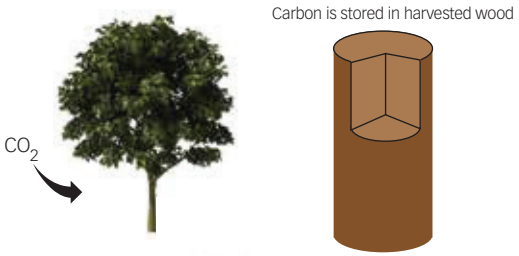
Building with Mass Engineered Timber

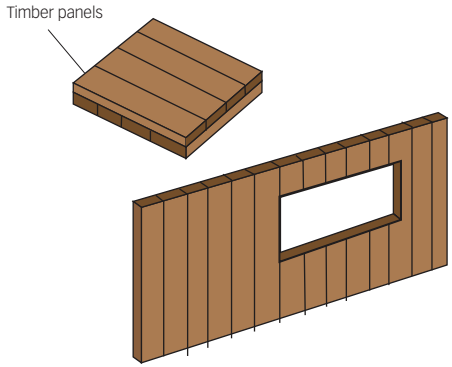
The Nanyang Technological University's sports hall is one of four developments in Singapore that have adopted an innovative timber construction method. The use of mass engineered timber or MET reflects the ongoing transformation of Singapore's built environment sector towards advanced and productive construction technologies with a greater focus on sustainable practices.

The building process

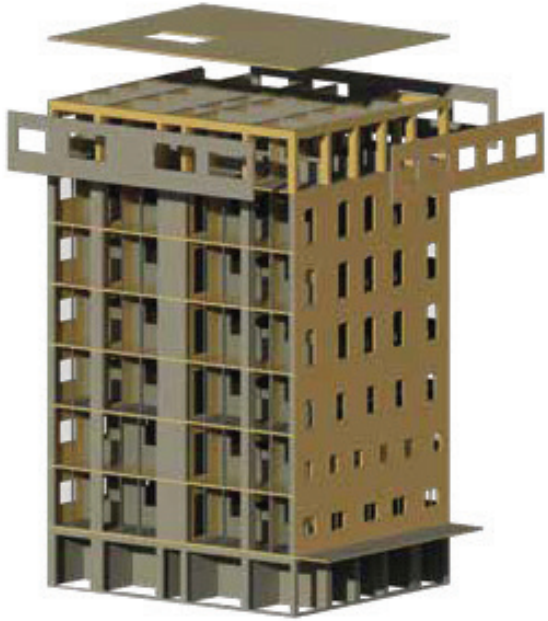
1. Manufacturers harvest wood from sustainably managed forests



2. Layers of timber panels are glued together for strength and structural stability and cut to exact dimensions with computer-controlled machinery in factories.



3. Timber building components are delivered to site and easily assembled without the need for wet works



Benefits

Productivity gains

- Saves up to 35% in manpower on site
- Design for manufacturing and assembly reduces construction time
- High strength-to-weight ratio makes it easier to handle than steel and concrete

Environmentally-friendly

- Highly renewable and sustainable construction material with long service life
- Significant reduction in energy usage and carbon emission during the manufacturing and construction process compared to steel and concrete
- Provides a higher level of thermal performance, reducing heating and cooling costs for building occupants
- Less waste due to precise manufacturing in the factory
- Less noise and dust generated
- Can reduce up to 70% concrete usage in buildings
- Safer working environment

Local projects that have adopted MET

BCA SkyLab Visitor Gallery
Completed in 2016

Blk 81 of JTC LaunchPad @ one-north
Completed in 2016

NTU Sports Hall – The Wave
Completed in 2016

Singapore Sustainability Academy
Completed in 2017

Source: NTU