

Foreword

What are the trends that we can expect in 2023?

Digitalisation, mass timber innovation, sustainability...just buzzwords or real trends making real impact? For us in the industry, it's important to sort the fads from the real deal. Even in a trade as old as timber, buzzy trends can bring lasting change.

To see what's really making the timber trade tick, we've cut through the noise to identify the key trends yielding the biggest industry impact today. Whether consumer, economy, or environmentally-driven - each trend influences how we source, buy, and use timber.

So, we're asking: what's making the most tangible difference to the timber trade today? And what do these trends mean for the future of the industry? We've done the research, so you don't have to wonder.





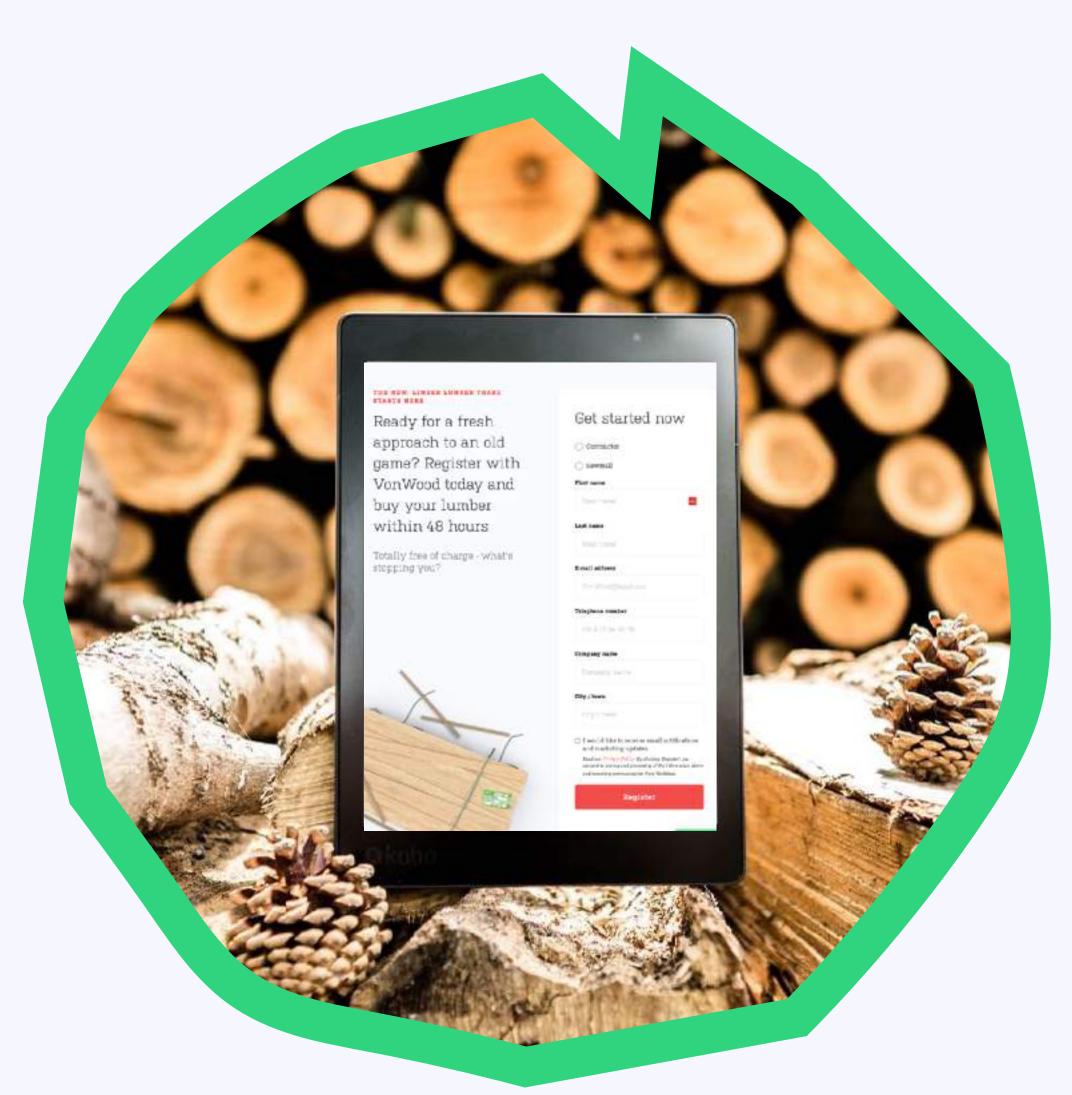
Trend 1:

Digitalisation

In the past, enhanced timber production efficiency largely came from improving the bulky machinery in use. Today, improving overall operations is tied to state-of-the-art harvesting technology along with extensive use of data. Despite the trade remaining tradition-conscious, digitalisation is already in the implementation stage, expecting to yield distinct advantages in paperless data management, transport cost optimisation, improved flow of goods, and enhanced machine utilisation. Meanwhile, cloud solutions are being implemented to ensure rapid communication with order management in timber logistics, improving overall operations.

Aside from efficiency, the benefits of digitalisation are being seen in other areas, improving not just logistics but also boosting sustainability. According to McKinsey, digital advances are helping the industry to simultaneously drive both sustainability and production efficiency. Enhanced access to high-quality digital information flows is making it easier to take sustainable actions in forestry. Digitalisation is key to better monitoring of forest areas, allowing for easier tracking of the development of ecosystems while following individual trees from the forest to industry and to the final finished product.

As these trends take off, further research is needed to fully develop the rapidly emerging industry technology, from methods using laser scanning to satellite images and data registered by harvesters. Nonetheless, as the technology becomes more established in the trade, we can expect their use to feature more predominantly in standard industry practice.



Trend 2:

Sustainable forestry; sustainable living

This one's a no-brainer - we know we have to think sustainably when we use timber today. Sustainable forestry is a core weapon in our fight against climate change and biodiversity loss. Market demand for sustainable wood products is on the rise, but the trend is further accelerated by legislation making it necessary for everyone to keep up. In 2022, the European Parliament voted in favour of regulations requiring companies to ensure wood products sold in the EU do not come from deforested or degraded land. While not yet law, the market now has impending legislation creating an urgent need for the market to implement enhanced sustainable practices. Combine this with growing consumer awareness, and sustainability in the industry is fulfilling both market and environmental needs.

In the <u>Netherlands</u>, there is already a high proportion of certified wood-based products in the market, thanks in part to the government promoting the production and consumption of sustainable timber with a comprehensive procurement policy and establishing the Sustainable Trade Initiative. Indeed last year saw the city of Amsterdam mandate that <u>20 percent</u> of all new housing projects in the city be constructed with wood or other biobased materials from 2025 onwards. Meanwhile, research demonstrates a high rate of consumer interest in sustainable practices in the Netherlands, with almost <u>80 percent</u> of Dutch consumers indicating that they consider sustainability in their purchasing decisions and consumer activity.



According to a 2022 report by Deloitte, consumers today are much more commonly seeking sustainable lifestyles than in the past. Everyday products typically produced from plastics, from toothbrushes to phone cases, are likely to be increasingly replaced by wood-based products as consumer demand for sustainable living continues. Sustainability now represents a sweet spot where consumer demand is meeting environmental interests and global industries are in turn being influenced. As the construction industry faces scrutiny for its polluting qualities as well as its high energy usage, attention is being redirected towards timber, which is the least energy-intensive construction material, requiring only 24% of the energy needed for steel production. Recent climate research further supports timber as the most sustainable construction material, finding that housing rising global populations in homes made from wood rather than conventional materials could avoid over 100 billion tonnes of greenhouse gas emissions by 2100.

Which leads us to our next trend...



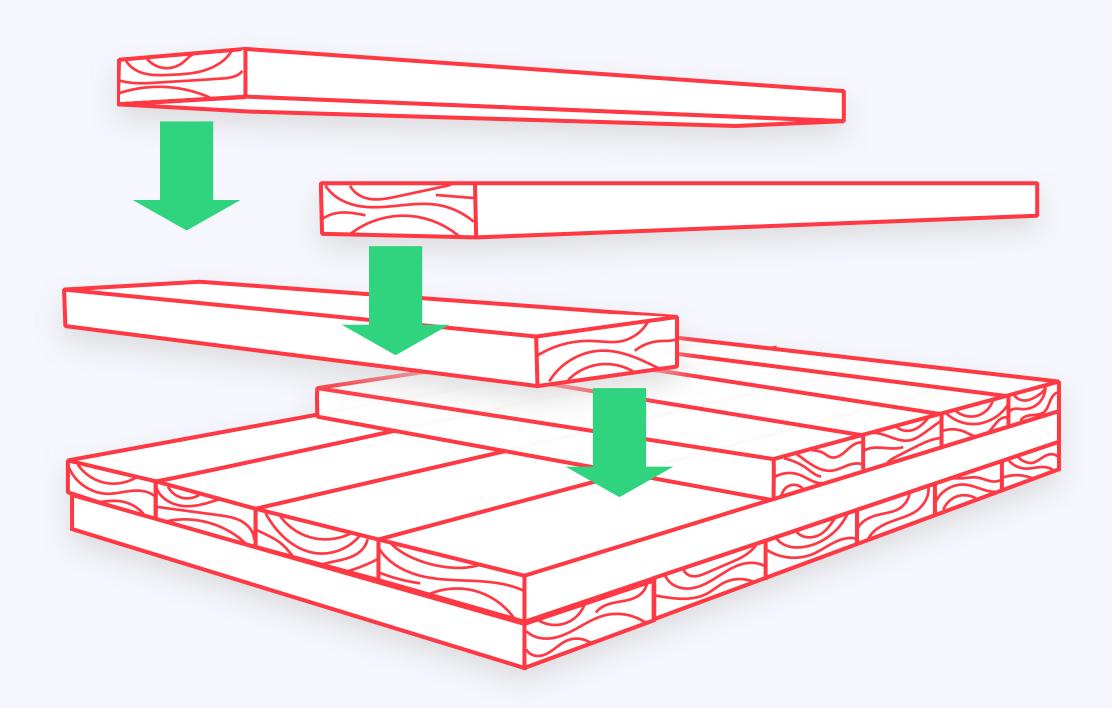
Trend 3:

Mass timber innovation - Cross-laminated timber

Mass timber innovation is making its mark on the wider industry as the most cost-efficient, energy-efficient, and future-facing construction material today, demonstrating the potential for transforming the face of tall building and tower construction today. Arguably the most important player within this trend is cross-laminated timber, or CLT, which is becoming an attractive alternative to concrete, even in urban areas. As an engineered wood product made by stacking layers of wood panels in perpendicular directions before fastening together, CLT offers faster, cleaner, and more cost-effective construction than traditional building.

Dubbed 'super-plywood', CLT is particularly popular for building in well-populated areas due to it being an especially quiet material to work with. First developed in Europe in the 1990s, the market is seeing fast growth today and expected to reach 2.6 million cubic metres by 2027, exhibiting a CAGR of 11.3% during 2022-2027.

CLT is inexpensive, flexible, and time-saving as a substitute to conventional construction materials such as concrete, steel, and masonry. As the most environmentally-friendly and sustainable alternative to conventional construction, it helps to reduce the amount of carbon dioxide present in the environment by trapping more than 1500 kg of CO2 per tonne. Its fire resistant qualities pose an additional advantage - in contrast to unprotected steel, CLT remains structurally stable when subjected to high temperatures and can withstand fires for between 30 and 120 minutes.



The conclusion? CLT is lightweight, environmentally friendly, and delivers safe and fast installation, all at a lower cost than conventional construction materials. Its growing popularity demonstrates the potential for mass timber innovation to maintain a prime position in the overall trade.



Trend 4:

Weaker supply security

Industry trends can come in lots of different forms, and unfortunately, they are not always the most exciting. This year, unsurprisingly, the war in Ukraine brought with it significant disruption to global timber supply. This continues to bear an undeniable impact on supply security, with sanctions against Russia - one of the world's <u>largest timber suppliers</u> - compounding with already existent security of supply problems. Prior to the war, supply issues were already beginning to cause problems, with demand for wood <u>outstripping</u> <u>supply</u> in 2021.

In April 2022, <u>EU sanctions</u> against Russia specifically included wood products, prohibiting the purchase, import, and transfer of such products into the EU if of Russian origin. Longer-term sanctions are likely to weaken supply security further, with countries previously reliant on materials from Russia, Ukraine, and Belarus to seek building material imports from others such as Scandinavian countries. In the <u>United Kingdom</u>, the government is already projecting that the upward trend in demand will not be met with proportionate supply by the 2030s.

Meanwhile, the combination of rising inflation and energy prices is putting additional strain on a struggling supply chain. The result is likely to see policymakers scrambling to prioritise supply security and resilience during this continued period of global instability, with current temporary measures becoming long-term features of the industry. Building up domestic timber industries takes time, effort, and significant government investment. While weak global supply may trigger calls for increased domestic investment in the industry, it is more likely that many European countries will look to North America to better meet continued demand in the meantime.





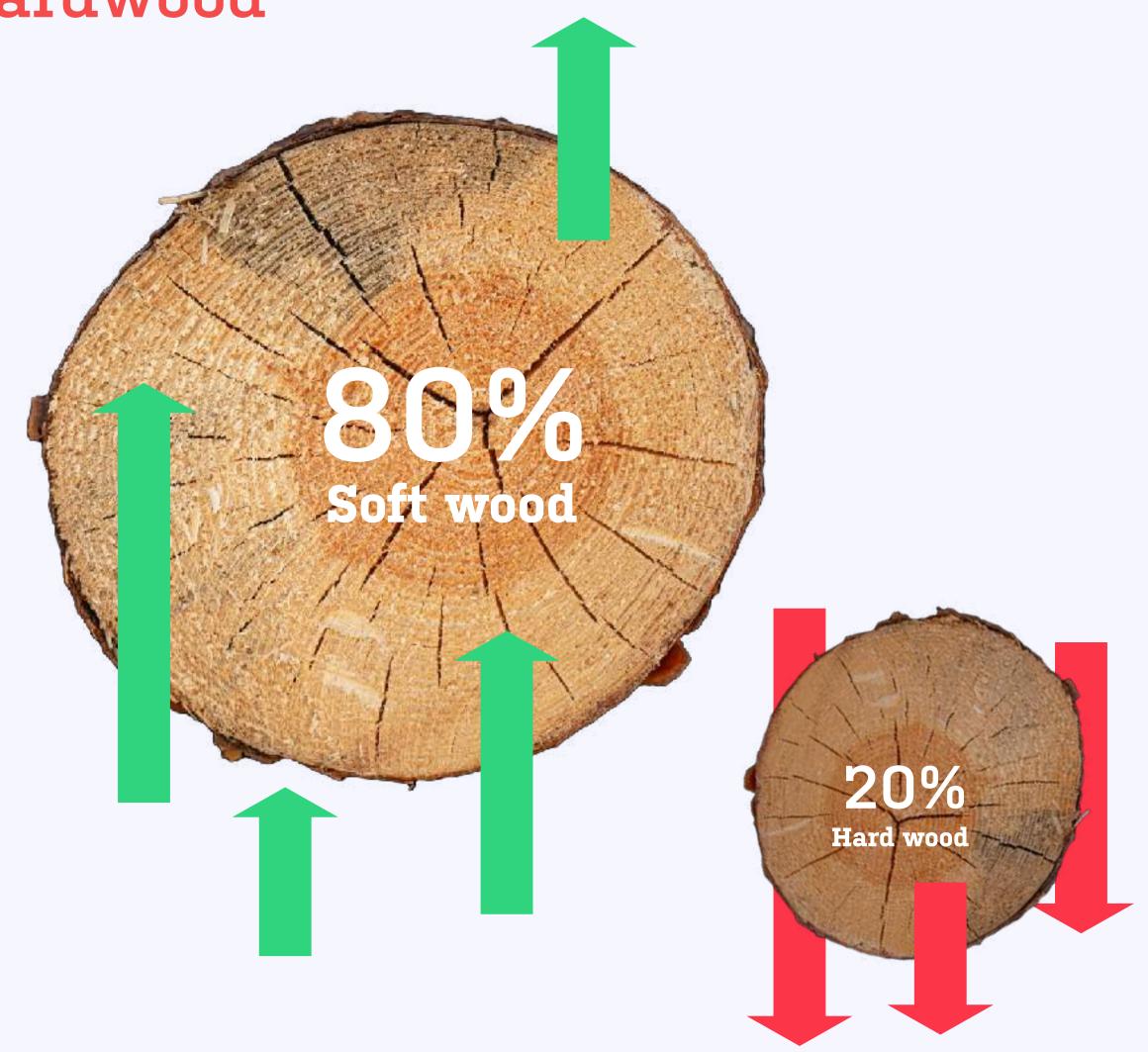
Trend 5:

Softwood making gains against hardwood

Over the past two years we've seen steadily rising prices of timber culminating to an all-time high in May 2021, driven by record levels of demand and mounting supply chain issues. Steep highs have since been followed by sharp drops in price, but persistent fluctuation and rising inflation are leaving many consumers looking for cost-efficient and reliable timber. Emerging from all of this volatility? A wood that checks both these boxes.

While the durability of hardwood has long solidified its reputation as a supreme and resilient timber, it is softwood that consumers turn to for a less costly but arguably equally trustworthy timber. Both its workability and affordability are two attractive qualities of softwood, contributing to the material's increased popularity in more trying economic times. Lower costs here are key: softwood trees grow more commonly meaning they are easier to source as well as quick to regrow, while their shorter market life also makes softwood timber much more affordable than its hardwood counterpart.

The higher costs and slow growth rate of hardwood mean softwood is an appealing option amidst supply chain uncertainty and rising inflation. While softwoods currently account for approximately 80% of the timber used in construction, this is likely to rise further. Rising post-pandemic costs were already driving the popularity of softwood in 2021, when larger amounts of the material were reported as being exported from an increasingly diverse range of countries. Meanwhile, as the popularity of CLT grows, so too will demand for softwood, as CLT panels are typically made from a variety of softwoods.





Trend 6:

Supply chain transparency

Supply chain transparency is no longer an interest reserved for those operating within the industry, with consumer interest in the topic gaining new traction today. According to Deloitte, 35 percent of consumers trust businesses that have a transparent, accountable, and socially and environmentally responsible supply chain. Of course, for forestry, supply chain transparency is a lot more than just a trend - it is in fact a crucial tool to combat deforestation, particularly in regions across Asia, Africa, and Latin America. As one of the most important ways of cutting carbon emissions, supply chain transparency will prove central to sustaining the timber industry in the coming decades.

In recent times, persistent illegal logging has been a crucial impetus for the drive towards increased supply chain transparency, with the <u>European Parliament</u> flagging it as a global problem bearing significant negative economic, environmental, and social impacts. With greater supply chain transparency, the forestry industry can combat the knock-on contribution to deforestation, climate change, and biodiversity loss. Businesses and forests alike are therefore under pressure to deliver enhanced transparency, safeguarding trust in their operations and boosting legal forestry.

Meanwhile, new technology is boosting transparency, particularly among non-profit organisations. <u>Blockchain technology</u> is making significant advances in this respect, enhancing the traceability of timber supply chains by enabling stakeholders across the supply chain to utilise secure blockchain-powered applications which store all relevant information in one place. The result yields improved efficiency, transparency, and overall security. With the <u>World Bank</u> stating that the annual global market loses USD \$10 billion annually from illegal logging, and governments losing an additional US\$5 billion in revenues, supply chain transparency is more than just a trend - it's become an economic necessity as well as an environmental one.





Trend 7:

Modular construction

Modular timber constructions are a tried and trusted option for anyone seeking an affordable, flexible, and ecological option for building - whether it's for a home, office, or any other purpose. The COVID pandemic proved the value of modular construction as a quick and cost-effective method of building, from delivering COVID testing hubs to data centres upon demand. This key benefit of faster completion time has turned more numbers towards modular construction, particularly as the constructions are ready to use pretty much upon installation.

But of course, there are other reasons driving the popularity of modular construction at the minute: from an environmental perspective, the construction process yields minimal waste, particularly in comparison to traditional on-site construction, where it is estimated that 30-40 percent of the materials go to waste. This is in stark contrast to just 2 percent of material waste in prefab or modular construction. Moreover, 80 percent of project activity takes place offsite, meaning that noise pollution is minimal and the level of inconvenience to neighbours of surrounding areas is relatively low.

Modular construction is especially suited to building in many EU countries like the Netherlands, with standardised row houses common. 93 percent of Dutch contractors reportedly having supplied modular constructed projects in the past. Countries like the Netherlands need to build millions of new homes by 2035, modular construction is readily available to increase housing supply while also contributing to those country's green ambitions of curbing nitrogen emissions created by conventional construction activity.

Increased urbanisation and industrialisation mean the modular construction market is undoubtedly on track to <u>expand</u> further into the future, spurred on by the need for cost-effective proven technologies providing uniform quality and quick construction time. Likewise, with rising inflation driving demand for cost-efficient spending, modular construction can be expected to solidify its reputation as an inexpensive option for building into the future.



If recent times have taught us anything, it's that timber is still teaching us new tricks. Each emerging trend demonstrates that the trade has the potential to adapt in the face of industry challenges - and even thrive. For an old trade, we're continuing to find new ways to work better with wood.

At VonWood, we believe in the power of taking timber into the future. In today's world, this means many things: adopting sustainable practices to safeguard our earth and our trade, marrying new technology with old industry, and facing head-on the changes that might come our way.



