# Wood construction the future of the high building ?

#### Holzhochhaus

Seeparkquartier Baufeld J5B



Rüdiger Lainer + Partner Architekten | lainer.at

**Oliver Sterl** 



# SHORTAGE

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## **CLIMATE CHANGE**

Mr. Ameen Fai

Minister of Defence

BEUCHAT

# URBANISATION

# **2%** of the earth's surface is consumed by cities

# **53%** of the world population lives in cities

**75%** of CO2 emissionen are caused by cities

# CONSTRUCTION MATERIAL WOOD



## FACTS AND FIGURES

Owner/Principal:	cetus Baudevelopment GmbH
Architecture and planning:	RLP Rüdiger Lainer + Partner
Planning of support structure, building physics and building services engineering:	RWT+ZT GmbH MZT Dr. Ronald Mischek ZT GmbH
Fire protection engineering:	Kunz - die innovativen Brandschutzplaner
Gross floor area:	25.000 sq. m.
Rental space:	19.500 sq. m.
Size of property:	3.920 sq. m.
Type of building:	high-rise using innovative wood construction technology
Number of floors:	24 floors
Height:	84 metres
Use:	commercial
Start of construction:	autumn 2016
Completion:	scheduled construction time 2 years
Investment volume:	approx. EUR 75 million



#### **KEEP IT SIMPLE**

# NUMPERADO

SIMPLE PROJECT IN AN COMPLEX URBAN SPACE SIMPLE PATTERN SIMPLE CONSTRUCTION SIMPLE COMMUNICATION SIMPLE TO UNDERSTAND

## URBAN DEVELOPMENT

VIENNA

CITY CENTER

URBANE PARTITUR 1993 RÜDIGER LAINER

SEESTADT ASPERN

SEEPARKQUARTIER

MASTERPLAN AIRFIELD ASPERN 2007 TOVATT ARCHITECTS





# SUSTAINABILITY





#### FLEXIBILITY



SHELL AND ACCESS





3. FLOOR: WELLNESS





5. – 9. FLOOR: BUSINESS





19. – 22. FLOOR: SERVICED SUITES



DIVERSE METHODS OF USE

1. FLOOR: FITNESS

5. – 9. FLOOR: BUSINESS

9. – 18. FLOOR: HOTEL

## **HYBRID CONSTRUCTION**



ATTACHED WOODEN STRUCTURE



















### ARCHITECTURE







# WALDREBE

Waldrebengasse

107 rental units
Kindergarten
12 units for assisted living
11 units for single parents
Wood construction system

## **"OBSYS" – OPEN CONSTRUCTION SYSTEM**





**BSH CEILING** 













**3D-ACOUSTIC CEILING** 



**CONCRETE** BACKBONE



#### Simple building

#### Horizontal core



#### **Construction elements** Easy to transport and simple on-site construction



*Facade* Simple wood composite with structured surface











#### Simple details

#### Construction

The house has got a concrete, mineral "backbone" with the technical infrastructure inside. Attached to this is a wooden construction with wooden solid ceiling, wooden pillars and solid wooden walls.

Reduction to 2 basic elements efficient economical realisation Horizontal shaft/core Flexible horizontal links





### **TYPOLOGICAL INTELLIGENCE**















#### **GARAGE WITH ADDED VALUE**



















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