



## D4.1 Development and dissemination of leaflets specific to each case study

### 1. Background

For many centuries building with wood was natural and almost self-evident in Austria. The first wooden houses which were made of vertical logs driven into the soil, date back to the Young Stone Age. Log houses have always been—and still are—the typical construction type in rural areas. These buildings represent mainly farmhouses. From the beginning of the 20th century, wood has been gradually replaced as construction material but recently timber construction is being reinvigorated and becoming popular again. Austria's building sector is implementing multi-layer wood-based construction houses since the mid 1990's. In light of climate change adaptation, efforts towards energy efficiency increased on a national level and gained momentum via the Austrian climate protection initiative "klimaaktiv" that aims to introduce and promote climate friendly technologies and services. It is embedded in the federal climate strategy and fosters market transformation towards energy efficient products and services. The klimaaktiv building standard is the guiding principle for environmental and energy-efficient design throughout Austria. Several buildings have been assessed via the klimaaktiv standard and allow for comparison along sustainability dimensions, bridging current state of knowledge, practical applications and the legal framework.

### 2. Case study description

The Austrian Case Study builds upon a showcase project in Vienna, embedded in the lake city Aspern (part of the 22<sup>nd</sup> district of the City of Vienna). The "HoHo" (i.e. Holzhochhaus in German) is to become the world's tallest wooden high-rise building in the world once it's finalized.

The designers and architects planned for different purposes:

- Ecological integrity
- Functionality
- Adaptability / flexibility
- Energy efficiency

As a demonstration project to pinpoint what might be possible with the use of wood in high-rise buildings, it shall mark a cornerstone to foster increased material use of wood in the building and construction sector at European level (and inspire architects around the globe).

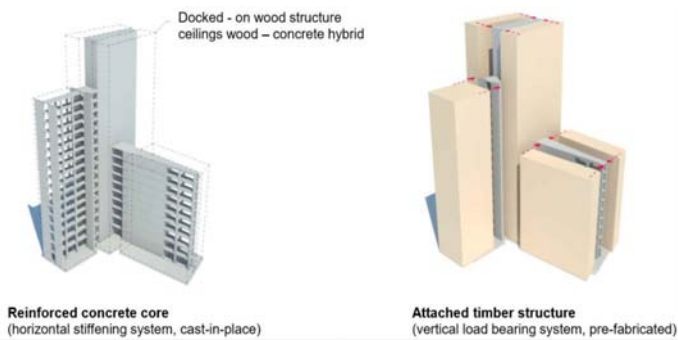


Roughly 3,600 m<sup>3</sup> of wood are used in the entire construction, corresponding to 0.6 per mill of Austria's annual surplus timber production.



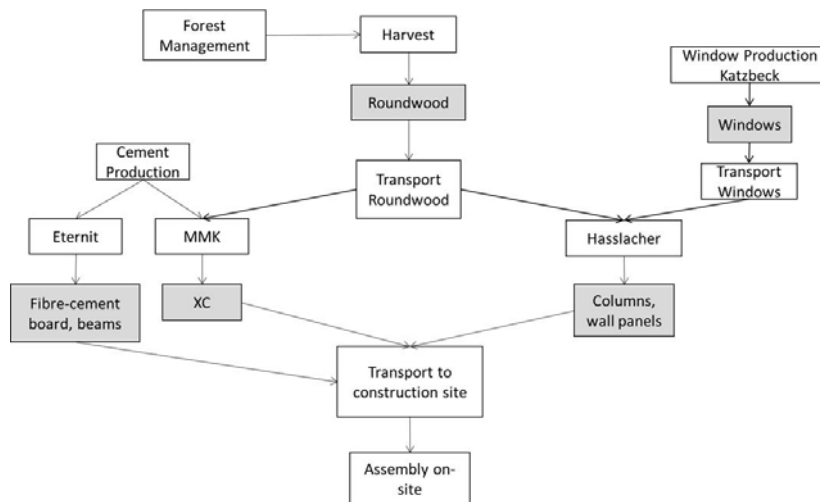


Key to its implementation are innovative products and a high level of prefabrication.



### 3. Results

According to HoHo responsible the use of wood avoids around 2,800 tonnes of CO2 equivalents compared to reinforced concrete construction. In addition, the HoHo Vienna construction method saves some 300,000 megawatt hours of primary energy. As the HoHo Vienna is still in its construction phase further results will be available during Spring/Summer 2019. A simplified model of the value chain is shown in the following figure.



### 4. Findings and Recommendations

To be added after analysis (spring 2019)

