

## Media Release

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### **LEADING WOMEN IN AUSTRALIAN MANUFACTURING ENCOURAGE FEMALES TO CHOOSE A CAREER IN THE INDUSTRY WHILE CELEBRATING THEIR EXPERIENCES**

- **Female leaders from Australia's manufacturing industry share their stories this International Women's Day**
- **AMGC research reveals that bias and misconceptions about manufacturing lead to just 48 per cent of younger Australians viewing manufacturing as important, significantly lower than older age groups**
- **NOTE: Interviews available on request**

On 2022 International Woman's Day the Advanced Manufacturing Growth Centre (AMGC) is highlighting leading female voices who address biases and generalisations when it comes to a career in manufacturing.

According to recent AMGC research, titled *Perceptions of Australian Manufacturing*, biased perceptions about Australian manufacturing often lead to public debate amplifying false stereotypes. This leads to low student consideration of a career in the industry, particularly among female students.

The research revealed that just 48 per cent of younger Australians (16-25 years) viewed manufacturing as important, compared to 75.2 per cent across all other age groups (25-65+). Without an accurate understanding of career opportunities and without seeing themselves included in communications about manufacturing, 'mental availability' of students when it came to choosing manufacturing as a career path was limited.

Australia's manufacturing industry provides a diverse range of highly paid and resilient roles spanning the entire manufacturing value chain, including Research and Development, Design, Logistics, Production, Distribution, Sales and Marketing, and Service.

AMGC spoke to eight of its members, all distinguished female leaders in their respective fields spanning research, medical, food and beverage, design, industrial equipment, telecommunications and advanced materials sectors.

#### **Research and Development (including Engineering) – CSIRO**

Professor Bronwyn Fox, Chief Scientist at Australia's national science agency, CSIRO, had a passion for music, literature and science growing up, and ultimately decided on the latter as a career.

"One of the big surprises about science and engineering for me was that it wasn't a career where you are trapped in a lab on your own in a white coat, that it was actually all about working in teams," says Professor Fox.

"I've really loved working in diverse teams where everyone brought their background and experiences to solve a big problem."

And why should females consider a career in STEM/Manufacturing? Because it's an enormous amount of fun. You also get to change the world.

"I've always loved visiting factories. One highlight was the Boeing factory in Seattle where the 787 Dreamliner is made which is bigger than Disneyland," adds Professor Fox.

"The heroes of the 21<sup>st</sup> century will be the technologists, the innovators, the problem solvers and people who are willing to take a risk to make a difference. Be one of them."

### **Engineering – Micro-X**

A talent for maths and science and the good job prospects attached to the profession led Caitlin Wouters, Senior Mechanical Engineer at Micro-X, to study engineering.

Wouters joined South Australian based Micro-X, a maker of miniaturised X-ray machines, fresh out of university, and says being able to see something progress from an idea to a finished product is highly rewarding.

"You are creating something in the world that people want or need, so that you can really make a difference," says Wouters.

"Working at a company which has manufacturing and design at the same place has many benefits, as you get to not only see through the design process but follow to see how suitable that design is for manufacturing and then all the way to customer feedback."

Wouters says that the idea of manufacturing as purely physical work carried out in hot, dirty, unpleasant environments is a misunderstanding.

Many items, particularly food and medical goods, are produced in very clean, highly regulated settings, using robotics or automated processing.

"For example, at Micro-X, since we make x-ray tubes, we require a 'clean room' environment when creating vacuum tubes. This involves an extremely clean environment, down to dust and particle removal from the air, and using automated tools like laser welders and machinery that can be very interesting to design and use," she explains.

"Manufacturing in many products these days is quite the opposite of the traditional view from the past,"

### **Design – b.box**

Lisa Edlund Tjernberg, Head of Product Design, at Victorian based b.box, chose design as her career. It was the perfect combination of art and science. "When I was looking to enrol in university, I came upon a course called 'Product Development & Design,' which sounded like a great blend," she recalls.

She joined manufacturer b.box to be part of a fast-growing company where she could be involved with everything from an idea to a finished product, "in collaboration with many skilled professionals across all the departments. It's so inspiring to be a part of something bigger!"

For a young person considering what manufacturing involves, Edlund Tjernberg explains that production is only one element. Most of the work in her team is in development of a product: "including user research; concept development; CAD development; prototype and testing; design for manufacture; and communicating with the factories – in achieving the right aesthetic, functionality, and quality."

“Also, manufacturing processes these days are being more and more automated, especially in countries where labour is expensive, which would offer some great opportunities in automation, robotics, electronics and mechanics, to name a few.”

### **Logistics – Additive Assurance**

Clare Bellchambers, Operations Manager for Victorian based Additive Assurance began her career as business analyst with a multinational chemical company in Melbourne, worked all over the world, then returned to Melbourne and the wonderful world of start-ups.

“I’ve managed a career covering sales, strategy, finance, operations and logistics all within the ‘manufacturing’ industry,” Bellchambers says.

“I decided to take what I had learned from the corporate world and use it to help start-ups grow and scale. I’ve been with Additive Assurance for around 18 months, and I still get excited about coming into work each day!”

Working at the small 3D printing technology company has come with a strong culture of collaboration, as well as a role crucial to getting all parts of the organisation to work smoothly and effectively together: “a bit like conducting an orchestra.”

Bellchambers says, “Logistics is at the centre of the organisation, so you get to see a little bit of what goes on in each area of the company.”

### **Production – Bestie Kitchen**

Amanda Falconer, Founder and Managing Director, of New South Wales based Bestie Kitchen, had a career in marketing for corporates, and formed manufacturing start-up Bestie Kitchen at age 55.

“I’ve spent a lifetime not knowing what I wanted to do. Until now that is. And sometimes you just don’t know,” Falconer explains, adding that manufacturing has given her a newfound appreciation of technology.

“I’ve always ‘made things’ - I just didn’t realise how much STEM was an enabler of this.

“I think that while you’re working that out - even if, as in my case, it takes decades - that it’s good to keep your options open. Embracing STEM will help do that for you.”

Bestie Kitchen has developed peer review research-based nutraceutical snacks for dogs, in collaboration with a holistic vet and CSIRO. Moving prototypes developed with CSIRO in their pilot plant into improved versions produced in Bestie’s factory has been “both terrifying and really satisfying,” according to Falconer.

Far from being based on manual labour in dirty factories, she has found manufacturing a fascinating universe of “computers, automation, and robots” as well as “brimming with opportunity.”

### **Distribution – Great Wrap**

Julia Kay, Co-founder and Co-CEO of Victorian based Great Wrap, is another entrepreneur who had no idea that her career path would lead toward manufacturing.

“I was working in architecture designing buildings with an education focus,” Kay explains. Her and husband Jordy saw a lot of environmentally-damaging waste arriving on pallets in their respective careers, so decided to address the plastic problem. Great Wrap makes environmentally-friendly, compostable stretch wrap based on food waste.

"Now we have two factories making it, powered by renewables, where we're creating inclusive jobs and a solution – it's just such a brilliant and rewarding industry to work in," adds Kay.

She says the most valuable skill she learned in her previous career was communication, with an architect having to be a conduit between a vast array of stakeholders.

"There are so many parallels between what I do now and in my previous career, we interact daily with scientists, engineers, production staff and an array of critical behind the scenes roles. In construction, there are hundreds of roles that go into completing a project although you often only see the half of it,

"In our case the performance happens when our product lands in our customer's hands, so distribution, be it direct from our facility, or via a retailer is absolutely crucial to our manufacturing business. Without a robust, efficient distribution function, that is easy for our customers, there would be no GreatWrap." Said Kay

### **Sales and Marketing - ANCA**

Johanna Boland came to manufacturing, and the family business, after working for entities including large multinationals, Melbourne City Council, PR firms in London and a not-for-profit.

"I love working in communications and one of the great things about this career is that you can transfer your experience and skills to any sector or business," says Boland, Group Strategy and Communications Manager at machine tools company ANCA in Victoria.

"I have also loved working in manufacturing. The people are intelligent and given the different teams that need to get involved in making a product you can work on some really dynamic projects."

ANCA employs over 1,000 worldwide with a half of those in Melbourne and builds high-precision machinery and software used by customers including Boeing and SpaceX.

Boland believes that manufacturing is an exciting industry, but in her experience it could do more to tell its story: "There are so many interesting business stories that you can find everywhere in Australia.

"There are also so many opportunities at ANCA and in the manufacturing industry as a whole. I would say most people just haven't heard enough about manufacturing to understand all the opportunities that exist."

### **Service - ZellaDC**

Angie Keeler, Co-founder and CEO of West Australian based Zella DC, was surprised to end up a manufacturer, but is happy she did.

"In fact, I studied psychology. But then an opportunity came up and myself and my husband decided to pursue it," Keeler shares.

Keeler's company makes micro data centres, built to withstand the most demanding environments they could be asked to operate in. Research and development to stay relevant in its field, as well as the other steps of manufacturing, are all important.

"Manufacturing is not just putting things together - there is a huge amount of work to do even before you get to production," she says.

“Logistics and distribution are also very important, especially for exporting to other countries. Exporting is an essential part of growing your business, but this can’t be achieved without a solid logistics and distribution department. But of course, without sales you have no business - you need to focus on sales first and foremost. Service is probably the second most important aspect.”

Good service is a must, and from pre-sales to post-sales it’s “quintessential to success,” according to Keeler.

“We focus on delighting our customers - if you focus on offering lifetime value, you gain returning customers that turn into ambassadors for your brand.”

**Board Member and Director of Corporate Affairs for AMGC, Kelly Godeau explains,** “These exceptional female leaders are an example of the incredibly diverse capability which exists in Australia’s manufacturing industry. These women represent a model for the 21st Century on what we can achieve together, and to focus on what we do best which is to approach manufacturing as an enabler of innovation that can change the lives of many and solve great global challenges”.

Australia’s manufacturing industry and the broad roles it offers employs over 1.3 million Australians and contributes more than 10 per cent to Australia’s Gross Domestic Product (GDP), ensuring that Australians continues to enjoy a high level of living standards, while generating future opportunities for students.

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***For further information about the companies mentioned***

Additive Assurance – <a href="http://www.additiveassurance.com/about.html">www.additiveassurance.com/about.html</a>	CSIRO – <a href="http://www.csiro.au/en/about">www.csiro.au/en/about</a>
ANCA – <a href="http://www.group.anca.com/About-us">www.group.anca.com/About-us</a>	GreatWrap – <a href="http://www.greatwrap.co/pages/about-us">www.greatwrap.co/pages/about-us</a>
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Bestie Kitchen – <a href="http://www.bestiekitchen.com/">www.bestiekitchen.com/</a>	ZellaDC – <a href="http://www.zelladc.com/about">www.zelladc.com/about</a>

***About Advanced Manufacturing Growth Centre (AMGC)***

The Advanced Manufacturing Growth Centre (AMGC) is an industry-led, not-for-profit organisation established through the Australian Government’s Industry Growth Centres Initiative. AMGC’s vision is to transform Australian manufacturing to become an internationally competitive, dynamic and thriving industry with advanced capabilities and skills at its core.

Through the delivery of its world-leading research, Manufacturing Academy, workshops, and ground-breaking projects, AMGC aims to develop a highly skilled and resilient local manufacturing industry that delivers high-value products – via the integration of innovative technology – to domestic and international markets.

<http://www.amgc.org.au>