

Submission – The Australian Manufacturing Industry

My name is Roger Fairfax and I commenced an apprenticeship in 1958 in QANTAS as an aircraft maintenance mechanic. I had done a pre-apprenticeship course in aviation at Sydney Technical College the year before. My apprenticeship was for five years and on completion of my five years aviation trade course I was able to do a one year Toolmaking Course at the same technical college during my fifth year of apprenticeship.

Ten years later in 1968, I took on a role in QANTAS Engineering Facilities. In this role my main task was to seek three or more quotes from toolmaking companies and general machine shops for manufacture of the tooling, jigs, fixtures, and equipment needed by the company to introduce and maintain the Boeing 747 aircraft. We arranged manufacture of tooling, jigs, and fixtures also for the RAAF, RAN and some overseas airlines.

There were many toolmaking companies some of which did extremely fine tolerance work. There were engineering companies whom we used to fit out the hangar rostrums to fit the needs of the aircraft for maintenance purposes. Some of those engineering companies had machinery needed for machining large fixtures needed for the JT9D Pratt and Whitney and the RB211 Rolls Royce jet engine overhaul requirements. This was in the period from 1968 through to 1983 that I am referring to.

Sadly, today there are none of the close tolerance toolmaking companies left who did so much work for the tooling that we had made for QANTAS. There are none of the engineering companies that had the large machinery to manufacture the large fixtures for the 8ft diameter jet engine parts. During the period of time that I arranged tooling for QANTAS and other client airlines we were able to get 95% of it manufactured in NSW and Victoria. The other 5% we purchased direct from the USA and these were tools that they had mass produced. As QANTAS engineering workshops were so far from the USA, the company preferred at that time to do all their own repairs of engine and airframe, hence the need for the tooling, jigs, fixtures, and ground support equipment. The tug for push back of a fully loaded 747 aircraft was designed and manufactured by Fox Engineering at Smithfield NSW.

From around 1985 onwards through to this present day, manufacturing in Australia has declined and gone to overseas companies because of the belief that it is cheaper to manufacture overseas. Sadly though, the quality of goods made overseas has also diminished in many ways.

We need to reflect on what we have lost in Australia in the manufacturing and associated industries since around 1985 to this day. We had a reasonable ship building industry. We made our own railway carriages, now made overseas. We had a number of steelworks. We refined oil into petrol and other associated products in refineries in Australia, many of which are no longer in operation. We designed and manufactured motor vehicles, Holden, Ford, Valiant, BMC and assembled Toyota vehicles, none of which exist today in Australia. We manufactured aircraft parts such as ailerons, flaps, and many other aircraft components for the Boeing aircraft company. We built fighter aircraft for the RAAF in NSW and VIC. We had a clothing and footwear industry and made the clothes and footwear that we wore. We need to ask ourselves, why did we let this be taken from us and given to overseas companies?

A large Australian Toolmaking company located in Reservoir Victoria designed and built a car engine transfer machine for one of the car manufacturers in Australia. This machine was computer controlled and the rough casting of the engine block started at one end and was fully machined in every detail at the other end. The computer numerical controlled machine

at the time was the first in the world. Why did we let this technology slip from our grip? The company was Zenford.

In times past Australia has been in the forefront of new ideas and research. We were one of the first nations to design the solar panel. This was put to the Australian Federal Government for funding for manufacture in Australia and no funding appropriated for it. Consequently, the research and the men behind it ventured overseas where it was taken up and is a viable industry today. Australia lost out.

In NSW, I don't know about other States, the TAFE system was one of the very best for training people in so many different trades. Bit by bit the NSW Government cut funding so that TAFE today is just a shell of what it used to be before around 1985. More emphasis was put on youth going through to year 12 and the onto university. However there are a lot of people that are not cut out for university study and instead would make good tradespeople. Without a decent TAFE this is difficult. Also due to the cuts in finance for TAFE, trade courses have diminished in what is learnt compared to when people did a five year apprenticeship.

What should we do?

We need to re-think and get manufacturing going again in Australia. We did it after WW2 so we can do it again. However it needs the will of the Australian Federal Government to lead the way; to put the finance where it is needed; and to seek the support from all Australians to get our manufacturing competitive and vibrant with new ideas and new or upgraded facilities.

Suggestions for consideration:

1. Seek ideas from people across Australia of what Australia could do to manufacture things that people around the world will want to buy from Australia.
2. Get the universities and TAFE working together. Ideas put forward from all walks of life could be researched and designed within the universities with TAFE working with them on how they can train the people that will put the ideas into manufacturing.
3. Think globally and not just Australia when tooling up for production so that things can be made for distribution across the world and of the best quality and follow-up.
4. Build up the TAFE colleges so that when they have trained people, those people have the very best of knowledge and skills from having learnt at those TAFE colleges.
5. Australia has an aging workforce with many of whom would be interested in working in industry, provided that there were certain parameters of consideration of their age. This would bring back many of the skills learned and practiced over many years and with new technology could be of great benefit to get Australian manufacturing going again.
6. Encourage a mentor relationship between the aging workforce and the younger workforce so that skills can be passed on in a new and challenging manufacturing environment.
7. The Australian government (all parties) work cohesively as a team to ensure a ten, a twenty, and a fifty-year goal setting program be put in place. This program should be reviewed every five years and would ensure that the Australian manufacturing industry always has opportunity to move forward and not be cut at the whim of a change of government. Australian Manufacturing needs to be a whole of Australia goal. There needs to be clear guidelines set to achieve this and if changes are made, as will happen, that the manufacturing industry is party to the changes.

8. A set of guidelines be drawn up so that when an idea for a new manufacturing challenge emerges, that there are representatives from Manufacturing, Government, Universities, TAFE and Commerce to work through each idea to determine its practicality, profit potential, global distribution opportunities and many other requirements. It should not just be an Australian Government decision. It needs all parties. It is no use pursuing an idea if it might be a fizzer. Homework needs to be done to ensure a viable competitive solution prevails.
9. Think of the world as our customers, not just Australia.
10. Pick-up on some of the manufacturing we have lost but refine it so that we move forward as a nation.
11. Review the success or demise of the various sections of the manufacturing industry that is developed. If a section isn't functioning as first planned and developed, then it needs to be reviewed. In some circumstances it may major change. If a manufacturing process has to be closed as the market has changed, then we need to look at another way we can keep manufacturing going.

I hope these ideas may be of some help for the revitalisation of the Australian Manufacturing Industry.

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