

CORRUGATED METAL SHEET BENDING



FormFlow is a startup formed to bring a unique and potentially revolutionary cold metal pressing process developed in collaboration with Deakin University into the global market. Its solution creates joined, corrugated metal shapes with no gaps and applies to roofing and elsewhere. Ongoing collaboration to move the concept to the production and services stage and into the \$1 billion sheet metal roofing sector is essential.



How the Growth Centre helped:

The Advanced Manufacturing Growth Centre came on board as an early collaborator. FormFlow is the recipient of a \$250,000 co-funded project without which this solution would not be at its current stage of readiness.

What's changed:

If the project is completed successfully, the FormFlow Bend concept will be at production implementation stage, and ready to commercialise. This will ideally take place through licensing the technology to steelmaking companies. Within five years it could generate over 100 jobs.

Success story overview

FormFlow was established in 2016 to commercialise a metalforming innovation developed in collaboration with Deakin University with high potential in building and architectural markets.

Their proof of concept demonstrates a technique to bend corrugated sheet metal without cracking, with applications in roofing manufacture and elsewhere. This technology is a world-first.

"If you have two adjoining sheets of corrugated iron, either two walls or the two sides of a roof, rather than having to put a cap over the top of them, you can end it to match that bend and then slide another piece of sheet up underneath it," explains Matt Dingle, a co-founder at FormFlow.

"You end up with a smooth transition."

A patent for this piece of technology leadership, named the FormFlow Bend, has been lodged. The innovation means keeping out moisture, dirt, animals and embers, and the air-tight seal also provides increased insulation.

Co-founder Dr Matthias Weiss is a Senior Research Fellow at Deakin's Institute for Frontier Materials, manages its sheet material testing facilities, and has built one of the world's largest roll-forming research groups.

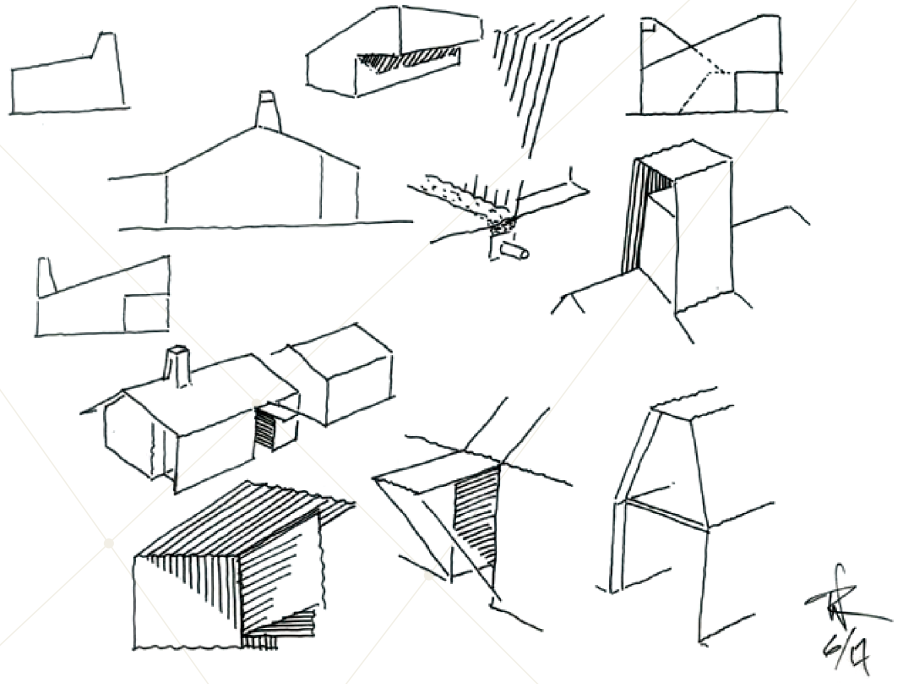
"Deakin is a strategic research and development partner," explains Dingle.

"There are lots of things that Deakin do that are really important to us. The most obvious one is they have a real expertise in metalforming research."

"I've had a very strong connection with Deakin for years: I was an undergraduate student, I did my PhD there, and the Carbon Revolution program sort of grew out of things that we were doing at Deakin and then commercialised afterwards... And this is just another offshoot of that."

The technology being developed is currently at Manufacturing Readiness Level (MRL) 5, or pre-production. If successful, the collaborative project between FormFlow, Deakin University and Austeng will raise this to MRL 8, production implementation.

The company has two main areas of focus. One of these is to establish partnerships and scale their innovation through a joint venture and/or licensing with a steelmaker, such as BlueScope or Liberty OneSteel.



“Otherwise we have to establish all of that infrastructure and supply chain ourselves, which makes no sense at all,” notes Dingle.

The other area is to establish a research and development entity to develop other new ideas.

A licensing arrangement would create servitisation opportunities, and enable international expansion while keeping IP in Australia.

According to IBISWorld research, the metal roof and guttering manufacturing sector in Australia is worth \$1 billion and growing at 11.5 per cent. Making reasonable inroads into this would create an estimated 100 direct and indirect jobs within three to five years, according to FormFlow. Reaching this and international markets will be most likely through having machines designed by FormFlow installed in other companies' factories and operating under license, with collaboration partner Austeng also gaining revenues through associated services.

Of the reasons for joining the Australian Manufacturing Growth Centre, which is supporting this project through a \$250,000 co-funded project, Dingle says a strong manufacturing sector underpins the economies of successful developed nations, and this should be fostered.

"I think we want to be part of ensuring the manufacturing sector in Australia is strong and becomes stronger over the next decade," he says.

Dingle believes it is vital, for such a sector to prosper in the country and that collaboration between businesses and university researchers is encouraged. As a founder of Geelong-based manufacturing pioneer Carbon Revolution, which pioneered the world's first one-piece carbon fibre wheel, he is well-placed to comment.

"In Australia we don't have large organisations that have the broad skills base that you might find in some of the huge multinationals overseas," he offers.

“But if we pool our efforts collectively, we have an incredible knowledge base and capability in Australia, and if we learn to utilise that more effectively then that's our biggest strength.”

Contact us

www.amgc.org.au



@AMGC_Ltd



Advanced Manufacturing Growth Centre Ltd



AMGC_Ltd