XFRAME

Office Product Catalogue

The XFrame™ System

Today more than 40% of the worlds waste is the result of building, construction, renovation, and demolition practices. XFrame™ is a radical response to this global challenge.

Backed by a proprietary technology platform that automates design and manufacturing processes, XFrame™ has been developed as a prefabricated, lightweight engineered timber wall, floor and roof framing system that enables end-of-life recovery and reuse.

XFrame™ is manufactured from sustainably sourced (FSC certified) structural plywood using precise computer controlled milling machines to minimise waste. The finished product is a series of modular parts that are designed to clip together without the need for nails, screws or adhesives.

Using XFrame our goal is to make the deconstruction and reuse of building materials an attractive and economically feasible end-of-life strategy.

XFrame™ Office was developed to address the significant waste generated through office and retail fit outs and refits. It is a series of modular commercial and retail applications that are lightweight, easily assembled and rapidly deployable. Adding to its circular economy credentials, XFrame™ Office uses the same components across the entire range meaning products can be disassembled and reconfigured as needed.


A kit of standard parts.


Made from natural and renewable materials.


Assembled without nails, screws or adhesives.


An engineered structure. Millimetre Perfect.

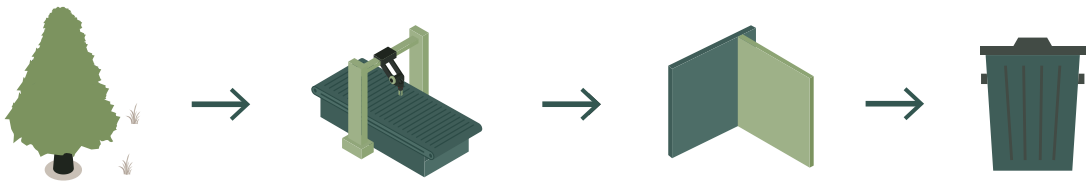

Scalable and flexible spaces.


Designed for complete circularity.

The Circular Economy

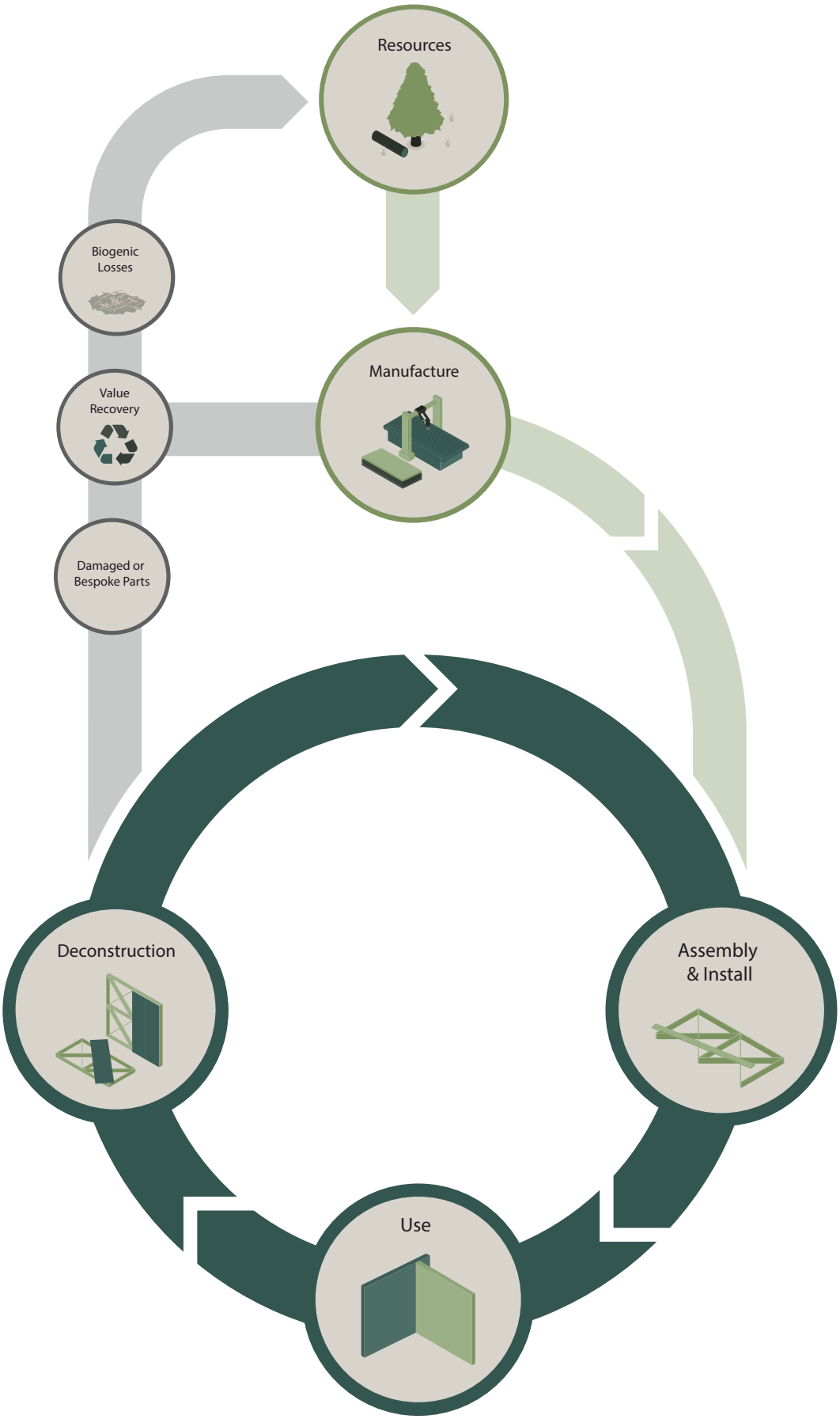
The Circular Economy (circularity) is a collection of design and specification criteria that aim to improve the ability of a product's (or building's) constituent parts to be recovered and reused. The ultimate ambition of circularity is to eliminate waste by creating an economy that is 'circular'. In this economy, products (such as buildings) must be designed to allow components to be recovered and reused without creating damaged, contaminated or waste materials.

Applying the circular economy to buildings is a crucial step in reducing waste and lessoning the negative impact of modern society on our planet. Buildings are the largest consumer of new raw materials, and are responsible for more than 35% of the world's waste. In nations with a younger building stock and less sophisticated material recycling methods (such as New Zealand, Australia and the United States), construction waste can represent up to 50% of total annual waste volumes.



The current 'linear' construction economy.

Circularity in buildings is best achieved through design and specification. The type of spaces created, the shape of those spaces, the materials selected and the type of structural and fixings systems adopted all significantly influence end-of-life deconstruction and reuse performance. Adherence to the guidance in this document will help ensure spaces are designed in alignment with the aims of the Circular Economy.



A framework for the circular economy in construction.

Unlocking Circularity

To achieve the ambition of a circular building industry it is the responsibility of architects and owners to adopt critical circular design ideas. The following ideas are essential to ensure circularity is effectively implemented. Overleaf are detailed criteria to guide decision making. These criteria should be used to review every material, product and system used in the building.

1. Do not compromise on material selection.

Material selection dictates how different building layers can be connected to one another and the type of material recovery possible at end-of-life. Using high quality non-composite materials means that reuse is more likely (as the material has more inherent value). Non-composite materials also have the benefit of being able to be recycled within clean high-value recovery schemes.

2. Standardise for future reuse.

Efforts to adopt standardised and interchangeable components on a large scale increases the likelihood of component reuse. The more similar components deployed, the higher the recovery value of those components. Rationalising wall lengths to industry standard sizes and separating bespoke architectural elements ensures that reuse is the most attractive end-of-life option.

3. Design in layers of change.

Every building component should be designed as a series of independent, interchangeable layers. These layers should never damage or compromise adjacent layers. Those most frequently modified should be easily removable in a damage-free manner. Any potential tertiary finishes or components that may limit the modification of these layers should be minimised.

4. Fixings dictate ease of deconstruction.

The methods used to connect secondary building elements to structural members must be easily reversible. These fixings also need to avoid damaging themselves, the elements they support and the members they fasten into. All adopted fixing systems need to be reversible by unskilled end-users and not impact the structural resilience of primary elements.

For further information refer to Finch, 2019, 2021, 2023.

XFrame Office is circular by design.


Mini-booth
for mini-spaces.

Mini Booth

A single-person, acoustically controlled space for video calling in open offices. The Mini is designed to fit efficiently in and around the superstructure of the office space and take advantage of previously underutilised floor space. Our Mini comes with a modular electrical kit as standard that includes ventilation, lighting and power supply.

Dimensions: 985mm x 2135mm x 770mm

Gross Weight: 70kg

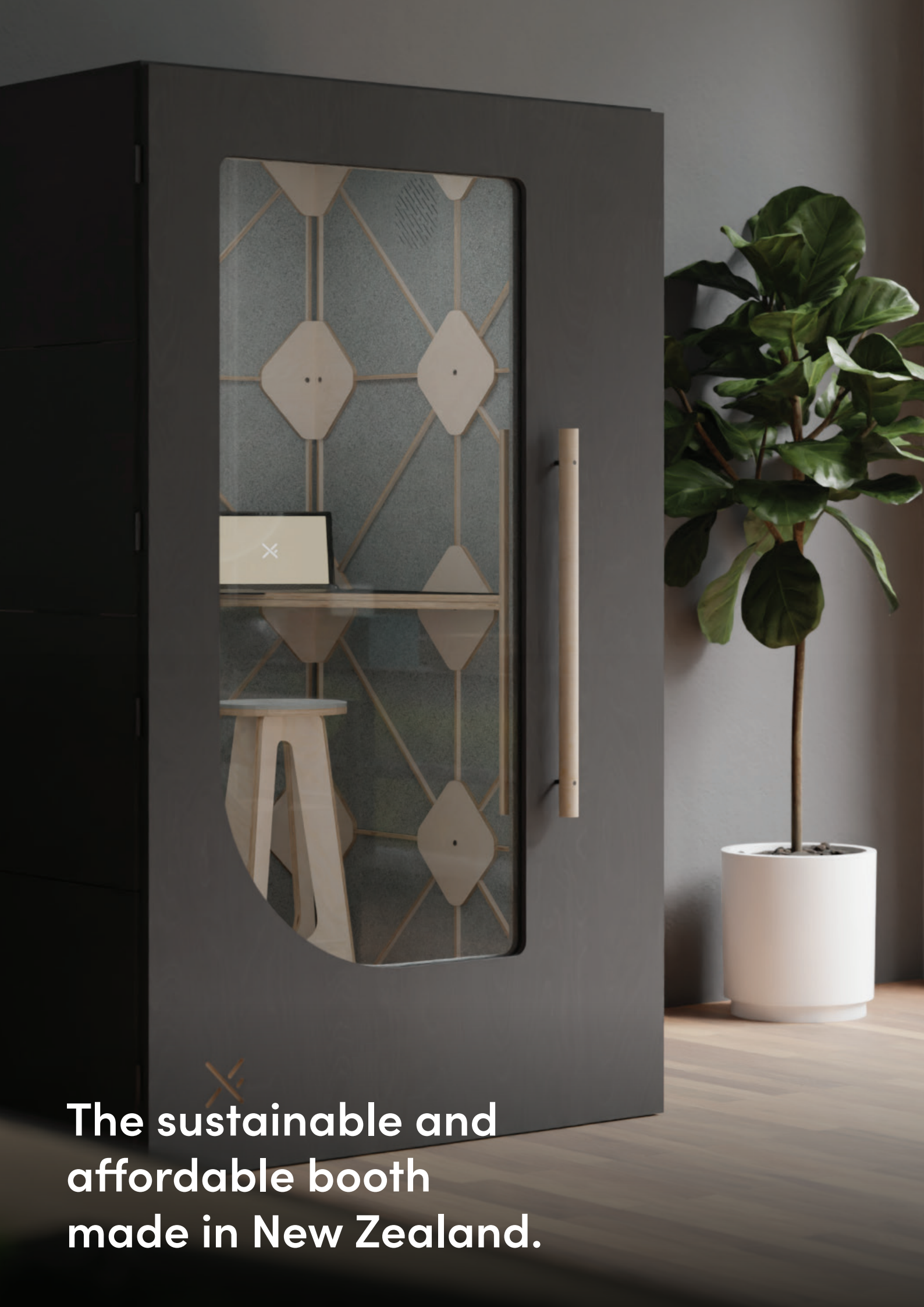
Exterior rigid options

Black Birch White

Interior acoustic options

Black Grey Neutral

+ Custom


The sustainable and
affordable booth
made in New Zealand.

Classic Booth

The XFrame Booth is an acoustically controlled space for extended video conferencing in open offices. The internal volume is 20% larger (and a work surface twice the size) of similar market solutions, ideal for extended video calls and productivity. Our booth comes with a modular electrical kit as standard that includes ventilation, lighting and power supply.

Dimensions: 1300mm x 2135mm x 1220mm

Gross Weight: 160kg

Exterior rigid options

Black Birch White

Interior acoustic options

Black Grey Neutral

+ Custom


Compact privacy
without compromise.

Double Booth

The Double Booth is a compact space designed for collaboration in open offices. It comfortably accommodates 2 people, making it ideal for video conferencing, collaborating, or private face-to-face meetings. This two-person meeting space is unique for its attractive price-point and endless customisation option. Supplied as standard with duel USB-C charging and quad fan ventilation.

Dimensions: 2130mm x 2150mm x 1150mm

Gross Weight: 290kg

Exterior rigid options

Black Birch White

Interior acoustic options

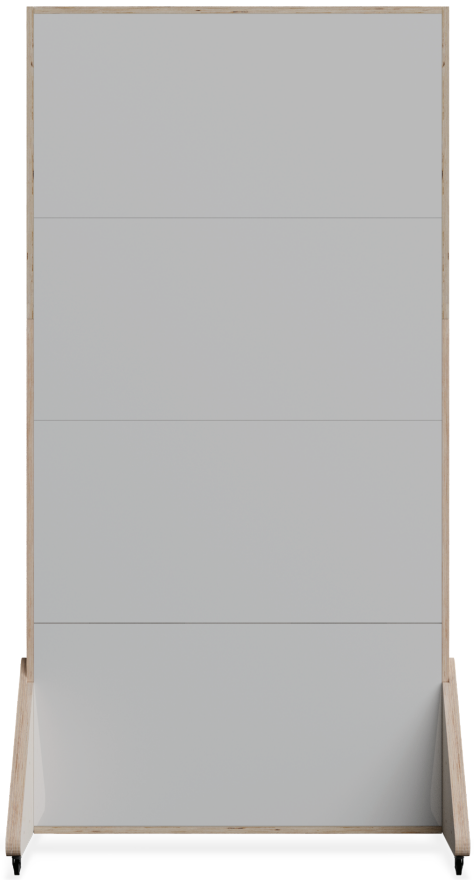
Black Grey Neutral

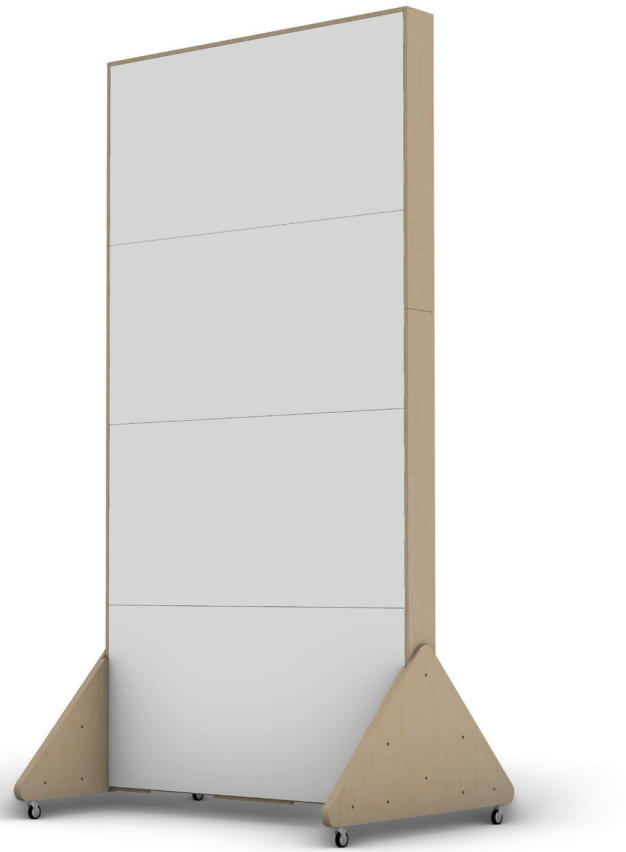
+ Custom


Mobile, extendable and
super flat-packable.

Mobile Wall

The XFrame Mobile Wall is an acoustically treated instant partition to aid in the control of acoustic and visual privacy in open offices and educational spaces. Panels can become productivity hubs, incorporating writable, pin-able and magnet linings, shelving and even monitors. These partitions are DIY friendly and can be easily reconfigured and/or customised as required.





Dimensions: 1080mm x 2180mm x 840mm

Gross Weight: 40kg

Exterior rigid options

Black Birch White Clear

Interior acoustic options

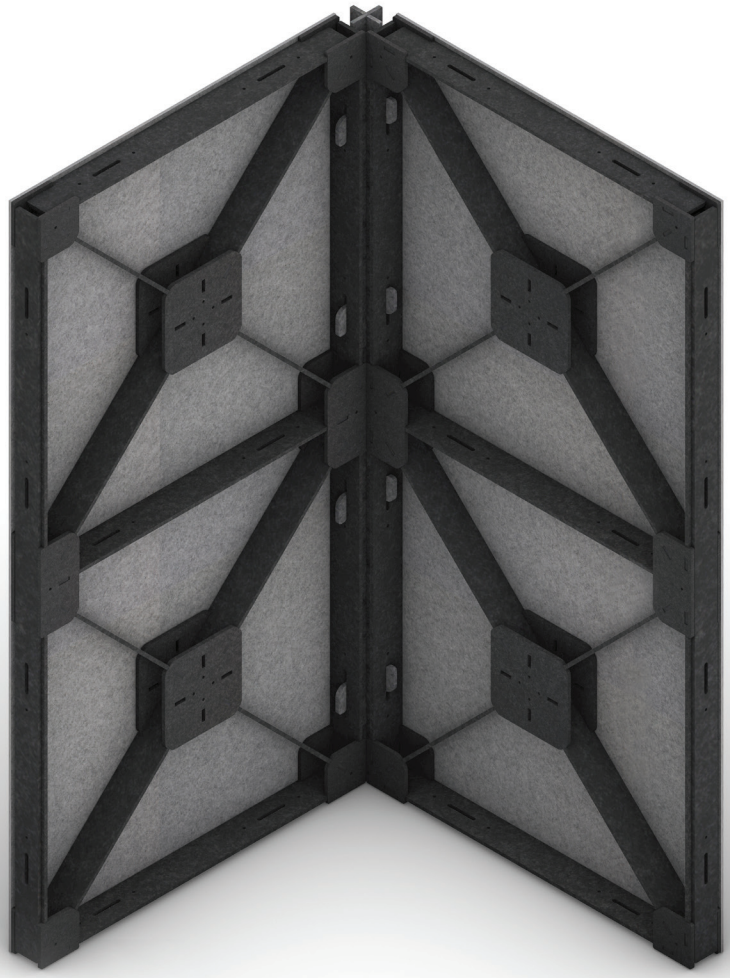
Black Grey Neutral

+ Custom


Light-weight,
free-standing and
sound dampening.

Studio Wall

XFrame Studio combines high-performance recycled acoustic material with the modularity and simplicity of XFrame. Instantly improve the reverberant performance of your space without the need to fix acoustic panels to building surfaces. Panels can be printed-on, custom cut, face-fixed, inset or grooved.



Dimensions: 1200mm x 2400mm (One Panel) **Gross Weight:** 10kg

Frame & Lining Options

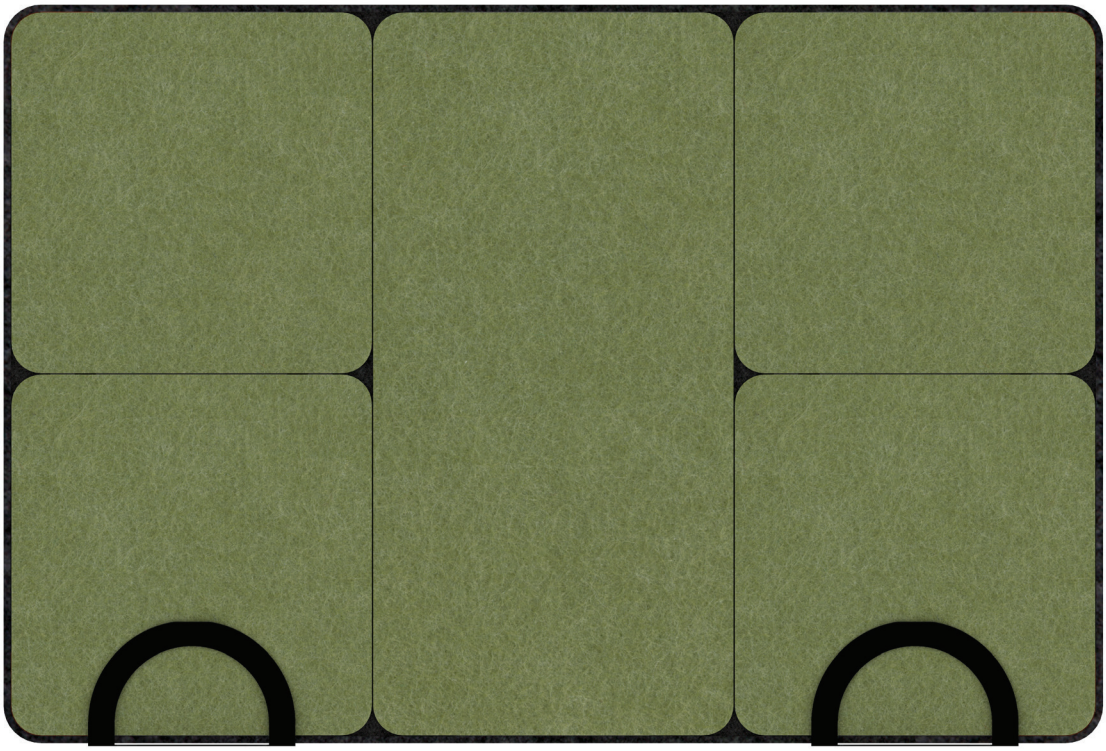
Black Grey Neutral

+ Custom

A premium, modular acoustic solution for educational and office spaces.

Quiet Wall

The Quiet Wall is a premium, modular acoustic solution ideal for both educational and office spaces. Teachers and professionals can personalize their environments, establishing dedicated zones for focus and collaboration, thus promoting connections among students or colleagues in expansive areas. Inspired by biophilic design, the curated color options aim to reduce stress and support emotional well-being. Engineered with high-performance acoustic materials, the Quiet Wall maximizes sound absorption, enhancing the overall educational and work experience in various settings.



Dimensions: 1800mm x 1200mm x 120mm

Gross Weight: 18kg

Lining Options

Green

Salmon

Navy

+ Custom

Nucleus

Transform open office spaces into productive, collaborative and diverse office landscapes. Eliminate the costs and disruption associated with fixed partition systems. Create networks of reconfigurable space for ever changing team requirements.

Dimensions: 1800mm x 2100mm x 2100mm

Gross Weight: 145kg (standard finish)

Lining Options

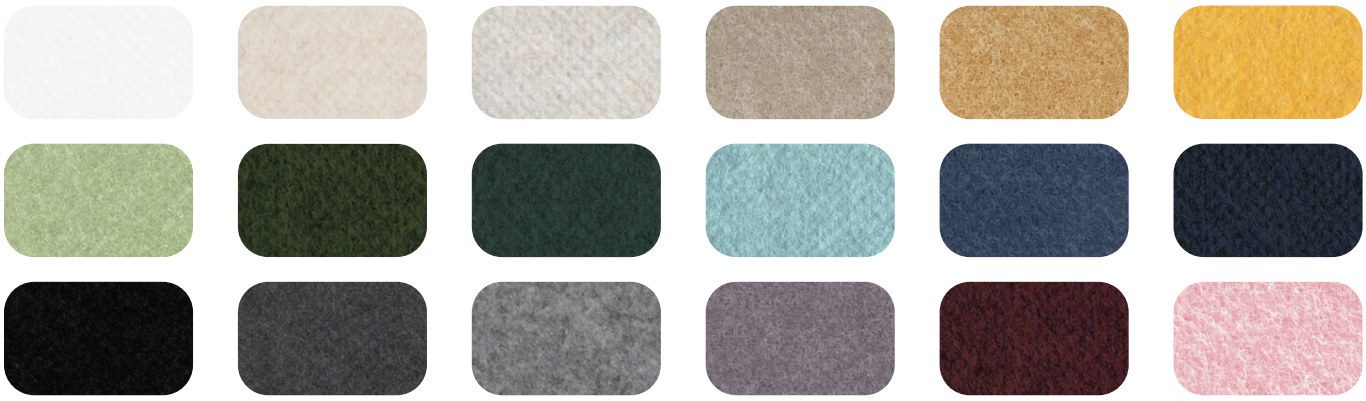
Birch Finish | Grey | Charcoal | Neutral | White

+ Custom

Customisation Options

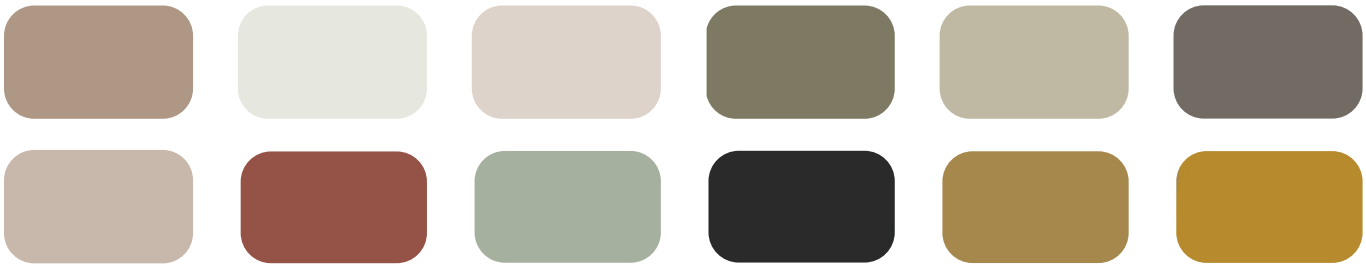
Using reversible pressure slips we offer a variety of design options for the interior and exterior. Our pre-finished linings are then fixed to the XFrame panels making for an effortless install.

Felt Colours



Laminate Plytech Polaris HPL Range

Laminate Plytech Create HPL Range



Engineered Wood Products (EWP's) and the Circular Economy

The suitability of engineered softwood products as a material for circular construction should not be assumed. Although engineered timber relies largely on quickly renewable materials, there is also a need for petrochemically based adhesives to form a structural bond between wood layers[1]. In many instances, it is also required that the engineered wood product be treated with chemical preservatives to increase resistance to rot and decay[2]. The product's reliance on a non-renewable material and the inability of these non-renewable materials to be recovered from the product is not reflective of circular economy best practice.

Log Harvest
-14kg | +2.63

Veneering
+3.47

Resin
+2.29

Pressing
+1.37

Packing
+0.03

Landfill (typical)
-0.05kg | +1.69

Energy Recovery
-8.84kg | +15.4

Reuse
-8.95kg | +14.0

Recycling
-2.41kg | +15.4

Life-cycle of Plywood | Adapted from Forest and Wood Products Australia Ltd EPD for Plywood (page. 18), 2022.
Values reported are the carbon footprint in kg CO2-equivalent per m3 of 17 mm thick plywood including biogenic and fossil carbon.

There is a range of emerging timber adhesive and preservation technologies that are derived from renewable sources (lignin-based adhesives and thermal modification for wood perseveration).[3,4] The first of these bio-based adhesives were made available to New Zealand and Australian markets in 2020 (Plytech, 2020). Such technologies allow engineered wood products to fit more comfortably within a circular construction context.

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1. Milner, H.R., and A.C. Woodard. 2016. "Sustainability of Engineered Wood Products." In Sustainability of Construction Materials, 159–80. Elsevier.
2. Shukla, S.R., and D.P. Kamdem. 2012. "Effect of Copper Based Preservatives Treatment of the Properties of Southern Pine LVL." Construction and Building Materials 34 (September): 593–601.
3. Aro, Matthew D., Brian K. Brashaw, and Patrick K. Donahue. 2014. "Mechanical and Physical Properties of Thermally Modified Plywood and Oriented Strand Board Panels." Forest Products Journal 64 (7–8): 281–89.
4. Wang, Sen, Yalan Yu, and Mingwei Di. 2018. "Green Modification of Corn Stalk Lignin and Preparation of Environmentally Friendly Lignin-Based Wood Adhesive." Polymers 10 (6): 631.

Designed for now, built for later.

XFRAME™