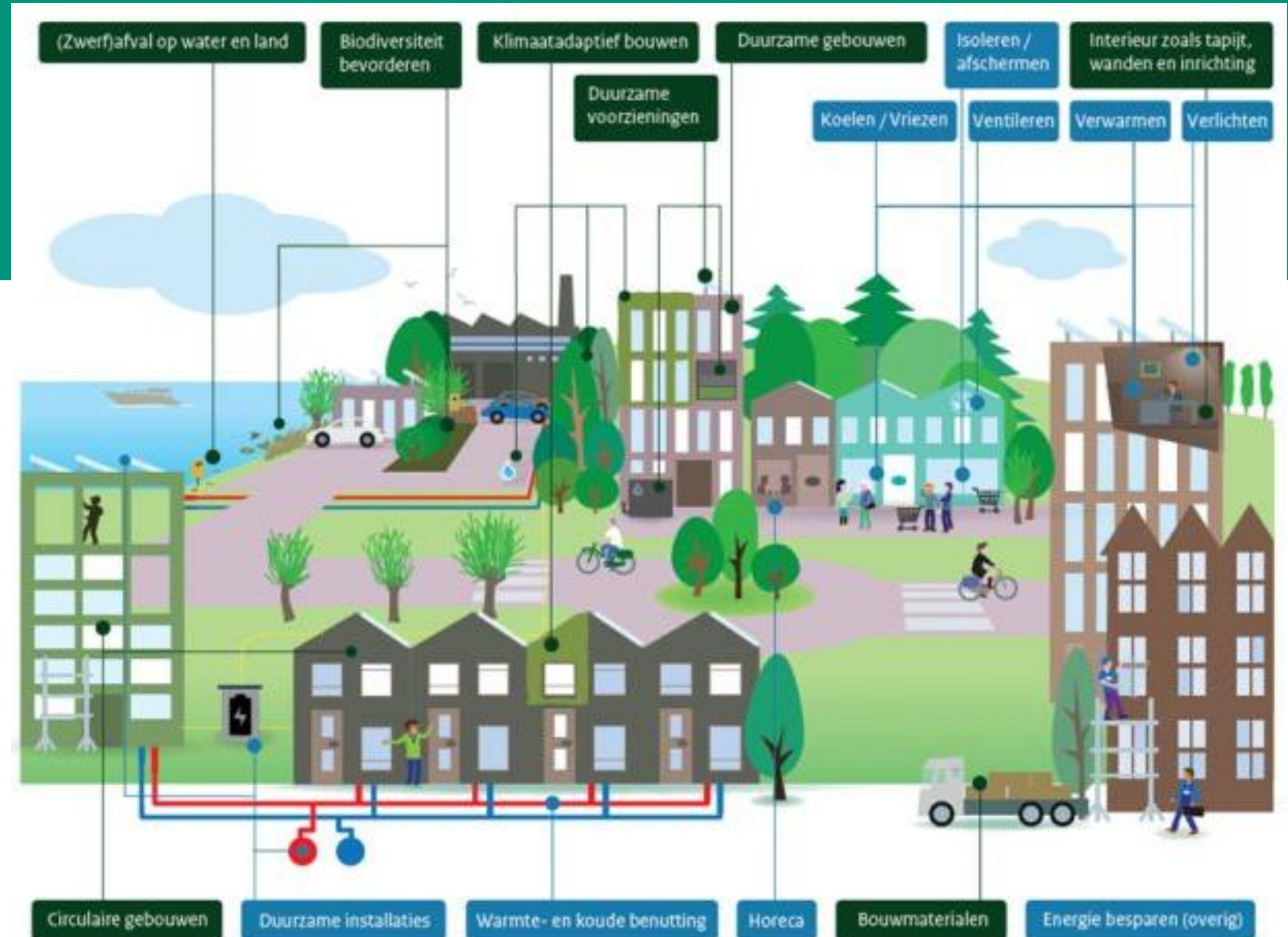
Tax advantages

Tax advantage on biobased materials

Less taxes on profit

2,5% of total building costs

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Thank you

And let's build the (biobased) future together!

Questions?

Feel free to ask me

Or email dennishauer@ucarchitects.com

Or via LinkedIn

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