



# RAISING THE BAR



## CHALLENGING TRADITIONS. GROWING AMBITIONS.

THE KEY TRENDS AND CHALLENGES AFFECTING MATERIALS HANDLING ACROSS THE TIMBER SUPPLY CHAIN

### // BACKGROUND

The use of wood for manufacturing products goes back to the starting point of civilisation, with wooden artefacts discovered from 400,000 years ago. Hyster itself has a long history in the lumber industry, originating from a US logging equipment manufacturer formed in 1929.

Still today, wood is as much of a key resource as ever, seen commonly in the production of furniture, construction products, and more. Considering its long history, it is no surprise that this sector has been one of the more traditional industries when it comes to materials handling.

However, with a changing world and a changing market presenting new challenges, trends and opportunities, the wood sector is evolving. So how can materials handling equipment play its part in helping this sector thrive?

### // THE BIGGER PICTURE

Before we look at the specifics of materials handling in wood applications, it is helpful to understand the industry as a whole.

The wood industry includes lumber and wood (raw material) and product manufacture such as furniture and other palletised goods, with the European wood-based market size estimated at GBP21 billion (EURO23 billion).

Europe is one of the top wood producers in the world, alongside the US, Canada, Russia, and China, with Sweden, Finland, Germany, and France the key contributors to this. Meanwhile Tropical Africa boasts a great deal of quality wood species for export which are in great demand, and at relatively high value, globally, such as teak, mahogany, ash and cherry.

World lumber markets peaked in mid-2018, but since have been in a period of decline. Both global economies



## CHALLENGING TRADITIONS. GROWING AMBITIOUS.

and wood product demand slowed, creating an oversupplied market with weak commodity prices.

However, the industry does show signs of recovery globally – despite the challenges posed by the COVID-19 pandemic in 2020. For instance, in the UK, imports of tropical wood and wood furniture increased in value by more than 30% between September and October 2020\* and hardwood sales returned to 90% of usual (pre-Covid) volume.\*\* Meanwhile in the US, lumber prices went from a low of \$250 per 1000 board feet in April, to a high of \$1000 in September.\*\*\*

In the Middle East, the timber industry is also expected to experience expansion, partly driven by the growing construction industry in the region. Though Covid-19 has certainly impacted levels of demand as some planned construction projects have been unable to be completed. The wood furniture and fixtures market is also seeing greater demand as office space usage in countries like the United Arab Emirates and Saudi Arabia increases. Imports of wood to Iraq, Kuwait and Bahrain are also moderately increasing.

And global wood production and recovery in the industry is anticipated to grow, due to initiatives that support companies that lead sustainability efforts, and an expected increase in import and export to meet the demands of the wood construction and furniture manufacture segments.\*\*\*\*

However, in Europe, the Middle East and Africa there is no guarantee of what lies ahead. There is continuing uncertainty following the Coronavirus pandemic, as well as unanswered questions on how the outcome of BREXIT will impact the sector. Bark beetle attacks throughout central Europe also remain a cause for concern. With purchasing still heavily influenced by the state of the economy and uncertain financial times ahead, ensuring uptime, increasing productivity, and realising a low Total Cost of Ownership for materials handling equipment become all the more important for wood applications keen to remain competitive in the market.

### // MEETING GREATER DEMAND, WITH LESS

The industry shows signs of recovery, all while timber applications find themselves under economic pressures, and are working hard to recover from the inevitable disruptions of Covid-19. This increasingly puts businesses in the wood industry under pressure to do more with less.

Uptime is critical, and the right materials handling equipment plays a big part in keeping operations running. However, often these trucks are big, heavy, and expensive. In the case of raw materials handling, non-standard attachments may also be needed that require extra investment.

Consolidating a materials handling fleet is one way that these businesses can reduce costs, while still retaining a focus on productivity. At Hyster, we have seen many enquiries for dual purpose solutions – lift trucks that





## CHALLENGING TRADITIONS. GROWING AMBITIOUS.

can be adapted from handling one type of load to another with easily exchanged attachments, and equipment that is equally tough for outside operations as it is indoors. Lift trucks that provide a balance of versatility, performance, fuel consumption and power are in demand.

These challenges for wood applications are also driving the use of fleet management and telematics systems, like Hyster Tracker, to help ensure a right-size fleet, utilised correctly to drive efficiency while optimising operator performance.

### // ALTERNATIVE POWER

More and more, the timber industry is looking to alternative power options and how these could benefit its materials handling operations. Even applications which in the past have always used an IC engine forklift are enquiring about lift trucks powered by lead acid or lithium-ion batteries, as well as hydrogen fuel cell technologies if there is sufficient infrastructure. Electric lift trucks no longer have the reputation of only being suitable for indoor operations, and often are plenty tough enough for wood applications, from sawmills, to those creating board and building materials, through to operations handling wooden furniture. And with the right battery management, lift trucks can offer increased run times.

Small electric trucks are nothing new, but for larger trucks at the 8-tonne lift capacity mark and higher, it is important to analyse if an 80V truck will have the strength to deliver the productivity needed. 350V lithium-ion Big Trucks are now in the market as credible IC alternatives. Lithium-ion trucks offer the potential for opportunity charging, maximising operational uptime and importantly, they also have the potential to greatly reduce emissions, bringing us onto our next trend.

### // THE GREEN AGENDA

In certain regions there are legal limits on the types and quantities of wood that can be used to protect against deforestation, in Tropical Africa for example. However, sustainability is a key focus throughout the wood industry and responsible forest management is an important goal for many producers of finished wooden products and building materials.

This 'green' approach extends through to materials handling fleets.

Choosing zero-emissions electric lift trucks is common in applications which are aiming to meet emissions targets, whether for corporate or legislative reasons. There is often a cost benefit too.

It is fairly common for timber processing and manufacturing operations to be located near to, or to have on site, biomass power stations. This provides a rich source of energy, which can provide these applications with a cheaper power source that enables them to charge lithium-ion lift trucks at their site with optimal cost efficiency.

In these cases, being able to use this source of power to charge electric lift truck batteries provides a highly sustainable and environmentally friendly solution, and





## CHALLENGING TRADITIONS. GROWING AMBITIOUS.

encourages these applications to increasingly embrace and integrate electric equipment solutions, all while reducing their overall Total Cost of Ownership.

In certain wood applications, such as those producing MDF or wood panels, operations are already highly optimised and efficient. However fleet electrification provides a further opportunity for these businesses to maximise cost savings while maintaining high productivity levels.

### // EMBRACING TECHNOLOGY

Though the timber sector is a traditional industry, it is one which is increasingly embracing new technologies, driven by a need to maximise productivity and streamline processes and sites.

In the forestry sector for example, mechanising historically manual processes with the right equipment is helping to boost productivity. In Sweden, it is reported that with better data and increased automation, productivity per worker has increased by 300 per cent over the past 25 years. \*\*\*\*\*

In some markets, there are also incentives and schemes driving digital adoption. In the UK for instance, the Made Smarter initiative connects manufacturers with the digital tools, industrial innovations and skills needed to make an everyday difference to their manufacturing. This is an opportunity for businesses in the wood industry to explore automated materials handling equipment solutions.

Meanwhile, the warehousing sector is increasingly automating repetitive processes to increase efficiency. Eliminating the human factor from materials handling equipment may result in time and cost savings in the right setting. Workers previously carrying out recurring actions on a lift truck, can be freed up to put their skills to use in more added value processes. Incidences of

product and equipment damage may also be decreased with automation.

Automation also provides a practical solution to labour shortages. Though employment levels in the wood industry show signs of recovery over the past 10 years, after a steep decrease from 2008 to 2010, there may still be a lack of the required skills in some applications. A worker who may once have been required to only drive a forklift, may now also be order picking and commissioning too. Employees increasingly need to be multi-skilled.

A smaller pool of candidates and a high turnover can also leave timber businesses with a less experienced workforce, which in turn can lead to lower productivity levels or more damage to the product or facility. Technologies such as lift truck object detection, pedestrian detection, awareness lights, load overload indicators and telematics all play an important role in these scenarios. More IT is moving into the forklift operator's cab, with increasingly visual





## CHALLENGING TRADITIONS. GROWING AMBITIOUS.

digital displays at the least. However, new technology doesn't always mean IT, robots or interesting gadgets. Something as simple as replacing rollers with sliding pads on the front end actually eliminates the need for regular greasing, saving time and money. This simple detail, included as standard with Hyster® lift trucks, is fantastic for the wood industry and solves a regular problem associated with the dusty environments.

### // CONSTANTLY TOUGH CONDITIONS

Wood handling operations are typically rugged, dirty, and tough environments. Extreme cold or heat can push materials handling equipment to its limits, and trucks (and their operators) must contend with rough, uneven surfaces. Large, heavy timber loads also make visibility challenging, particularly for tall loads in front of the operator that are often 4m wide.

Having experienced a difficult few years economically, applications may also be forced to use an ageing fleet, leading to expensive repairs and costly downtime, which impacts productivity. One solution to this particular challenge is having local support for lift truck parts and maintenance. Fleet management systems can also help manage maintenance to extend equipment life and minimise downtime.

Considering the toughness of wood applications, it is no surprise that typically operators are influential in decision making around materials handling equipment. Safety and driver ergonomics are key for operators, who will benefit from lift trucks that offer ergonomic and technologically advanced features, with superior

operator comfort, precise handling, and easy entry/exit to the cab (their workplace).

However, to reduce overall costs, applications should always seek lift trucks that are designed for maximum reliability, with robust powertrain, strong axles and mast, and durable components throughout.

Attachments that enable equipment to be dual function for versatility, performance and fleet efficiency will also help optimise operations.

## WHAT DOES THE FUTURE HOLD FOR THE WOOD INDUSTRY?

Though 2020 has taught us that you cannot always predict what lies ahead, optimising fleets with tough materials handling equipment and assistive technologies is a good way for wood applications to be prepared as the sector recovers.

Hyster can help. With lift trucks designed to be tough enough for challenging wood handling environments, advanced technologies, extensive fleet management capabilities and smart robotic solutions, a full suite of solutions is available to support the timber industry. What's more service, support, maintenance, parts, and aftermarket solutions are available from the global network of local Hyster® dealers.

Find your local Hyster® distribution partner or reach out to our wood industry specialists now.

[www.hyster.com](http://www.hyster.com)

\*[http://www.globalwood.org/market/timber\\_prices\\_2020/aaw20201101e.htm](http://www.globalwood.org/market/timber_prices_2020/aaw20201101e.htm)

\*\* [https://www.globalwood.org/market/timber\\_prices\\_2020/aaw20201102e.htm](https://www.globalwood.org/market/timber_prices_2020/aaw20201102e.htm)

\*\*\*<https://www.mpamag.com/news/why-have-lumber-prices-been-so-high-this-year-239702.aspx>

\*\*\*\* [http://www.stackyard.com/news/2019/11/environment/06\\_tilhill\\_report.html](http://www.stackyard.com/news/2019/11/environment/06_tilhill_report.html)

\*\*\*\*\*<https://www.mckinsey.com/industries/paper-forest-products-and-packaging/our-insights/data-the-next-wave-in-forestry-productivity>