

Timber construction convinces and gains market share



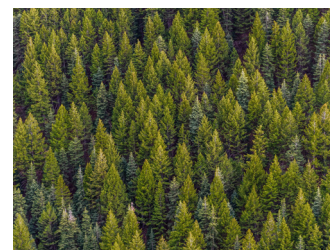
Timber construction is experiencing a real boom in Europe. Multi-family houses with over 300 apartments, commercial and industrial buildings, administrative buildings, hotels and high-rise buildings made of timber are evidence of this.

The use of timber in construction has increased continuously over the last few years, a study by the Bern University of Applied Sciences shows. The proportion of wood construction is considerable: 22 percent of new commercial buildings, 11 percent of public buildings and 7 percent of multi-family houses.

These advantages of timber are convincing more and more building owners and architects.

Climate protection - Wooden buildings bind CO2

One cubic meter of timber relieves the atmosphere of around one ton of CO₂, because trees convert CO₂ into oxygen and carbon as they grow thanks to photosynthesis. The production of one cubic meter of reinforced concrete, on the other hand, causes around 500 kilograms of CO₂. Timber is therefore clearly ahead in terms of climate protection. Anyone who wants to contribute to climate protection today builds with timber.



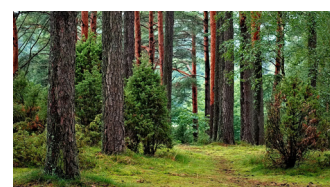
Construction time - ready in record time

Modern timber construction is fast: The elements are prefabricated to the millimeter and transported to the construction site. Large buildings thus grow in height in just a few days. Only three months after erection, the building is ready for occupancy if the craftsmen are well coordinated. A wooden building is clean, dry and pleasantly habitable from the first day.



Sustainability - Timber regrows

Timber is one of the few natural and renewable building materials. The production of beams and boards requires only little energy and no petroleum. The Swiss Forest Act stipulates that no more timber may be used than will grow back again. In fact, much less is used - so we can use our timber with a clear conscience.



Fire protection - Wooden buildings are safe

Timber must meet the same fire safety standards as reinforced concrete and even has advantages: Timber burns predictably and retains its load-bearing capacity for a long time even when the outside is charred. Larger wooden components hardly catch fire and go out again. Because wooden buildings are safe, high-rise buildings, hospitals and hotels have also been allowed to be built in wood since 2015.





Soundproofing - solved in modern timber construction

In the past, timber was more poorly soundproofed than concrete. Today, timber construction meets the sound insulation regulations without any problems. The most important element is multi-layer construction with good separation of the individual layers, which interrupts all sound bypasses. Good sound insulation also requires heavy but flexible layers. Fillings have proven to be suitable for this purpose.



Lightness - five times lighter than concrete

Timber is a lightweight building material, weighing only about one-fifth of concrete. The low weight brings advantages: The crane is only in use for a few hours, then the site is free again - an advantage for construction sites in the city. Timber is also ideal for adding storeys to existing buildings. Multi-story additions create impressive living space in good locations.



Logistics - efficient transport

A timber building requires around five times fewer site trips than a concrete building. Timber construction companies prefabricate elements for walls, ceilings and roofs with millimeter precision and transport them to the construction site in the correct sequence. According to a precise schedule, the timber building grows upwards at 10-15 elements per hour.



Comfort - lower heating costs

Timber houses are more comfortable than concrete buildings. The smaller the difference between surface temperature and air temperature, the more comfortable it is in a room. Timber has a higher surface temperature than concrete, steel or glass. Because this is the case, we feel more comfortable in wooden buildings - even if the room temperature is around 2°C lower.



Lifetime - Timber is durable

Timber buildings can live for hundreds of years, as the famous Valais granaries prove. Timber survives generations if it is installed and kept dry. Wind and weather give the aging timber its patina without weakening it. Where large canopies to protect against moisture are not possible, structural timber protection is important.



Versatility - mutable shape

Today, timber construction and modern architecture go hand in hand, even in urban environments. Every conceivable facade cladding, from clinker to glass and plaster to aluminum, is possible on a timber construction. Timber construction also sets no limits in terms of form. Because of this, more and more building owners and architects are using timber as a material for their showpiece buildings.

Living health - Wooden buildings breathe

Vapor barriers are passé. In timber construction, systems that are open to vapor diffusion are used. They support a pleasant living climate and prevent structural damage. Timber materials containing high levels of formaldehyde are also a thing of the past. Correctly selected and used, timber materials only release harmless quantities of the substance. [Lignum maintains a list of suitable timber materials for use in interiors.](#)



Availability - regional and abundant

Every year, 10 million cubic meters of timber grow back in Switzerland. Of this, we can use 7.5 million cubic meters. In other words, so much timber grows each year that we could build 600 single-family homes every day of the year or a school building every 15 minutes. Timber is also often available directly in the region. This saves transport routes and costs.



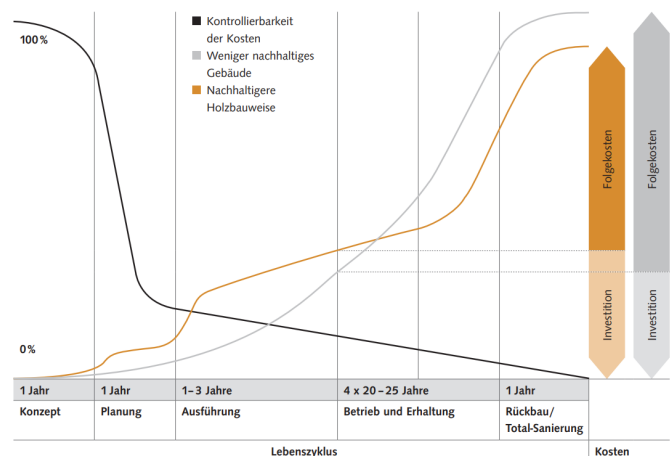
And finally - A wooden building is cheaper

Over their entire life cycle, wooden buildings are usually more economical than buildings made of steel. Therefore large and professional investors are increasingly turning to timber, even though the planning and construction costs can be slightly higher.

Several factors contribute to the economic efficiency:

- digital planning
- short construction time
- earlier commissioning/renting/sale
- lower heating costs
- lower maintenance costs
- lower deconstruction costs

Relationship between life cycle costs and construction



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