Australian Foundry Institute

ABN 53 830 764 159

Industry Data Report

March 2019

Details of a survey of the cast metal industry of Australia.

Compiled by –

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AFI National President

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1.0 Executive Summary

The Cast Metal Industry in Australia has seen several years of contraction with the exit of Automotive Manufacturing, significant increase in the importation of castings and cyclic declines in the Mining, Agriculture and General Engineering industries.

All in the industry are aware of these changes and the multiple challenges being faced now and into the future. This survey and the data it provides is a first attempt to provide all in the industry some tools (hard data) to support improvement actions, particularly with our political decision makers.

Conducting the survey had been a challenging but also rewarding exercise. Understandably there has been a reticence to share this business confidential data in some quarters. However the 34 casting operations that have shared data with me, ensures that the report is representative of the casting industry in Australia.

The cast metal industry in Australia generates upwards of $0.75 billion in sales annually, and directly employs 2000+ people, including 35 apprentices.

There are 3 common issues that our industry faces – energy costs, access to trained personnel and training of personnel.

This report will not provide solutions to these issues. What it will do is to allow those of us that are trying to influence more favourable outcomes for our industry, to have a stronger voice.

The challenge we all face now is to make use of this data and deliver the results we seek.

2.0 Background

Across all States in Australia, the cast metal industry is seeing massive increases in electricity costs. With an ageing workforce and (until March this year) only the one training facility option for Metal Casting Industry apprentices available country wide, access to trained personnel and ability to train apprentices, has been significantly limited.

Efforts to address these issues with Federal Governments and the various State Governments have delivered very little progress. A regular request from the political decision makers has been to ask for Industry Data that can demonstrate the economic impact of our industry. This situation has driven the view that an industry wide survey was required to gather representative data.

The view of the AFI Executive is that there was a need to build confidence in the survey process, thus this initial survey has been deliberately limited in scope.

3.0 Survey Purpose and Overview

The purpose of the survey was to provide collated industry data on selected aspects of the Cast Metal Industry.

3.1 Areas Addressed

The request for Industry Data has been mainly focussed on AFI member casting operations but does include some non-AFI member companies.

Information requested covers Tonnage of metal cast (Ferrous and Non-ferrous), number of employee's, number of apprentices, electricity cost per KwH, new sand cost per Tonne, and annual casting sales value.

3.2 Confidentiality Management

It was recognised that confidentiality of the data supplied by individual casting operations was a potential blocker to the data being shared. To help to overcome this potential blocker, it was decided that all data would be received and collated by myself only. As a long term, but now retired foundryman, I have no vested interest in any existing casting operations. I was happy to make an absolute commitment to maintain confidentiality of the provided data. Only aggregated data will be reported.

3.3 Survey Format

Appendix 1 shows a blank Data Request Form and the 2 related documents that were issued to casting operations through the various AFI State Secretaries.

3.4 Participant Feedback

A significant majority of participants were supportive of the process. A few were limited in the data that they could share.

3.5 Survey Timing

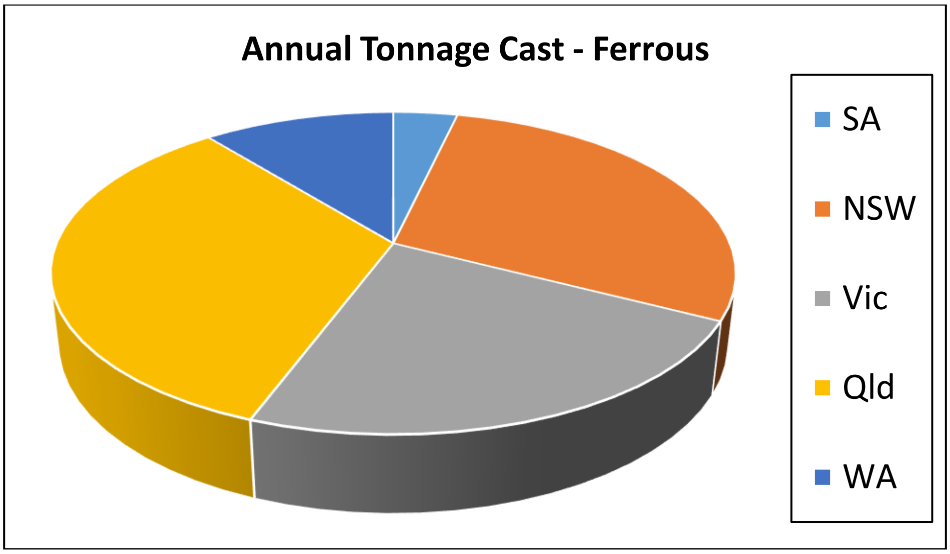
The initial communication requesting data was issued in mid-December, 2018 with a request that data be provided by 1/3/2019. Some responses were received prior to the Christmas break, some immediately after, then there was a lull. A follow up email communication garnered further responses and in some cases a follow up phone call was also needed.

4.0 Survey Data – Statistics Summary

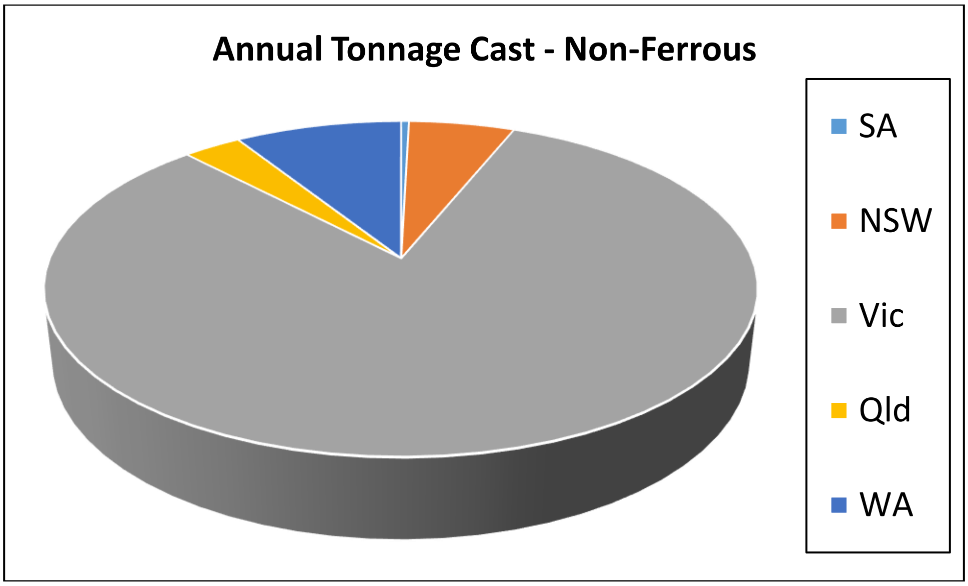
4.1 Annual Metal Tonnage – Ferrous and Non-Ferrous

All 34 respondents gave an annual tonnage cast figure, giving a total 34,000T of Ferrous metal cast annually.

Extrapolating from the data that I did receive, I consider that the total Ferrous metal cast in Australia would conservatively exceed 40,000T pa. (Note that I do not include the major steel works in this estimate).

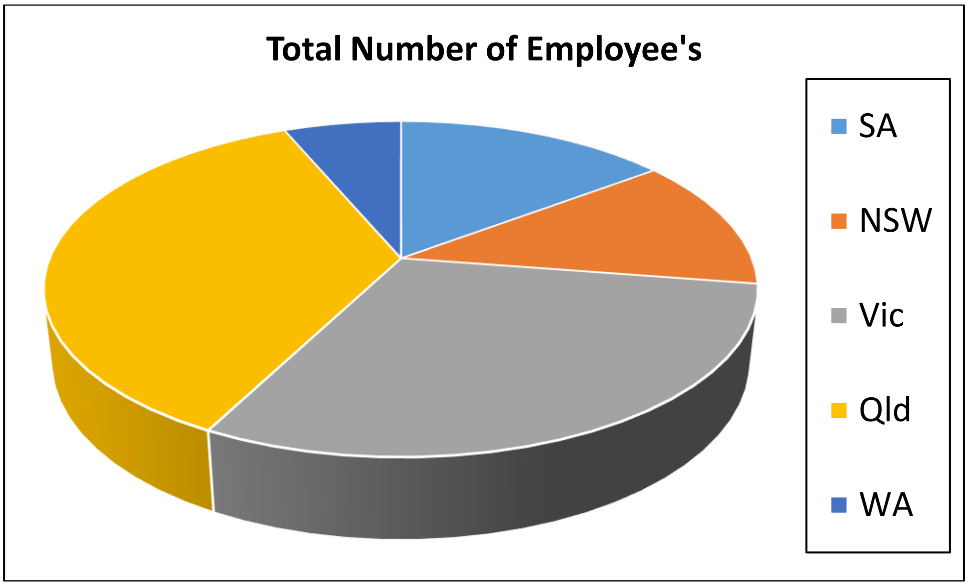


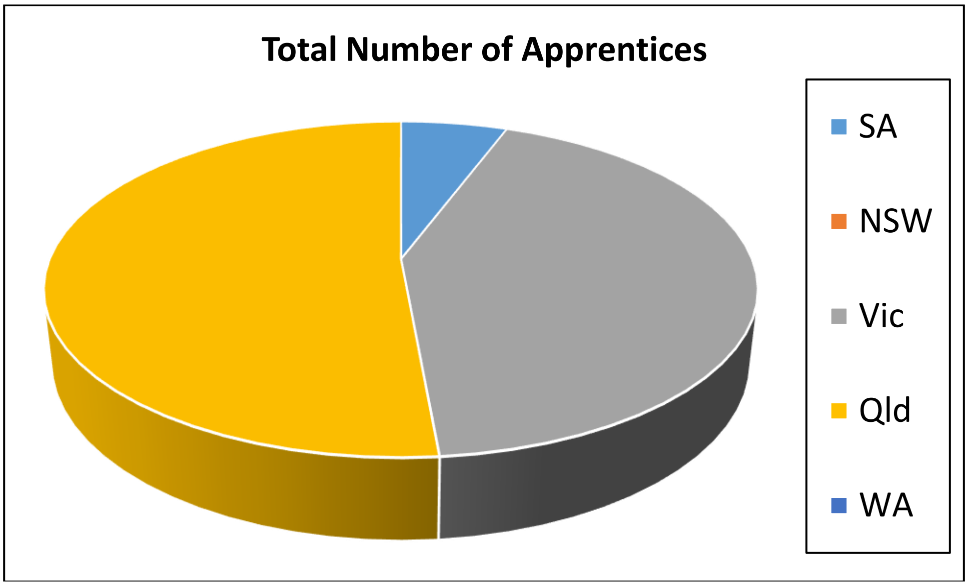
The Non-Ferrous data that I received gave a total of 8750T metal cast annually. Again, if I was able to include data from the non-AFI member companies that have very sizeable operations, I would consider that the total of Non-Ferrous metal cast in Australia would very conservatively exceed 35,000T pa.



4.2 Number of Employees and Apprentices

The respondents to the survey directly employ 1691 employees and 35 apprentices. The majority of these apprentices are based in Queensland and Victoria.

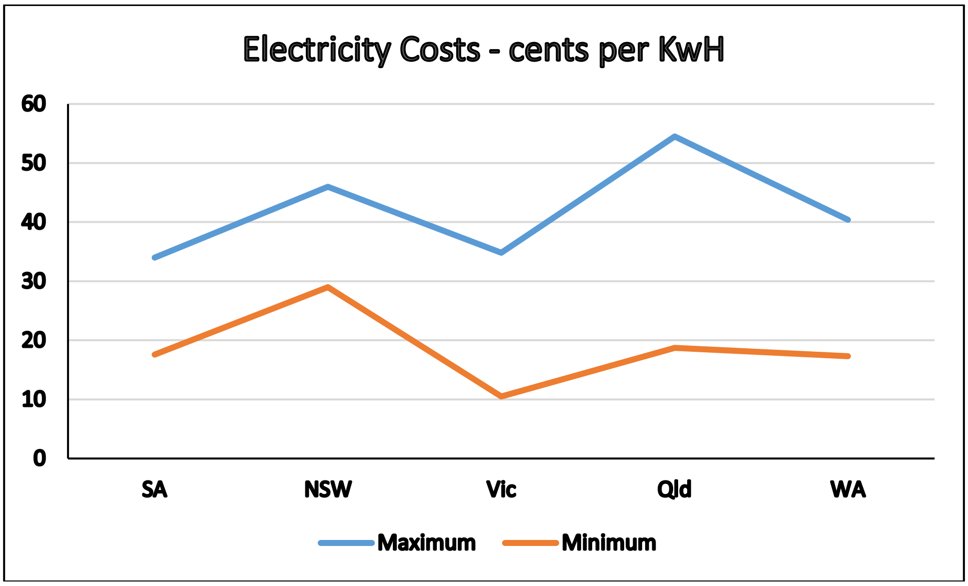




4.3 Energy Costs

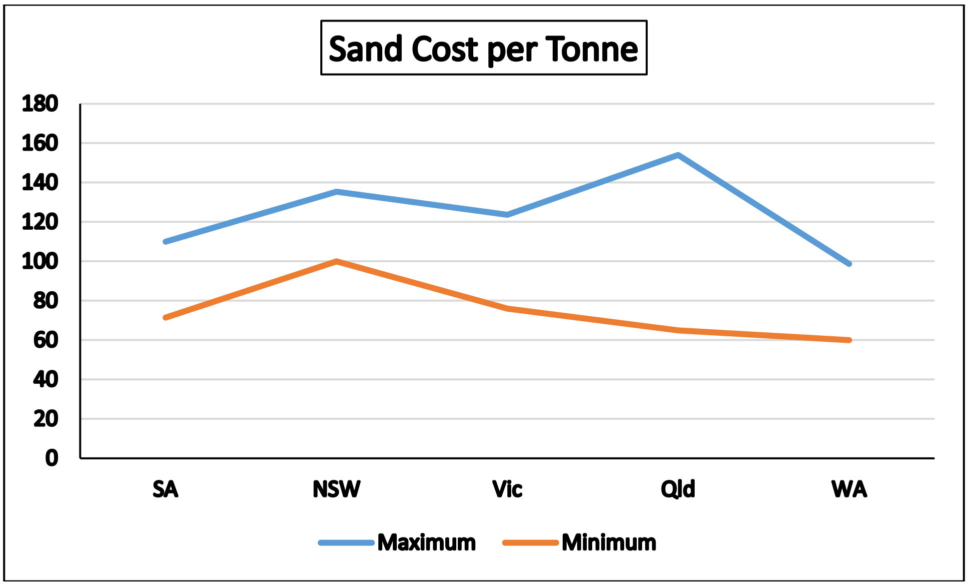
Survey participants were asked to provide electricity cost per KwH. The 29 responses ranged from Peak Rates, Off-Peak Rates, Furnace Tarrifs, General Tariffs, Total annual Cost with Total annual KwH's used, and in some cases the various other power supply charges were also shown.

To me this demonstrated the challenge that each of our casting businesses has in trying to interpret their rising power bills. The data also presented a wide range of cost per KwH, with considerable variation state to state.



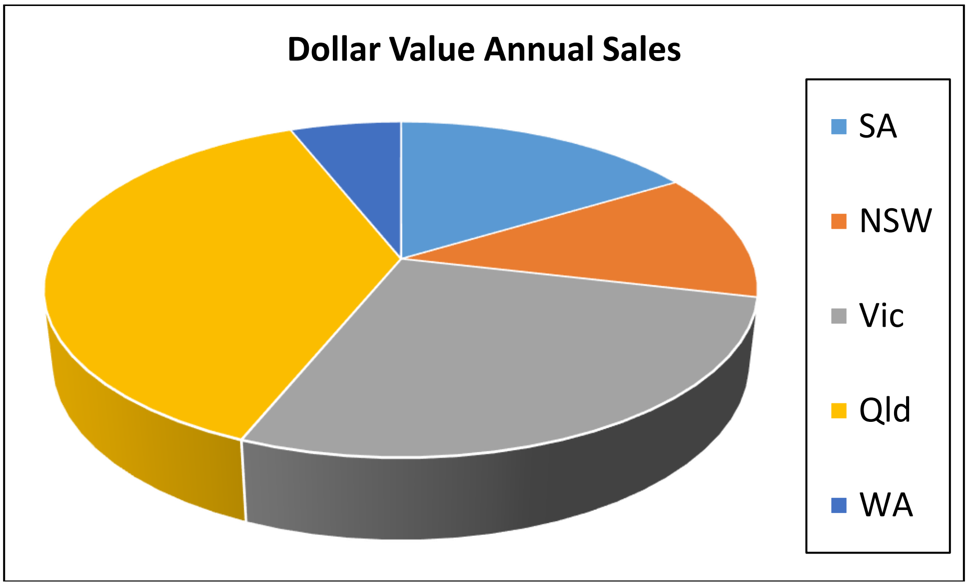
4.4 Sand Costs

Survey participants were asked to provide sand costs. Grades of sand were not specified. Interesting similarities of cost distributions of Electricity and Sand when comparing by State.



4.4 Annual Sales

Survey participants were asked to provide the annual sales value of castings sold. This calculation is made more complex by the fact that many casting operations also have considerable value-add processing post-casting (eg: machining, assembly, painting).



5.0 Discussion

As stated, I consider a conservative estimate of metal cast in Australia is 40,000T of Ferrous (Iron and Steel) and 35,000T of Non-Ferrous (Al alloys, Cu base alloys, Pb, Co).

Though not surveyed, it is known that these castings service markets in Mining, Agriculture, Defence, Rail Transport, Road Transport, General Engineering, Energy, Biomedical, Food and Automotive industries.

Potentially an important leveraging tool is Sovereign Risk. This could generally apply to supply of castings to the Defence Industry. The metal casting industry in Australia is strategically important and needs to maintain a critical mass (how do we quantify this ??) to ensure an adequate pool of skilled personnel.

The most immediate 3 major risks identified to our industry are Electricity Costs, access to trained personnel and formal training of personnel.

Costs

One recommendation of the 2012 Enterprise Connect review of the Foundry Industry in South Australia, was for the “joint procurement of key products including materials, energy … as well as support services.”

Applying this approach to Electricity supply will need collaboration between businesses but does have the potential to deliver a much better outcome than currently seen.

With the WA power supply grid isolated from the eastern seaboard grid, it would not be feasible to take a national approach to procurement but a collaborative approach between either State based foundries or regional based foundries may be feasible.
The variability in cost per KwH within each State and from State to State should be explored further. The same comment applies for Sand Costs.

Training
The Queensland based apprentice training facility has been operating successfully for more than a decade now. The geographic challenge and associated costs has made it difficult for foundries in other States to employ apprentices. Another difficulty is that funding for training is a Sate based responsibility not Federal, so we generally don't have State based support to send apprentices to the Queensland facility.
A very significant step forward in this respect has been the re-introduction of apprentice training (Moulding and Patternmaking) in Victoria through the Goulburn Ovens TAFE (GOTafe). The training model developed by GOTafe lends itself to training of small groups of apprentices, with the trainer going to the apprentice group rather than the apprentices having to frequently travel to a central location. Importantly this training model has been used by GOTafe with groups of apprentices (from other industries) in Qld, NSW and SA.
The potential exists for GOTafe to provide Moulding and Patternmaking training to States other than Victoria. For this to occur each State Government would need to support the GOTafe proposal.
GOTafe will also work with the AFI (Vic) to develop Cert IV level training in the future.

Lobbying
Whether we talk about Electricity Costs, Training, Access to Trained Personnel or any of the other challenges that our industry faces, I consider that a collaborative approach will deliver a better outcome for all. We are seeing a level of collaboration by some groups of foundries in some States (in Qld Joe Vecchio - representing 4 of Qld's major foundries - will soon be meeting with a State Govt representative on Electricity Costs).
I can't say that I am skilled at lobbying – maybe others in our industry are.
Consideration needs to be given to utilising bodies like the Australian Industry Group to advance our causes.

Future
There is no doubt that a more nuanced survey of the metal casting industry would provide much more detailed data.
Is this what we should be aiming for ?? Will this deliver better outcomes for the industry ??
As the National President, I need your feedback and direction. How do we assess the value of a regularly updated Industry Data Report and what form should it take ??
Please discuss these questions with your colleagues, be prepared to openly discuss your views at State and National meetings, and help to guide the AFI to be a more effective representative body for you.

6.0 Conclusion

This initial survey of the Australian Metal Casting Industry has delivered base level data which allows us for the first time in many years to quantify the size of our industry (in terms of tonnage cast and number of employee's). It also quantifies the State to State and within State variance of electricity and sand costs.

This data presents an opportunity for all of us to advance our causes with Electricity retailers, new sand suppliers, and political decision makers. Please be active in using the data.

7.0 Appendix 1

7.1 Blank Data Response Table

Casting Industry Data

2018 Survey

Data Requested	Response	Comments
1. Annual tonnage cast by metal type		
2. Total number of employee's to produce these castings		
3. Number of Trainee's / Apprentices		
4. Power costs / KwH		
5. New sand costs / Tonne		
6. $ value of annual sales		

7.2 Letter issued with Data Response Table requesting participation.

Australian Foundry Institute

ABN 53 830 764 159

20 March 2019

Re: AFI Industry Data

To: AFI Member Casting Operation

The AFI has traditionally been a technical body, enabling dissemination of technical developments in all aspects of the casting industry. Given the challenges our industry faces with power costs, accessing trained personnel and training of personnel, there is a growing need for the AFI to become more active in lobbying our political decision makers. A regular blocker to advancing AFI causes with our politicians has been the lack of industry wide data.

I am writing to you requesting your co-operation and support in gathering industry data. Can you please complete that table on the following page and return directly to me.

I understand and respect that privacy and competitive advantage concerns are a significant and legitimate concern in relation to company data. To alleviate this concern, all data will be received and collated by me only. As a foundryman of long standing, now retired, with no vested interest in data from individual companies, I give my personal commitment to confidentiality.

The data received will be collated by me to produce an Industry Report, which will be distributed to all AFI members. AFI State and National bodies will use this report to advance AFI causes with political decision makers.

I envisage a need to update Industry Data periodically. I propose to do this annually. I would also envisage a need to broaden the scope of the data being requested now. This will be subject to review over the coming year.

Thank you in advance for your support. If you do have any concerns or suggestions relating to this process, can you please contact me directly. In particular, please communicate any blockers that you may have to providing this data.

Yours Sincerely,
Alan Cooke
AFI National President
0427 777 061
Email: agcooke52@gmail.com

7.3 Document supporting Survey issued with Data Response Table

Australian Foundry Industry Data

AIM:

To produce an annual Australian Foundry Industry Report that can be used to advance AFI causes.

Initial Data to be Requested

1. Annual Tonnage cast by metal type.
2. Total employee's to produce these castings.
3. Number of trainee's / apprentices
4. $ value of annual sales
5. Power costs / KwH
6. New sand cost / Tonne

Why Do We Need Data ??

Traditionally the AFI has been a technical body. In recent years with high power costs, training and training personnel issues, there an increasing need for the AFI to lobby political decision makers. A regular blocker to progressing AFI causes with politicians has been the lack of industry wide data.

What Are the Blockers to Getting Data ??

A major blocker for individual companies to provide data has been around privacy and competitive advantage concerns. Clearly legitimate concerns that must be protected. For this initial collection of data, I want to use my credibility as a foundryman of long standing, now retired, with no vested commercial interest in data from individual companies.

How Will Initial Data Be Requested ??

The initial data will be requested by a letter from me to all AFI members companies active in casting, delivered through the State AFI Secretaries. It is very important that this letter is delivered to the appropriate decision maker of each of our member companies.

The request will be for the data to return directly to me.

It is envisaged that some members will readily provide the requested data, others will require follow up phone calls, and a few will require a face to face visit.

This stage of the data gathering process is critical to achieving a successful outcome. Identifying what actions are appropriate for each member company will be dependent on the strength of personal relationships in some cases. Could each State please give this aspect of the process significant consideration.

Collation of Data

I will be the only person to receive and collate data.

How Will the Data Be Used ??

The fully collated data will form the basis for the Industry Report. Data within the report would be provided down to State level. Regional data and individual company data will not be included in the Industry Report.

I propose that the Industry report be made available to all members by 31st March, 2019, and publically available via the AFI website by the 30th September, 2019.

AFI National and each State branch would be encouraged to use the Industry report to progress relevant causes of benefit to the industry.

How Frequently Will Data Be Updated ??

The intention is to have an annual update to requested data so that it maintains it's relevance and (just as importantly) maintains a mindset amongst the decision makers of our member companies that an up to date Industry Report adds value to their business.

I would also intend to broaden the scope of the data being requested. I'd envisage a need to streamline the process of data collection and collation. To enable this, I propose investigating the possibility of engaging Deakin University (to be costed). Whatever 3rd party is engaged, the role would be to develop the tools needed to manage the data, review Industry Reports from other countries (eg: UK, USA, China, Turkey), research what data is needed, and put forward recommendations to enhance the value of the AFI Industry Report.

I would anticipate that this 3rd party can present their findings at the 2019 National Conference.

Alan Cooke

AFI National President