

# The Need to Move to Lightweight Wood Panels

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In 2016 the Turnover reported for IKEA was Euro37.4 billion (USD45 billion) with year on year increases of nearly 10% and a Gross Profit of Euro16.1 billion. You may ask how can a furniture business established in 1956 achieve such global success in a 'low tech business'? Part of this success story is due to the evolving concept of the 'Flat Pack' Assembly idea. The founders of IKEA realised that transportation and distribution was a tremendous opportunity to save costs and thus reduce prices. By designing furniture delivered and sold in 'Flat Packs' as much as 75% of the space for storage and logistics could be saved. The next evolutionary step was in terms of 'smart design' to reduce the number of components and simplify the assembly complexity. Where can furniture manufacturers and retailers look for further improvements? This is where 'Lightweight Panels' and 'Engineered Boards' come in to play. It has been reported that for a mere 30% reduction in weight the cost saving can be as much as 50%. First and foremost you reduce the amount of material being used but the savings continue through to lower manufacturing energy costs and on to further savings in terms of handling, logistics and storage. Light weight components are also easier to handle and assemble. Quality is not compromised if the design is good and opportunities arise to enhance properties with the correct engineering.



Almost everyone has concerns about the environment and the sustainability of wood resources in particular. No one questions the importance of forests as the lungs of the planet and the ecological value of its timber resources. We also accept the concept of basic human rights and the need to raise the living standards and more evenly distribute wealth within our current 7.5 billion inhabitants. It is vital to note that the global population is estimated to grow to 10 billion by 2050 and this growth will be predominantly in developing countries. The next question is how do we satisfy this growing demand for consumer goods, including housing and furniture? Timber should be the material of choice due to its green credentials, it is renewable and has a far smaller carbon foot print than plastics, metals or concrete. The only way to increase production to satisfy this rise in consumption of goods is to ensure that, sustainable resources are optimised in terms of usage and recyclability.

So in the case of IKEA we have a very strong economic argument on the merits of designing and engineering lightweight materials. And we have an even stronger moral obligations to ensure we optimise the natural resources we currently have available to ensure the sustainable development for emerging economies and for future generations globally.

The potential of engineered lightweight panels are limitless they can be designed for specific uses such as thermal insulators, acoustic insulation, fire retardant, structural strength and custom design. I am confident that both commercial and ecological pressures will necessitate a whole range of new and exciting Engineered Panels of which lightweight panels will form a significant proportion. There will always be a demand for solid wood, plywood, OSB, Particleboard and MDF, but the innovation and future growth will increasingly come from newer Engineered Lightweight Panels. ©