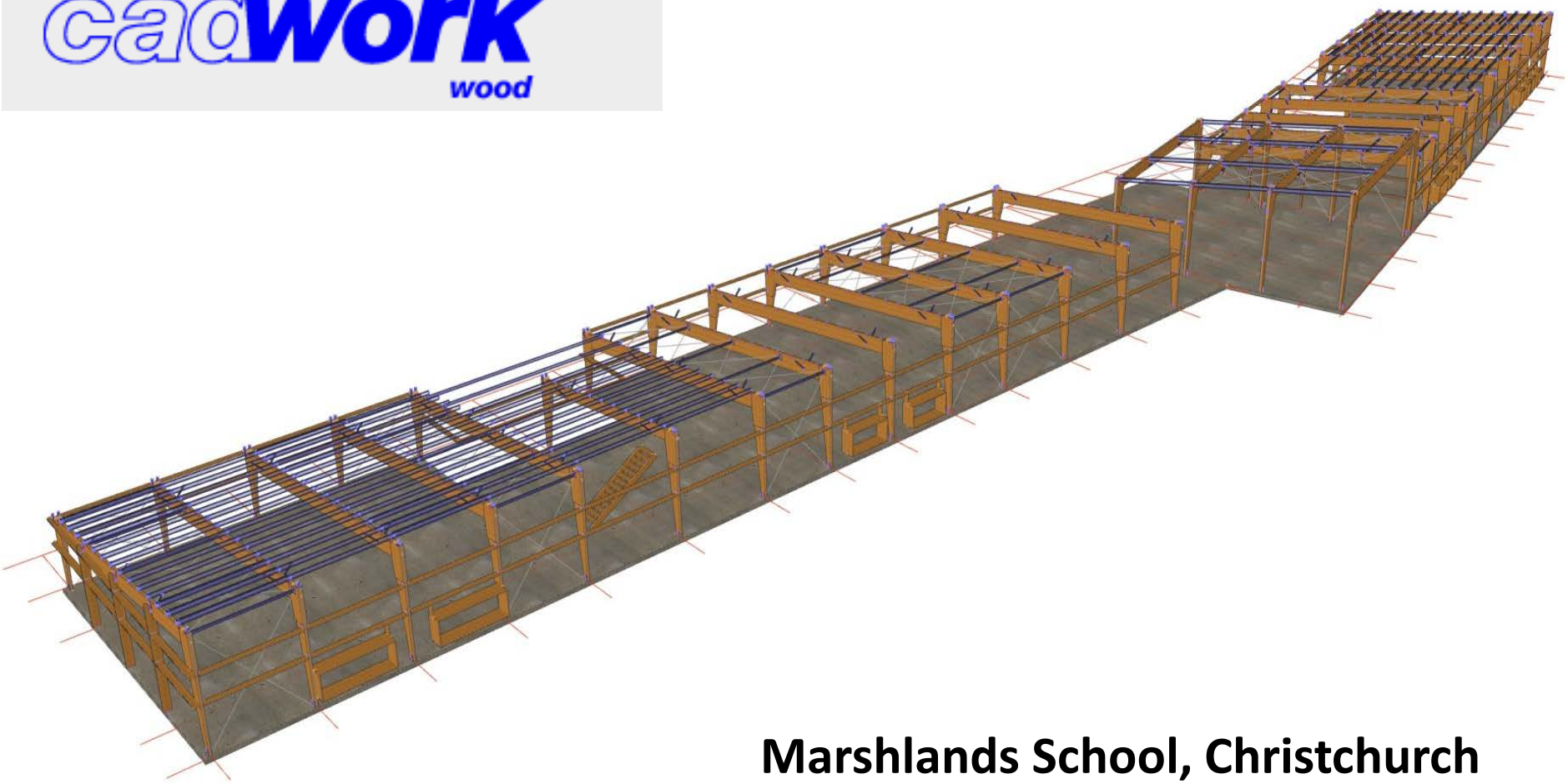
How CAD/CAM has advanced timber fabrication

Andy Van Houtte

FRAME 2015

CAD – Computer Added Draughting

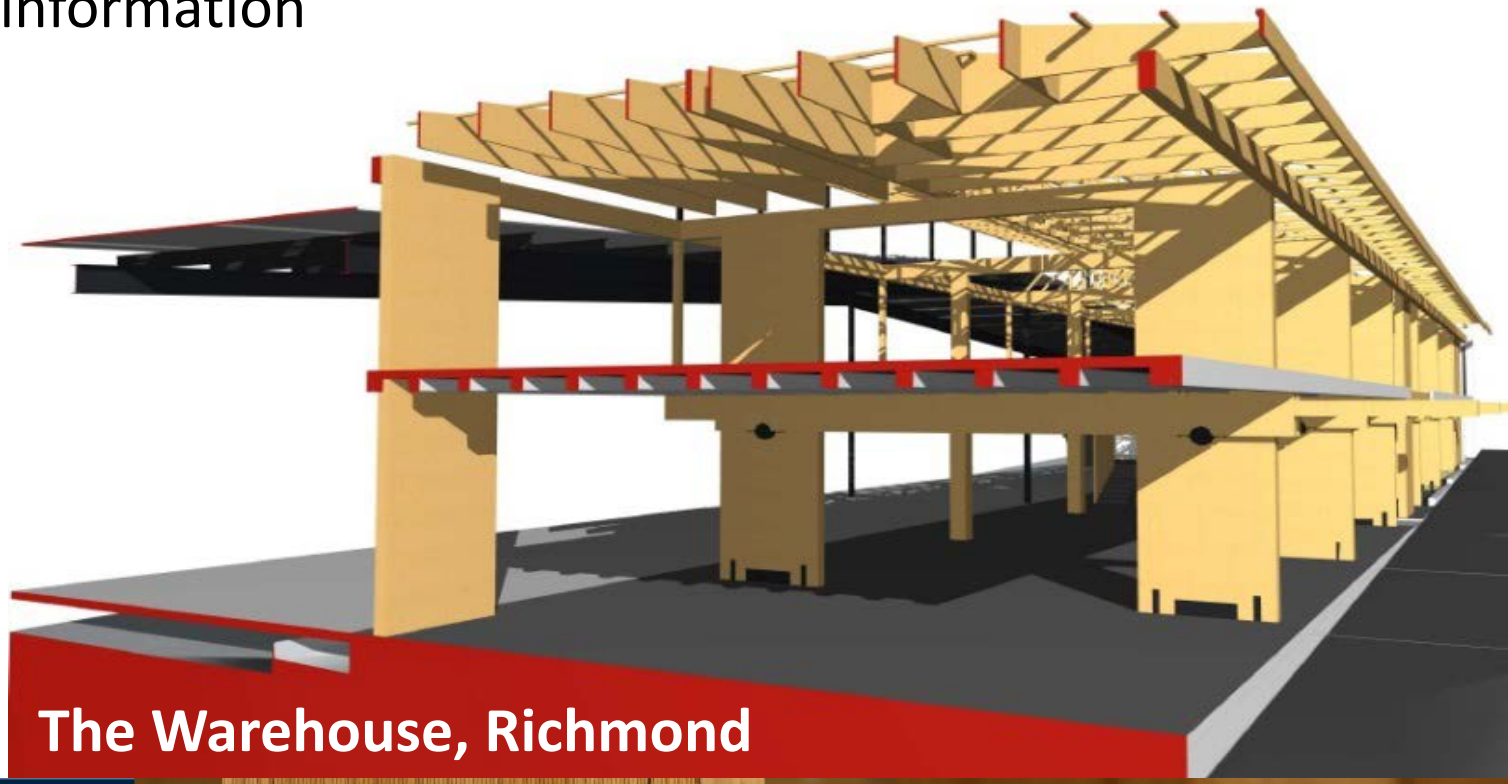
cadwork® wood



Marshlands School, Christchurch

Benefits of CAD

- Transparency
- Accuracy
- Flexibility
- Component information
- Data exchange DXF/DWG, IFC, SAT, BTL
- Design input



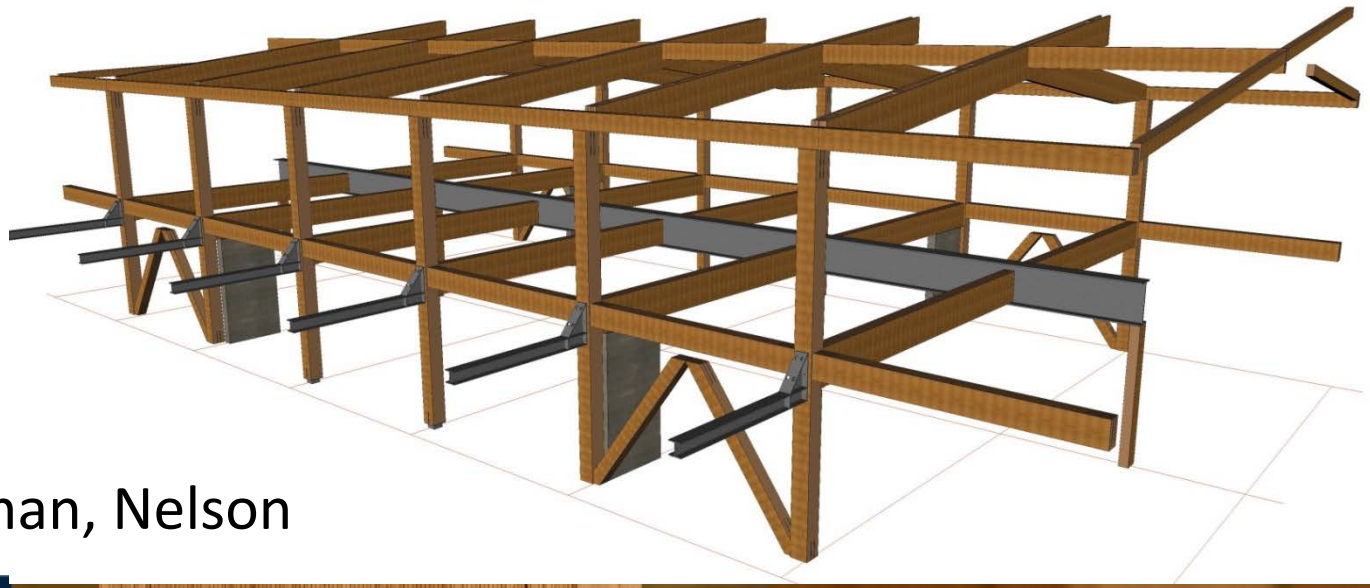
The Warehouse, Richmond

CAM – Computer Added Machining

Hundegger K2i, Nelson Pine Industries Ltd

Benefits of CAD/CAM

- Accuracy and replication
- Speed of machining
- Integration with other systems/materials on site
- New connections
- Large section material
- Quality



Network Tasman, Nelson

Notching, Milling, Cutting, Drilling

Large Section EWP

Tait Communications Head Office, Christchurch

NelsonPine Laminated Veneer Lumber LVL

engineered for performance

Advances in Connections

Quick Connect Moment Joints

NSW Netball Center, Sydney

TUMU ITM, Napier

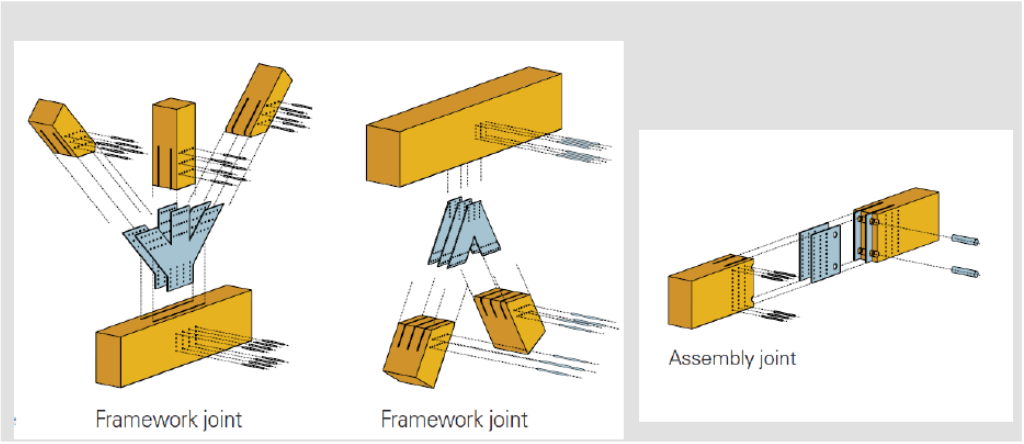
Advances in Connections

- Post Tensioned elements
- Energy Dissipation
- Pivoting frames
- Flange hung floors
- Internal steel plates

Network Tasman

NMIT, Nelson

Advances in Fasteners

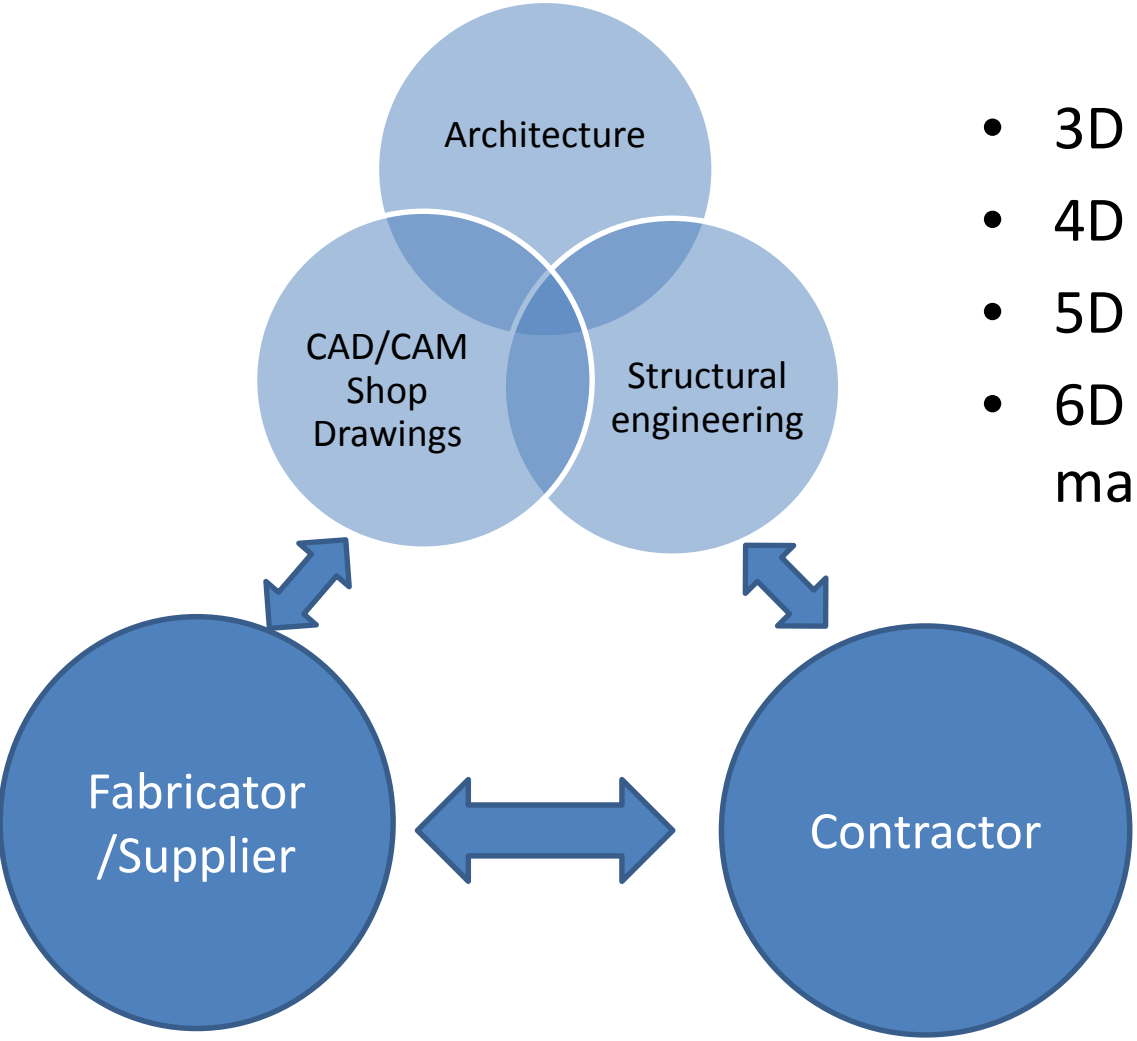


SFS intec

Advances in Building Technology

Kaikoura District Council Offices and Library

BIM - Building Information Modelling



- 3D Drawings
- 4D Timeline
- 5D Cost information
- 6D Asset management, maintenance, warranties etc

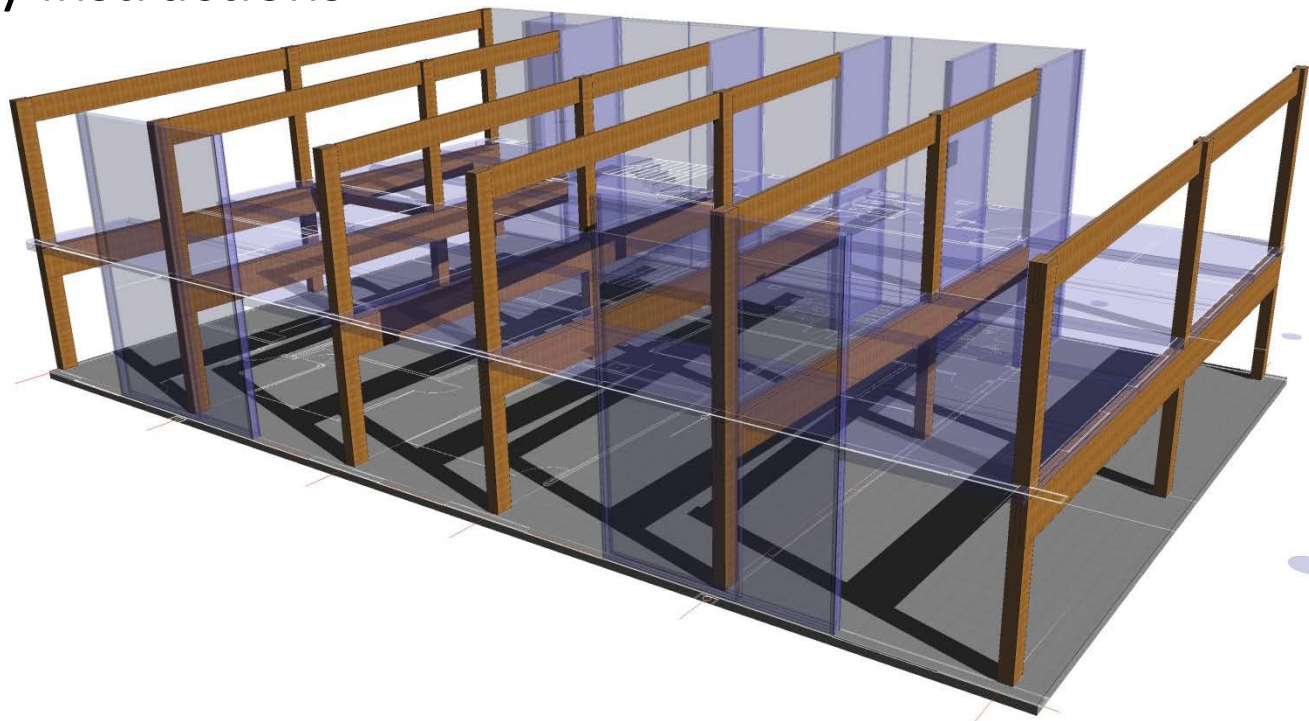
- Compliance with building code
- Modelling for lower environmental impact

BIM integrates all building professions

- Designers
- Builders/Construction
- Facility Managers/Owners
- Supply Chain
- Building Authorities
- Professional Community/Standards

Advances in Supply Chain Delivery

- Easy to combine with other materials
- Known component weights
- Packing and delivery instructions



Accident Compensation Corporation Building, Rotorua

Opportunities everywhere

Waitomo Caves Visitor Center