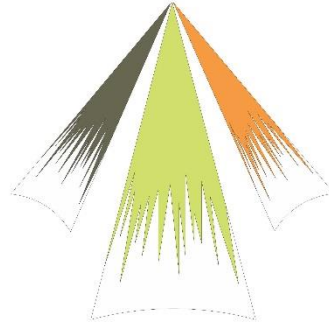


BENCH VALUE



BENCHVALUE EVENT

23/10/2019

Vienna, Austria

Case study Austria

Alice Ludvig, Bernhard Wolfslehner, Patrick Huber



Climate protection initiative

multi-layer wood-based construction
houses since the mid 90's

klimaaktiv



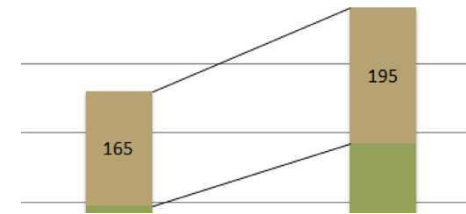
Aim:

Introduce and promote climate friendly
Technologies and services

Embedded in the federal climate strategy

Market transformation -> energy efficient
products and services

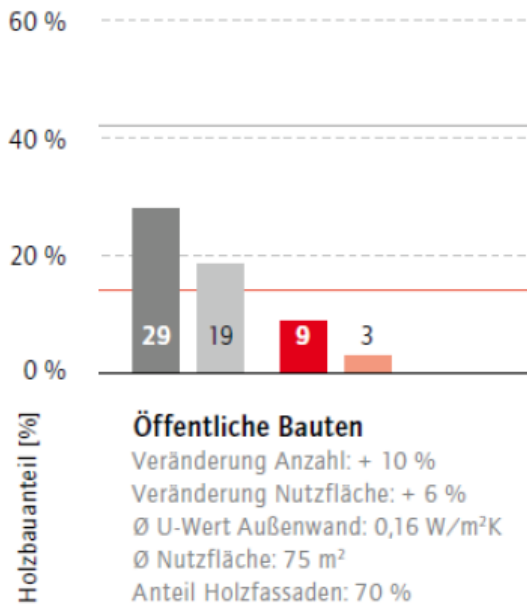
KLIMAAKTIV
GEBÄUDEREPORT 2017



GEBÄUDESTANDARD
KRITERIENKATALOGE



Wood construction in Austria



Public timber buildings

_ increase since 2008: + 6 % of floorspaces

_ market share increased especially for nurseries and school-buildings. (+ 14 %, 25 % in total)

_ Timber-buildings are comparatively small, they have an average floorspace of 75 m² only.

proholz Austria, 2017

Share of wooden buildings in Vienna:

23 % (all construction projects, in numbers)

9 % (volume)

BOKU, 2015

Recent projects

- LifeCycle Tower ONE (Dornbirn)
 - First timber hybrid high-rise building
 - 8 storeys, 27m
 - Passive house technology
 - Wood-concrete composite structural system
- Passive houses and Nearly Zero Energy Buildings
- Energy + buildings



Residential Buildings



5-storey massive timber block of flats in Linz (Rosenstraße)

Builder: Diözesane Immobilienstiftung
 design: x-architekten ZT GmbH
 Construction: Brüder Resch Hoch und Tiefbau GmbH

5-storey timber-frame block of flats in Leonding (Limesstraße)

builder: GIWOG
 design: Obermair Architekt
 construction: Obermayr Holzkonstruktionen GmbH

6-storey timber-frame block of flats in Wels builder:

WAG
 design: Architekten Luger und Maul ZT GmbH
 Construction: Obermayr Holzkonstruktionen GmbH

Prefabrication



Foto: proHolz-ooe.at

Prefabrication leads to short building periods and high quality.

Innovation



Hybrid-Constructions could change the game.

Foto: MMK

„HoHo“ building



Hard facts

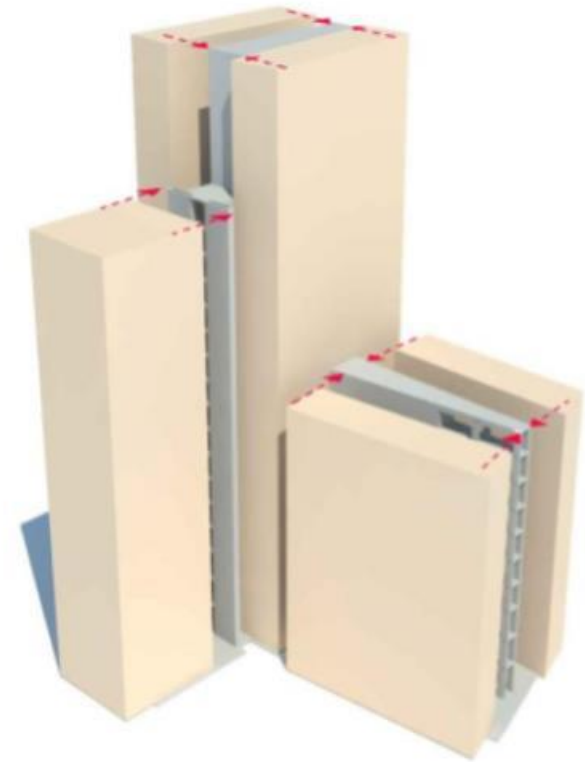
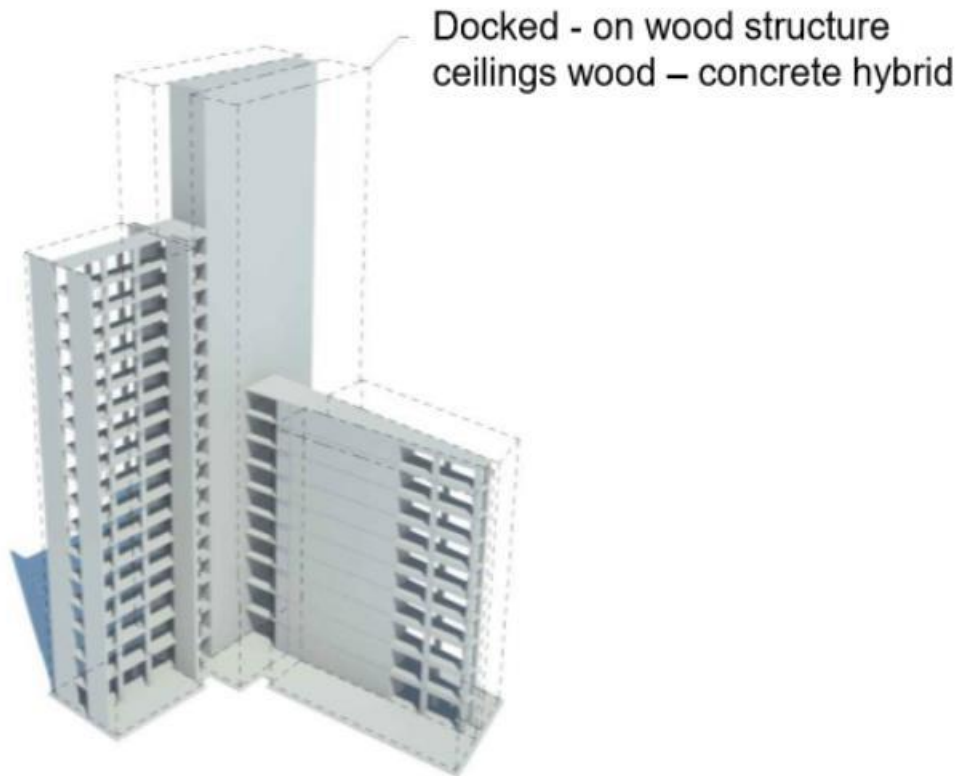
- 25.000 m² floor area
- 24 storeys
- 84 m high

Construction materials

- Vertical core = Reinforced Concrete (RC)
- Columns = Glue Laminated Timber (GLT)
- Wall panels = Cross-Laminated Timber (CLT)
- Ceilings = CLT + RC (hybrid) = XC
- Edge beams = precast concrete



Principal structural design



Reinforced concrete core
(horizontal stiffening system, cast-in-place)

Attached timber structure
(vertical load bearing system, pre-fabricated)



„HoHo“ benchmarks

- To date: Second highest wooden building in the world
- Total costs: **€ 65 million**
- **3,600 m³ wood** (entire construction)
- **300,000 mWh energy savings**

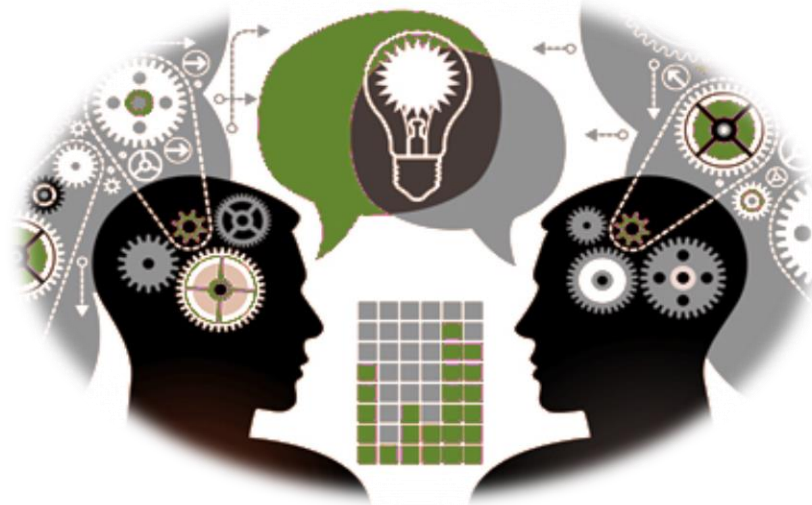
Stakeholders



WOSCHITZGROUP
WE ADD STABILITY TO VISION.



MINISTERIUM
FÜR EIN
LEBENSWEERTES
ÖSTERREICH



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Austria



Thank you for your kind attention!

