

# XFRAME

Circular construction technology creating modular and reusable wall frames

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## QUICK FACTS:

- The XFrame system is a circular construction technology formed from a modular 'kit-of-parts' that is completely detachable and reusable in the future.
- During the manufacturing of frames, they are typically left with just five per cent waste from the materials used.
- The modular nature of the framing system also helps reduce the amount of construction waste going to landfill after disassembly and reassembly.
- Over the course of the 2021-2023 financial years, XFrame's revenue system has grown over 12 times, helping them deliver more than 50 projects across three continents.

Reusing office furniture like tables and chairs during relocations has become more commonplace in workplaces over recent years, but companies successfully dismantling and repurposing their entire workplace, including the wall systems and building materials, before reusing them elsewhere remains rare.

[XFrame](#), developed by co-founders Carsten Dethlefsen and Ged Finch, is a modular wall-framing technology that targets retail, commercial and multi-rise residential spaces. Using the power of automation, they take a frame design and convert it into a kit-of-parts, with every component of the structure designed for disassembly and reassembly. This modular design aligns to circular economy thinking by enabling XFrame's customers to reuse the building parts and thus reduce construction waste from going to landfill.

We spoke with Carsten, Managing Director and co-founder of XFrame, on how their technology can help rethink the way we build office spaces.

## WHO

"We are a circular construction technology. What we do is take a design and convert it to a kit-of-parts that can be manufactured globally. The premise behind the design is that every element of that building structure is completely reusable and reconfigurable, driven by a proprietary automation platform."

"Every building component is designed as a series of independent, interchangeable layers which are easily disassembled and able to be reconfigured for a client's future project."

# VISION

"The whole vision for XFrame came about through Ged Finch, the other co-founder of the company and the inventor. He talked about developing a wall-framing system that can be completely reused and the driving force behind that was to reduce the amount of construction waste going to landfill. So, we combined Ged's invention and vision with my experience within the building industry and understanding of its inefficiencies to deliver a different product and way of building."

"The ability to create a completely customizable, modular building solution is unique. We can take any design and convert it into XFrame without compromising the design intent or the design outcome of that particular build. You've then also got the ability to completely repurpose and reconfigure those building components, which I think is a key point of difference."

"With every building project, there are components that break or cannot be reused. The unique thing with XFrame is each individual component can be remanufactured. So, if one component breaks, it doesn't necessarily mean that the entire wall section can't be reused. We just remanufacture or replace the bits that are broken - minimising what would otherwise go to landfill."

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# HOW

"At the start, there was a lot of work around engineering. We had to understand what the system was capable of, and how it would work with existing building code requirements. We tested, pulled and pushed it until it broke to understand what the limitations were. From there, we were able to determine where XFrame would fit best within the building industry. We also built out the automation capabilities that sat in the background, which are the real secret sauce in terms of utilising the power of automation to take a design and turn it into a kit-of-parts, all based on a key set of structural engineering rules."

"The automation technology takes a design, goes through and calculates the components required to deliver that particular project and nests them on cut sheets, which is what we send to the fabricator – and it does that in the most efficient manner possible. We're then typically left with five per cent waste at manufacturing. The automation then goes further to automatically produce assembly instructions, installation guides, construction documentation, carbon reports and pricing documentation, which is all built into the workflow. In this way, we can take a design and be manufacturing ready with all supporting documentation within the space of a couple of days. Automation is about 95 per cent of the process – the remaining five per cent is human involvement including interpreting plans, optimising design outcomes and building efficiencies."

"Our team now has automation specialists, architects, project delivery people and the corporate side of the business."

"Initially, we needed the capital to get up and running, develop the proof of concept and deliver some projects. We don't manufacture in-house, so we didn't need to go and invest in a whole heap of machinery and instead partnered with companies already doing that. The main way in which we overcame the barrier of market acceptance was really through just delivering projects."

## RESULTS + BENEFITS

"Over the years, our focus has changed from initial product validation, showing it worked, automating the process and now moving towards rapid business growth and a larger project pipeline."

"Year-on-year, our revenue base has grown by 12 times over the course of the 2021–2023 financial years – showing a very rapid uptake. We've now delivered more than 50 projects across three continents, showing that there's an appetite out there. Our project types too have moved from smaller fit outs to entire floors of buildings. The scope of our involvement in projects is also growing and I think that has only transpired in the last 18 months."

"One client in New Zealand took their fit out with them when they moved their warehouse and rebuilt it themselves in their new location. They were a couple of panels short, based on the new configuration, so all we did was cut some more panels for them, put them in the mail and sent them across and they finished it off themselves, making it zero-waste, because every component was reused."

"XFrame has also provided ANZ branches with a unique solution to fulfil its vision of modular, reconfigurable and adaptable retail offering. We deliver modular meeting rooms and bunkers for them within their retail stores. These rooms are completely relocatable and reconfigurable providing ANZ with ultimate flexibility and without massively interrupting operations and creating waste."

"Our business model is very much around a distributed manufacturing model. We don't have manufacturing, assembly or installation capabilities in house. This makes us very easily scalable. So, we're now actively pursuing overseas markets where we can bolt onto existing operations and provide a whole new product range for them."

# CALL TO ACTION

"We are now a tried, tested and proven system. We are in the market, rapidly growing and taking on new projects. So, we would love for people to have a look at XFrame and consider us for their next project that we might be suitable for. We're very much ready for that. Learn about XFrame's circular construction technology by visiting <https://xframe.com.au/>"

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*Planet Ark acknowledges the Traditional Owners of the land on which we live and work. We recognise their continuing connection to land, water and community and pay respect to their Elders past, present and emerging.*

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