

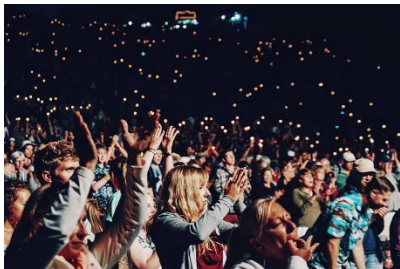


Casting Industry –
the career choice for
makers, creators, and
innovators

Melting Moments – June 2022

Presidents Report

Since our last edition AFI Vic and National have had a busy couple of months. After several years we finally had the opportunity to come together at the AFI QLD hosted National Conference - and what a cracking conference it was (see full report from Vic Committee member - Matthew Pinzces later in this newsletter). We took this opportunity to officially launch AFI's very own Foundry in a Box and the promotional video we had quietly been working on. From all of the feedback received at the conference and afterwards, all are agreed that we've created a great tool to enlighten and educate our next generation of makers, creators and innovators. The FiaB video and the original Metal Casting Industry promotional video will also be accessible via the Australian Foundry Institute YouTube channel. Nationally, we have welcomed Ryan Weber (AFI NSW) to the be the IT leader for our website and general "internet guru"



We have also sought your assistance and feedback on the AI Group Skills Survey - if you haven't responded please do not hesitate all our voices are needed to make any change.

In the past week, AFI(Vic) Treasurer Murray has sent out the coming year's Membership invoices - please keep a lookout for this and authorize payment as soon as possible. Don't forget the Cast Technology New Zealand Annual Conference will be held in Tauranga 5 – 7th August 2022. Click on the link below to register

www.castingtechnologynz.org

Finally, last week I was involved in the Vinnies CEO Sleepout. This a truly wonderful cause - sadly becoming more and more essential in Australia every year. Homelessness can affect anyone at any time. The Australian Bureau of Statistics has found that over 116,000 Australians are experiencing homelessness. Of these, 60% are under 35, 44% are women and 13% are under 12 years old. Vinnies provides a huge range of holistic services to support people experiencing or at risk of homelessness. Each year, the millions of dollars raised through Vinnies CEO Sleepout help to provide crisis accommodation, food, healthcare, counselling, education, employment, and support to find a permanent home for people throughout the country, all year round. I would love to see AFI at a National level register for the 2023 Event and contribute to making a difference and go some way to assist those in need.



Amber Maxwell – AFI Victoria President

AFI National

Wow – So it's almost the end of Q2 2022. So, where the devil did that time go 😊?

Thankfully the impact of the pandemic has lessened significantly, albeit with some businesses still having outbreaks of the virus itself rather than the virus plus 2-3 times that number in close contact absentees.

From a foundry perspective the order books for the quarter are generally fairly rosy. Unfortunately, as I write this every State bar WA is being affected by a perfect storm of issues in relation to electricity supply which for the first time in the history of the National Electricity Market (NEM), the market price has been suspended to reduce the risk of significant blackouts. Clearly, the impact on the business at which I work is directly impacted as we have successfully bought directly from the wholesale market since mid-2016. While the inflated spot prices for gas and electricity are not having impacts on most foundries as yet, unless the fundamental flaws in the market are addressed the likelihood of cost increases well above 50% are virtually inevitable. In recent weeks I have advocated in many media outlets, particularly the ABC, for immediate action to reduce the risk to foundries specifically, manufacturers generally and all consumers.

From an AFI National perspective we want to thank AFI Queensland for hosting a relevant and enjoyable national conference from May 12-14, 2022. Catching up in person after a few years of virtual meetings was expected to be excellent and, in my opinion delivered in spades.

As advised at the National Conference we will continue to publish an annual Foundry Industry Report. If your foundry has not yet been contacted, expect an email from Alan Cooke requesting data for the 2021 year. Please support this initiative as the industry data is the key source of information for State & National committee members to lobby Council, State & Federal government for topics such as a National Training program which works effectively for the needs of the industry, energy costs and usage, particularly with the push to 'net zero', and waste costs / recycling opportunities. This is particularly poignant as just after our National Conference I was contacted by another foundry in relation to a Senior Federal Adviser to the Trade Minister call he had received. The Adviser confirmed his advice to the Minister was that there is an overabundance of underutilized capacity in Australian foundries!! Having just had a

National conference where order book lead times were 14-24 weeks this is not just astounding, but more evidence that we need to fill this gap with facts from our Foundry Industry Reports. AFI representatives have continued the discussions with the National Skills Commission. The key objective is to highlight the needs of our members to cover shopfloor operators, apprentices, technicians, metallurgists and managers from the perspective of both training resources and potential migration support. Finally, to enable the AFI to represent the industry effectively we need to know the issues each member is facing to enable the State & National bodies to advocate on your behalf.

Brett Lawrence – AFI National President

Apprentices and Training

In Victoria, we continue to have 10 apprentices employed across Victoria with 2 additional metal casting businesses actively looking to employ an apprentice now. Recent activity for this GOTafe apprentice group was a visit to Keech Castings, Bendigo and Billmans Castings, Castlemaine. Nationally we currently have apprentices being trained by SkillsTech from NSW, SA, WA and Tasmania.

In the coming weeks we will have on the AFI website a summary of all courses on offer from GOTafe, SkillsTech and AIE along with the various State funding available to support this training.

Foundry in a Box

We've created a monster!! Foundry in a Box demonstrations and workshops continue to be extremely well received wherever we attend. The FiaB video was presented with many accolades at the Brisbane Conference (check out the video on the AFI Website or YouTube channel !!). We followed this up with 2 days of attendance at the Fit For Trade Expo at the Melbourne Convention and Exhibition Centre. From this we now have a steady stream of interest and bookings.

AFI(Vic) will collate a list of equipment and materials that we have used to develop our version of FiaB and provide this listing to all other AFI States.

Foundry in a Box is the tool that we needed to promote the metal casting industry with students. We now need to convert the interest into a new generation of young people entering our industry.

National Conference – Brisbane, May 2022

We finally got there! Our national conference originally scheduled for October 2021, was finally held in May of 2022. The conference ran over three days, and it was joy to be out and about again catching up with industry colleagues. The event was well attended and by my count there were 84 delegates from all parts of Australia. We started the event with a tour of the SkillsTech TAFE. SkillsTech opened the only fully equipped foundry training facility in the southern hemisphere in 2009. They have excellent facilities and are staffed by passionate professionals. What struck me the most was the holistic training approach where all the students were given some training across the full range of metalwork. For instance, the fitters and turners were also given instruction in heat treatment. With a fully functioning foundry, the students are taught in real world conditions. A common theme regarding the SkillsTech TAFE, was “use it or lose it”. I think the industry needs to look at how to make interstate foundry training more viable for non-Queenslanders.

Conference papers started on the Friday and continued on the Saturday. It was a good mix of technical and practical papers. There were plenty of pictures of grain structure for those who wanted it but there were also some excellent general papers such as Robert Olds of Olds Engineering discussing what the company went through after an anonymous vexatious claim regarding silica in their foundry. There was also an excellent social program with drinks and dinner and bowling over the three nights. The conference wound up on the Saturday night with a dinner and presentations to all of the new “Legends” of the AFI.

After not being able to travel due to current conditions, I was greatly looking forward to this conference and it did not disappoint. I had a number of queries that I was looking for answers to and found all of my answers with the knowledge base that attended. It was also great to catch up with my foundry colleagues. I caught up with people that I had not seen in 30 years. I believe that the “use it or lose it” tag also fits the AFI. I highly recommend attending our conferences as it is a great place to meet and learn from each other and it supports our great industry. The next one is in Western Australia. I hope to see you there...

Matthew Pinczes, Arrow Bronze

Respirable Airborne Silica Dust

In recent years respirable airborne silica dust has been a hot topic – particularly in the engineered stone industry. However, concerns have spread to many other industries including ours.

In Victoria, the Occupational Health and Safety Amendment (Crystalline Silica) Regulations 2021 were gazetted on 9 November 2021 and commenced on 15 November 2021, amending the Occupational Health and Safety Regulations 2017 to strengthen protections for workers exposed to respirable crystalline silica.

Similar regulations either have been or are being implemented in other States. But what does this mean for your metal casting business using silica sand for moulds or cores??

Under the changes, businesses working with silica must now identify and document high risk crystalline silica work and the risk control measures they have in place. Employers are now also required to provide safety training and instruction to any employees and information to any job applicants who may engage in high-risk crystalline silica work. But what is designated as high risk?? Could any of our industry processes fall into this category??

These questions can best be answered by reading the excellent presentation from Robert and William Olds, of Olds Engineering, Qld. They were subjected to a vexatious claim of worker exposure to silica dust. By being very methodical and thorough in their investigation, they were able to prove that there was no substance to the claim and that workers were not engaged in “high risk crystalline silica work”.

Their investigation cost them dearly in time, resource and dollars but they do now have a solid body of evidence that will not only reassure themselves and their workforce that they have a safe work environment, but will also protect them from any future claims.

The presentation can be found on the AFI website – please read it in full. (News / Industry Conferences, then click on Details).

AW Bell Kicking Goals!!

See the following announcement from the Australian Manufacturing Forum in April – *Ten companies have been awarded a total of \$23 million in contracts through the Defence Innovation Hub, with the largest going to casting specialist company A.W. Bell.*

A.W. Bell has a heritage in the automotive industry and nowadays creates complex metal products for aerospace, defence, biomedical and other sectors. The company was recently named joint winner in the [manufacturing category in last year's Australian Export Awards](#).

A.W. Bell earned a \$5.88 million contract to develop "world-leading high grade titanium casting system for in-service aircraft that could enhance aircraft capabilities."

[The Defence Innovation Hub](#) was announced in 2016 under the former [Turnbull government's Defence Industry Policy Statement](#), and provides most of its contracts to SMES to support technology developments that "are ready to enter the engineering and development stages of the innovation process."

Congratulations to Sam, Roger and the team. We look forward to a Ti themed presentation in the near future ...

CSIRO Sells VoxelJet Sand Printer

In late April CSIRO finalized the sale of its Voxeljet VX1000 sand printer to Quicksand Pty Ltd. The new owner is a consortium between Race Cast Pty Ltd and Hasco Foundry, who combined have been the largest users of 3D sand prints for the past couple years. The printer was moved from CSIRO Lab22 in Clayton Melbourne just before Easter and relocated to Milawa near Wangaratta Victoria in a new purpose-built facility. Quicksand's objective with the purchase has been to minimize disruption to companies currently utilizing the technology and to increase the usage of sand printing through existing and new customers. The printer is now fully functional and supplying prints. Contact Shane Corish at Quicksand (0488 969 321, quicksand3d@gmail.com).

Shane completed operator training of the Voxeljet at CSIRO about 5 years ago and has been using the machine since then to print cores and moulds out of CSIRO Lab22 for his company Race Cast Pty Ltd (V12LS engines and other automotive components).

Swinburne "Factory of the Future" visit

After nine months in the making, on Wednesday 22nd June, AFI Vic had the privilege of touring the Swinburne University - Factory of the Future facility located at the Swinburne University Hawthorn Campus. The Factory of the Future, provides businesses with the opportunity to participate in a joint journey that starts with the development of the digital and Industry 4.0 strategy (the "Why" of digital transformation), continues with the engineering and training project arising from the strategy (the "What") and can culminate in research and development where appropriate to create new business outcomes (the "How"). The state-of-the-art Factory of the Future facility at Swinburne allows companies to learn (or expand upon existing) digitalization technologies and explore advances in automation of manufacturing.

The Factory of the Future was developed as a result of the evolving needs of industry and the education sector. Working collaboratively with businesses, Swinburne can assist with the development of new products and methods of manufacturing, as well as assisting with a business to become more productive and value-added models.

Testlab 4.0 at the Factory of the Future, Swinburne is an state of art connected factory and comprises an automated quality inspection cell, a cyber-physical production line system, a symbiotic cell (collaborative workspace for human-machine interface - also known as a cobot!), automated indoor vehicle for component transfer, all of which are controlled by a manufacturing execution system. A representative manufacturing digital twin predicting the throughput of the connected factory in real-time was demonstrated. The integration of FoF concepts into any business starts with a simple review of the existing business.

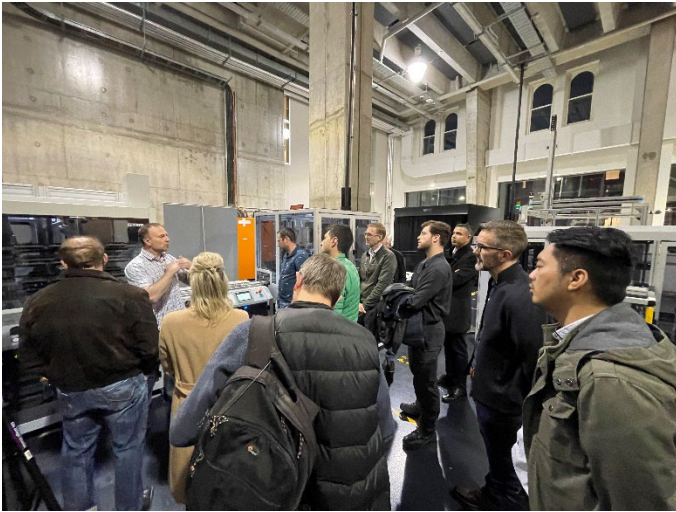
If you would like to learn more about the Factory of the Future (FoF) and how your business could benefit from a review please do not hesitate to reach out to;

Sharad Ménon | Industry Engagement Manager
Advanced Manufacturing Industry 4.0 Hub | Factory of the Future

T: 0411 450 879

E: sharadmenon@swin.edu.au

W: www.swinburne.edu.au/industry4hub



through prime-time exposure across the ABC, Sky and many other media. You can't buy this type of exposure and Brett has been subjected to multiple interviews, even while his business has had to temporarily close as a result of the Govt closing the market. Please find the time to thank Brett for his efforts.

4. With the current energy efficiency certificate prices in VIC and NSW it is possible to replace lighting fixtures with LED in commercial and industrial settings at very little cost to the client. One (of several) companies that conduct this service is Green Guys. Contact them and save on your power bills!!

NEXT AFI VIC Meetings

Wed 20/7 – Site visit to Arrow Bronze, Dandenong South

Wed 17/8 – Presentation by Quicksand Pty Ltd. at The Village Green Hotel

APPENDICES

1. See excellent flyer from Kevin Morphett, AFI(NSW) which summarizes activities at the Brisbane National Conference.
2. Kevin Morphett, AFI Legend – a great summary of the career of an exemplar of our industry.
3. Latest AFI(Vic) 2022 program
4. Welcome our Tasmanian Apprentice
William Elliott 21years Toby Lucas 21 years



Around the Traps

1. It's with much pleasure that we learnt that Keech Castings is now under the ownership of Derwent Industries. With all employees offered ongoing employment and a continuing strong order book, this is the best possible outcome for all concerned.

2. In less welcome news, we've learnt that Allens Foundry, Shaw Process Castings and Trigg Brothers have either closed or will do this year. In all cases it's the value of the land that these businesses are sited on which has drawn the proverbial "offer's that are too good to refuse". We wish the best to all parties involved and do hope that you stay in touch with the industry.

3. With the energy cost crisis creating havoc across all manufacturing industries, National President Brett Lawrence has done an excellent job of highlighting the issues to our metal casting industry

AFI National Conference Brisbane May 2022

The AFI National Conference has recently concluded. Many thanks to the AFI Qld branch for presenting a very successful and informative conference

Access to the technical presentations is available through the AFI Website

<https://www.australianfoundryinstitute.com.au>

The social program included the President's reception on the Thursday night, Bowling on the Friday, with the Gala Dinner on the Saturday.

The Young Achiever were presented to the Institute at the Presidents reception



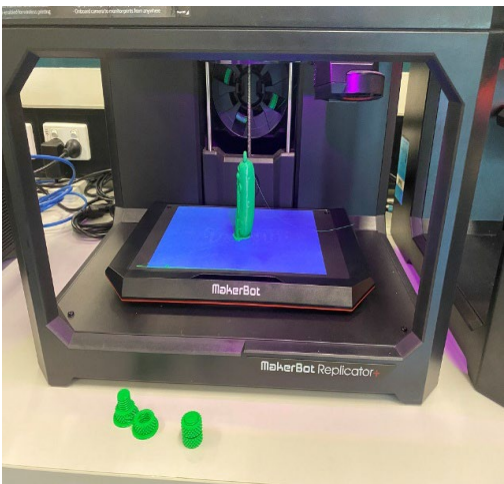


Brad Walsh and Phil Stoddart (Castech, SA)



John Boyle (Central Foundry, NSW); Belinda Walter (AFI Qld) and Angela Boyle (Central Foundry, NSW)

SkillsTech Qld TAFE



Tour

3D Printing at SkillsTech Pattern Making

Many thanks to Kevin Roos and Mike McCabe for their informative and interesting tour. Mike concentrated on the Foundry department, while Kevin took us through the general engineering department which included an interactive virtual welding program which proved popular with all



The foundry tour included the patternmaking department, sand testing, greensand and hard sand moulding sections and the melting department



Conference

The Conference papers presented were varied and well received. Congratulations again to the AFI Queensland branch for putting these together at short notice.

The theme for this year's conference was: ♪ *"Don't Stop Thinking About Tomorrow"* ♪ signalling our intention to provide attendees with new ideas, research and networking opportunities that will help the Australian Foundry Industry take the next steps into a bright tomorrow, that whilst ♪ *"Yesterdays gone, Yesterdays gone"* ♪, the future ♪ *"It'll be, Better than Before"* ♪.

♪ *"Why not think about times to come?"* ♪



AFI Qld Committee Members Trevor Davis and Richard Bozza presenting Speaker Gifts to Dr. Roger Lumley.

We hope you found the conference both professionally and personally rewarding and look forward to seeing you at the AFI 57th Annual National Conference, scheduled to be held in Perth, WA in October, 2023.

Gala Dinner

The Gala dinner was held on the Saturday night on the 12th floor of Rydges Hotel with great views over South Bank and Brisbane CBD and gave everyone the opportunity to ditch their HiVis and dress up for the evening. The AFI Legends awards were presented and included those who had been nominated since the AFI Conference at Parramatta in 2019



AFI Legend Awards (2021 and 2022) Presented To:

(from left to right) Simon Kay (Qld); Kevin Morphet (NSW); Ian Fitzgerald (WA); Laura Eden (Qld); Bruce White (Qld) and Chris Grant (WA).

The following Legends for 2020 and 2021 from Vic weren't able to be present.

Jim Artso (2020); Kuno Brautigam (2020); and Craig Ditchfield (2021).

2022 NSW AFI Legend - Kevin Morphett



Kevin began his career in 1973 at Bradford Kendall Kilburn SA as a Cadet Metallurgist. Initially doing wet chemical analysis, then Electric Arc furnace operation.

In 1977 Kevin headed off to Perth with mates and worked at Forward Downs as a furnaceman. He met George Law and went to work with him in his yard in Roleystone where they made CO2 moulds and Aluminium castings from a homemade gas fired furnace.

While in Perth, Kevin received a call from Bob Hansberry in 1978 to see if he was interested in a Plant Metallurgist position with Bradken Singapore. As any 21-year-old would, he jumped at the chance.

Still with Bradken, he returned to Australia in 1980 to work as Shift Metallurgist at Bradken Runcorn, Queensland when at the time, Bradken were melting 140 metric tonne per day, feeding the KW moulding machine and Griffin Wheel Plant. In 1989 he worked at Bradken Technical Services Sydney doing Physical testing, metallography and OES operation.

From 1992 to 1994 he worked at Bradken Malaysia, Bradken Bathgate, Scotland and Bradken Newcastle, England. In 1995 he joined Abel Lemon as NSW Sales Manager till 1996 where he moved to Bisley and Company till 1999 when he started working again with Bob Hansberry but this time, at Bob's foundry, ABC Castings, Riverwood as Foundry Manager Non-Ferrous.

Kevin then joined Dickinson's Metallurgical Supplies in 2007 and was initially responsible for Qld, then NSW, Victoria and SA. It was during this time he joined the AFI Qld division committee which he was part of until his move to Foseco, Sydney office in 2013 as their NSW Sales Manager. With the move into NSW, he joined AFI NSW committee becoming Treasurer in 2014 and then took on the dual role of Treasurer Secretary in 2017.

Although Kevin retired from Foseco at the end of 2021, having served in the foundry industry for 49 years, he is still very active with AFI NSW still holding the dual roles of NSW Secretary and Treasurer.

Keiran Slattery

AFI NSW President





Australian Foundry Institute (Vic Branch) 2022 Program v5

Month	Date	Location	Topic	Presenter	AFI / ADCA Contact
Feb	Wed 16th	Village Green	Robotic Fettleing of Castings – presentation	Fred Kolak	Graham W
Mar	Wed 16th	Geelong	Newcomb HS and GMC Presentation / Bill Pratt 100 th Celebration		Sean B
Apr			No activity scheduled for April		
May	Thur 12 th – Sat 14 th	Brisbane	National Conference		AFI (Qld)
June	Wed 22 nd	Hawthorn	Industry 4.0 – Swinburne Tech – site visit		Alan C
Jul	Wed 20th	Dandenong	Arrow Bronze - site visit		Matthew P
Aug	Wed 17 th	Village Green	Quicksand – Sand Printing		Gary S
Sep	Fri 2nd	Sovereign Hill, Ballarat	Annual Technologists Picnic - presentation		Gary Bunn - MA
Sep	Wed 21st	Carrum Downs	Australian Brass Forgings – site visit	Gary Thompson	Graham W
Oct	Wed 16 th – 20th	Busan, Sth Korea	WFO Congress		Adam H
Oct	Wed 19th	Village Green	Legends Night and AGM		Amber M
Nov	Wed 16 th		TBA		
Dec	Wed 8 th	Errols, Nth Melb	Planning meeting		