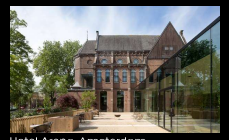

HAUT
TEAM V
ARCHITECTURE
Do Janne Vermeulen
Team V Architecture
www.teamv.nl
ARUP
lingotto

TEAM V ARCHITECTURE

SELECTION PROJECTS
TEAM V ARCHITECTURE

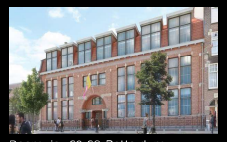

a.s.r. HQ , Utrecht


House of Province, Arnhem

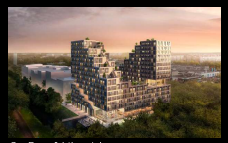

Hotel Arena, Amsterdam

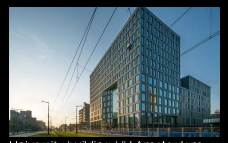

Rotterdam Central Station


Zuidasdok, Amsterdam


Boompjes 60-68, Rotterdam

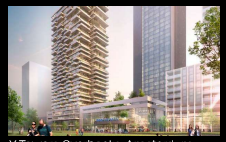

Boompjes 60-68, Rotterdam


Op Dreef, Utrecht


University building, VU Amsterdam

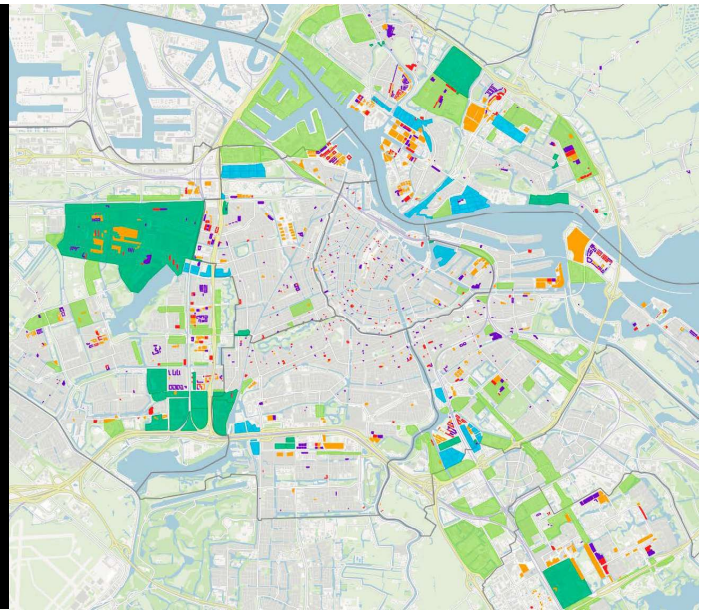

HAUT, Amsterdam


CrossOver Zuidas, Amsterdam


Y-Towers Overhoeks, Amsterdam

CITY OF AMSTERDAM

- Largest city of The Netherlands
- Population in 2017: 851 000
- Growing with ca. 11.000 a year
- 'Koers 2025': 50.000 new dwellings in 10 years time: explosive growth
- Several development locations in and around the city
- Market value of property is rising



SUSTAINABILITY IN THE NETHERLANDS

FOCUS ON ENERGY

Legislation:

- EPC: norm based on kWh/m
- leading to 'Almost Zero Energy use'

High norm compared to other European countries

SUSTAINABILITY IN SPECIFIC PROJECTS

FURTHER AMBITIONS FROM THE CLIENT & MUNCIPALITYV

- BREEAM Certificates
- Net Zero Energy Building
- Frisse Scholen (fresh & healthy schools)
- WELL certified
- Cradle 2 Cradle / circular building
- Other specific innovative solutions (living lab / smart building)

Ministry of Finance (2009)
Low energy and healthy office

Renovation a.s.r. Utrecht (2016)
BREEAM Excellent & renovation

Renovation Atlas TU/e (2018)
BREEAM Outstanding & smart building

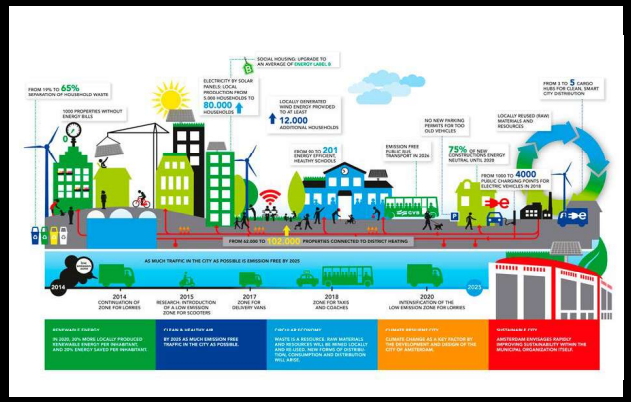
SUSTAINABILITY IN AMSTERDAM

AMBITIONS OF THE MUNICIPALITY

20% more renewable energy and 20% less energy consumption in 2020.

A healthy and sustainable city by:

- Clean and healthy air
- Circular economy
- Separated waste
- Sustainable heating and cooling
- Wind and solar energy
- Water management and climate control



HAUT'S LOCATION: AMSTERDAM

AMSTELKWARTIER

New neighbourhood Amstelkwartier:

- 2.450 dwellings
- Primary school
- Harbour
- Park
- Restaurants
- Hotel

TENDER PROCESS

Land owner and contracting authority:
Municipality of Amsterdam

Requirements
Triangular plot: 1.122 m^2
Max height: 73 m
Program:

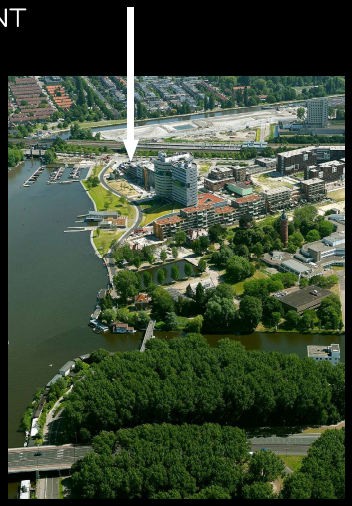
- Max. 12.600 m gfa apartments,
- Max. 1.000 m^2 gfa commercial,
- Underground parking, 50 cars

TENDER PROCESS COMMERCIAL DEVELOPMENT

Architecture
Urban Design
40%

Sustainability
30%

Financial bid
30%



HAUT - THE BEGINNING

TEAM

developer

lingotto

engineer

ARUP

"We can build this tower in timber"

TEAM V
ARCHITECTURE

architect

Murray Grove London,
Completed 2009
9 storeys, timber core

London,
Completed 2015
10 st. concrete core

Treet Bergen,
Completed 2015, 14 storeys timber core + timber truss

HoHo Wien,
Completion 2016-2018
24 storeys, concrete core

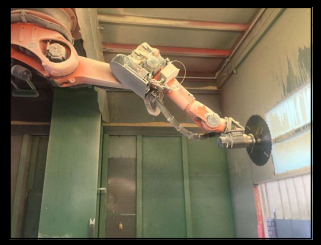
Brock Commons,
Vancouver
Completion 2017, 18 storeys concrete base + core

Vancouver,
Design 2016, 19 storeys,
concrete + steel core

Västerbroplan Stockholm,
Design 2013, 34 storeys
Concrete core

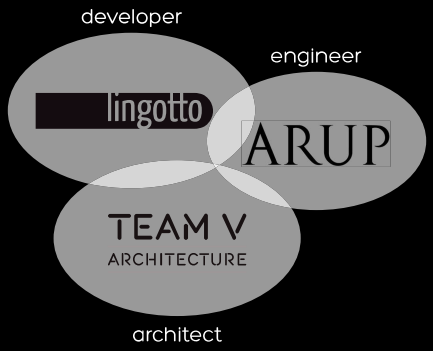
The River Beech Tower,
Academic design 2016, 80 storeys

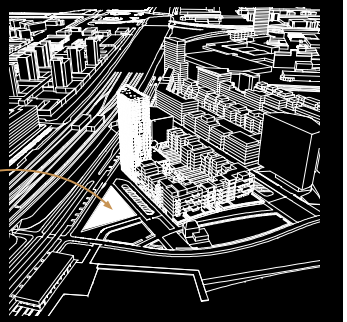
Oakwood Tower London,
Design 2016, ca. 85 storeys
Construction unknown



HAUT - THE BEGINNING

TEAM





COMBINING THE CITY'S AMBITIONS INTO A SINGLE SOLUTION

Architecture
Urban Design
40%

- Entrance to the neighbourhood
- Landmark for Amstelkwartier
- Activity and livelyness on all façades

Sustainability
30%

- BREEAM Outstanding

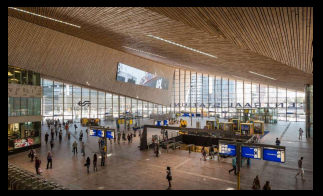
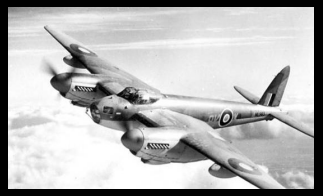
Financial bid
30%

- Future residents step in early and customise their apartment they become 'fellow clients'

WHY USE TIMBER?

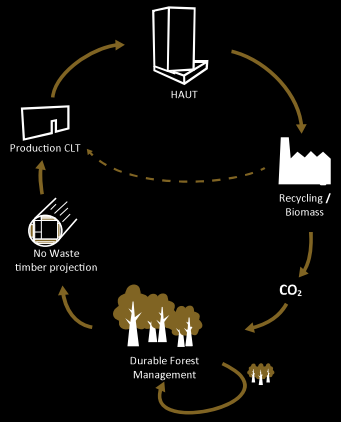
- Sustainable: carbon storage
- Flexible
- Aestetics
- Comfortable
- Light weight
- Speed of construction



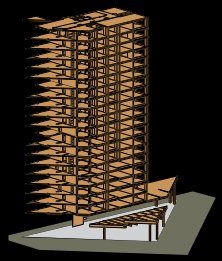
HAUT'S HIGH TECH TIMBER

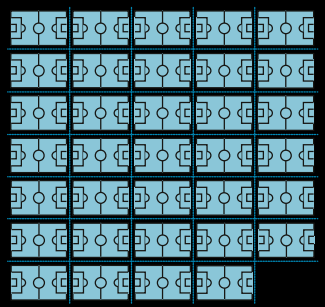






HOW MUCH TIMBER?





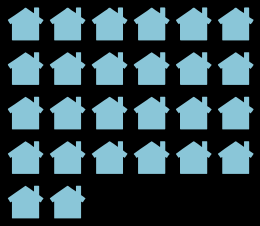
2700-3000 m^2 timber needed

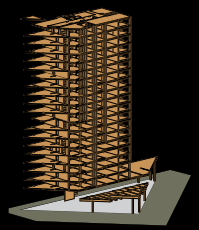
16-18 ha of trees
(1 ha equals 160 m^3 of timber)

Tha's is equivalent to aprox.
34 footbal fields of trees

CO_2 STORAGE

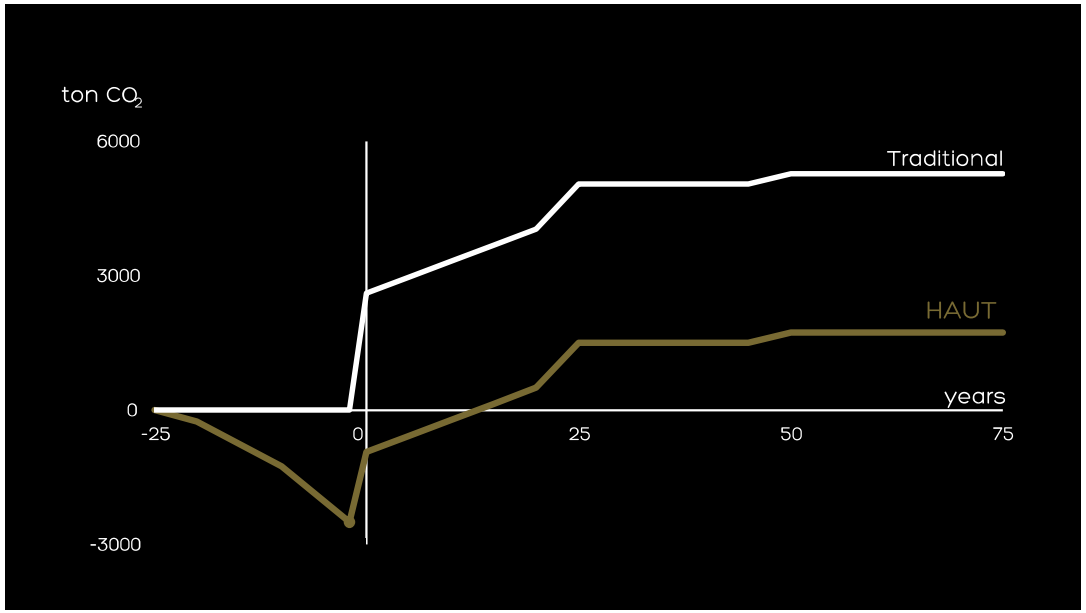
HAUT WILL STORE THE CO_2 EMISSION OF APROX. 26 HOUSEHOLDS



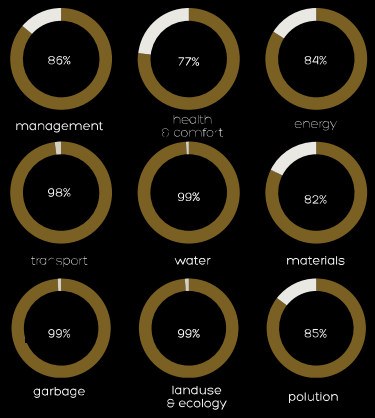
1 household > 8 tons of CO_2 p/ year.
(gas, electricity and car)

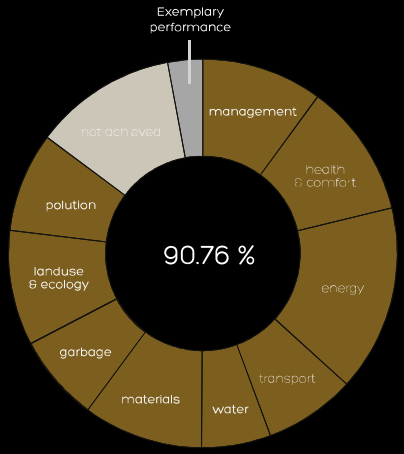
HAUT should store the yearly emission of 260 households.



HAUT'S SUSTAINABILITY

BREEAM OUTSTANDING CERTIFICATE





And the winner is...

HAUT, Amsterdam

Located in central Amsterdam just outside the historic canal zone, HAUT will provide 52 luxury homes in a hybrid building using timber as the main construction material. The judges agreed that this project significantly pushes the boundaries of high-rise timber modular construction to deliver high performance, quality dwellings. The focus of developer, Lingotto-Amsterdam, on the efficient use of materials and circular economy principles is impressive, innovative and highly replicable.

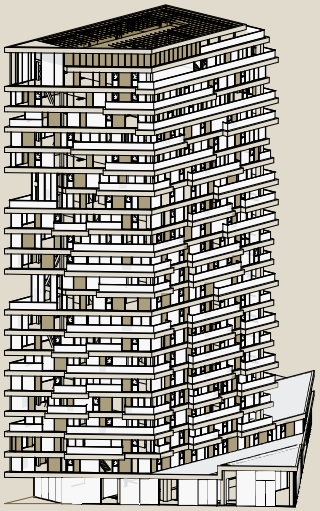
HAUT'S SUSTAINABILITY

PV PANELS

PV panels

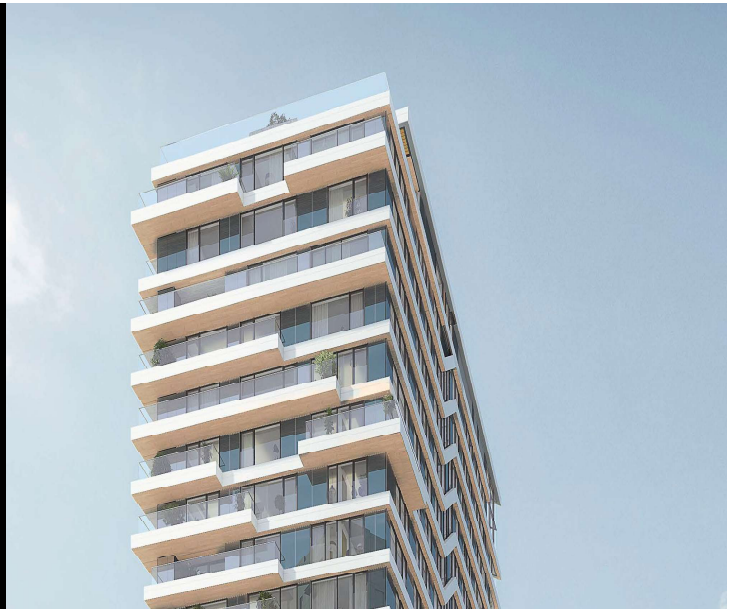
In the current design the following numbers are PV panels integrated in the facade and the roof.

North west facade	196 m
East facade	573 m
West facade	238 m
South facade	191 m
Roof	316 m2
Total	1.514 m2

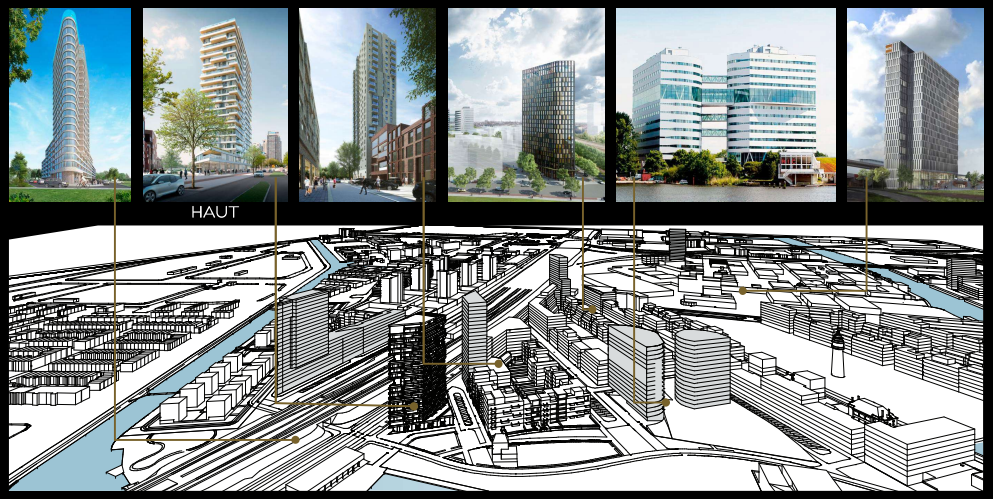


HAUT'S FACADE

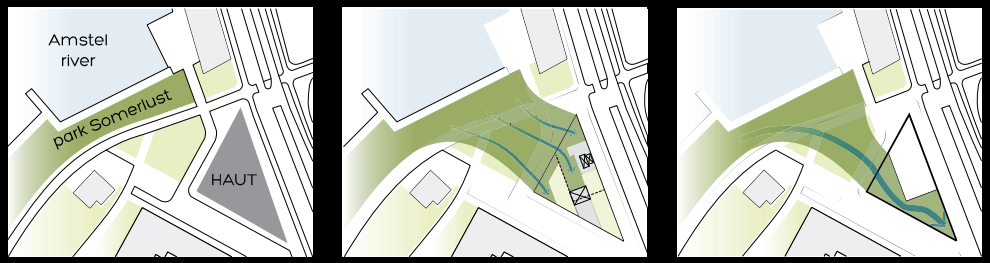
FIBRE REINFORCED CONCRETE, WOOD, GLASS, PV-CELLS



HAUT AS PART OF A NEW CITY QUARTER



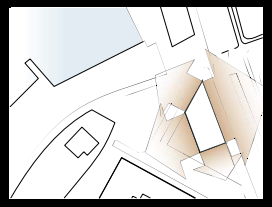
CONTINUATION OF PARK INTO BUILDING



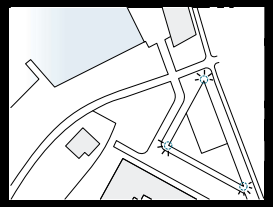
URBAN DESIGN TOWER

Entrees of HAUT

Strong horizontal articulation with extended and staggered horizontal bands as balconies

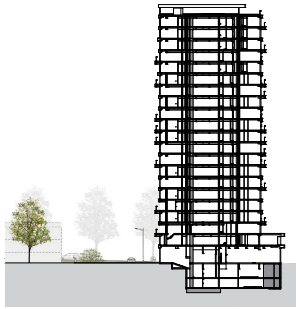


The building is oriented on all sides

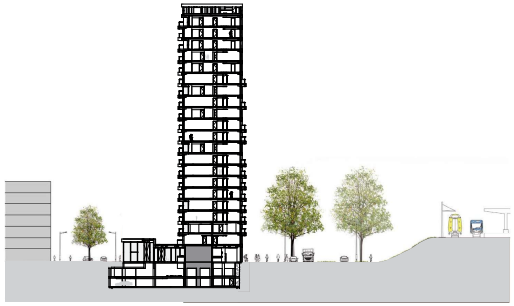


The corners of the plinth are specialized

Street profile: Korte
Oudekerkerdijk

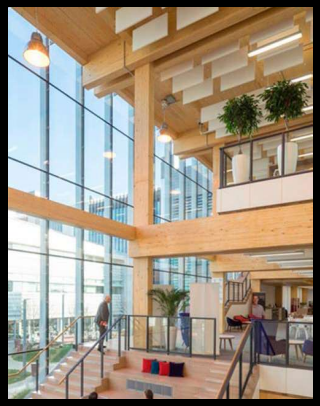


Street profile: Amstelbeststraat
and Spaklerweg



TIMBER RELATED CONCERNS

- High rise
- Moisture
- Fire
- Acoustics

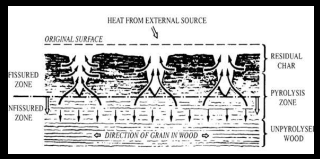


TIMBER RELATED CONCERNS
MOISTURE

- Temporary protection / construction tent
- Building sequence: placing façade as soon possible
- Wrapping construction elements

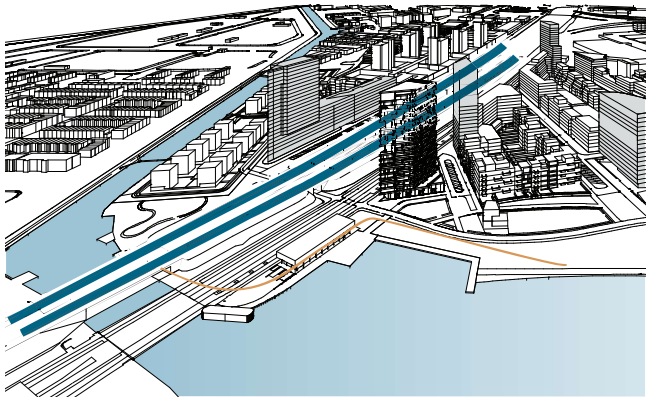
TIMBER RELATED CONCERNS
FIRE

- Timber structure as a fuel
- Preventing delamination
- Charring under fire conditions
- Threshold for self-extinguishment

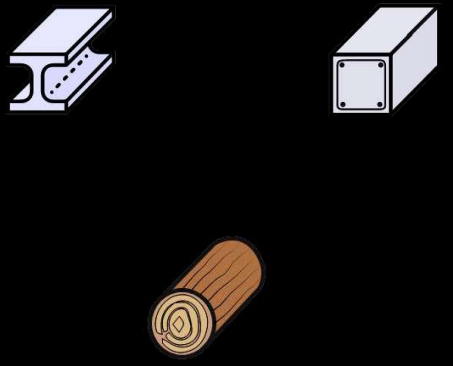


DESIGN DEVELOPMENT
CONSTRAINTS

- Embankment
- Train-tracks
- soil conditions



MAKING HAUT REALITY
HYBRID STRUCTURE



APARTMENT DISTRIBUTION

One apartment per floor

Two apartments per floor

One apartment per floor two floors

Two apartments per two floors

Three apartments per floor

Four apartments per floor

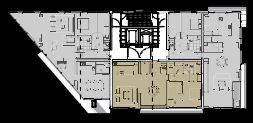
six apartments per two floors

APARTMENTS

One apartment per floor

Two apartments per floor

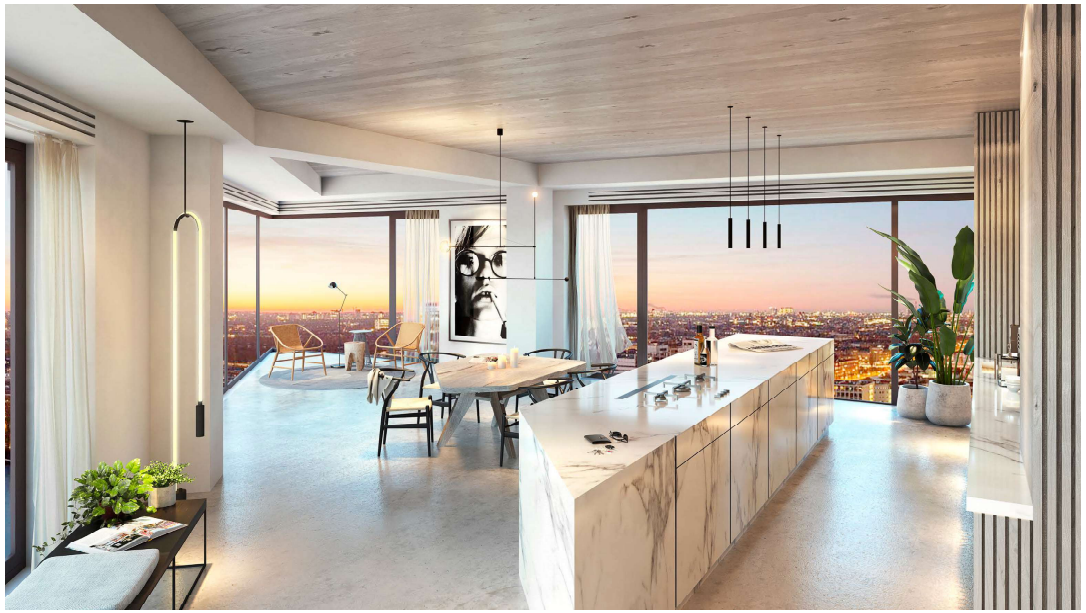
Three apartments per floor (1)

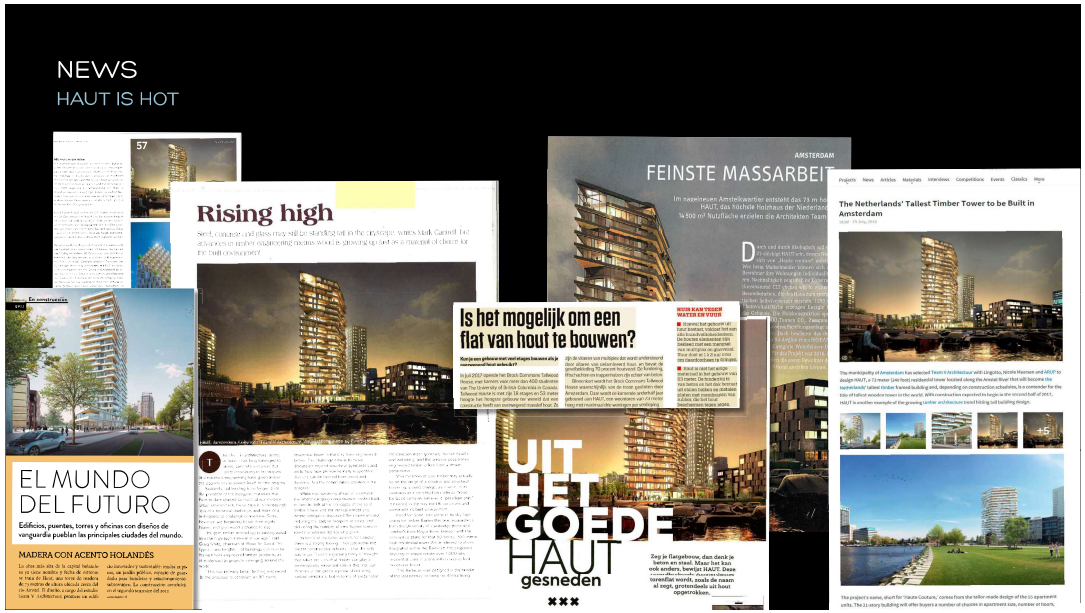


Three apartments per floor (2)

Four apartments per floor

six apartments per two floors




NEWS
HAUT IS HOT
Rising high
Is het mogelijk om een flat van hout te bouwen?
EL MUNDO DEL FUTURO
MADERA CON ACENTO HOLANDÉS
UIT HET GOEDE HAUT gesneden
The Netherlands' Tallest Timber Tower to be Built in Amsterdam


HAUT