



Federation of Automotive  
Products Manufacturers

## Submission

to the

House of Representative Standing Committee on  
Employment, Workplace Relations and Workforce  
Participation

Inquiry into Employment in the Automotive Component  
Manufacturing Sector

February 2006

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## Executive Summary

On Tuesday 6 December 2005 the Minister for Employment and Workplace Relations, the Hon. Kevin Andrews MP, asked the House of Representatives Standing Committee on Employment, Workplace Relations and Workforce Participation to inquire into and report on *Employment in the Automotive Component Manufacturing Sector*.

The Minister requested the Committee to inquire into and report on employment opportunities and challenges in the Australian automotive component manufacturing sector with a focus on the following issues:

- Current and future employment trends in the industry;
- Emerging skill shortages and appropriate recruitment and training strategies;
- Labour adjustment measures required to assist redeployed and affected workers; and
- Measures to support skills development, innovation and investment in the industry.

The Federation of Automotive Products Manufacturers (FAPM) is an association of manufacturers engaged in the production of a comprehensive range of automotive products. It was formed in 1958 and currently consists of nearly 200 member companies, employing more than 27,000 people with sales of over \$8.5 billion.

FAPM exists to promote the interests and welfare of the automotive components industry in and to support the development in Australia of an increasingly efficient and internationally competitive motor vehicle industry.

The automotive industry is increasingly globally competitive and we need to respond to these challenges through investment in our capacity to produce world-class vehicles. The people involved in the industry underpin our ability to maintain the competitive advantages that we currently have.

In this submission, we have acknowledged recent employment movements; the future challenges facing the industry; and where the industry and governments can impact on the workplace and workforce participation.

We have chosen to make a series of recommendations which, firstly, general in nature, but are vital to support the industry as a whole, and, secondly, recommendations which will impact our workplaces directly.

## Summary of Recommendations

### ***Creating the Right Conditions for Industry***

There are a number of elements of Government policies, in addition to sound fiscal and monetary policy, which FAPM believes are essential to wealth creation, job generation and rising living standards which are as important to the automotive industry as they are to any other industry. These include:

- Supporting public R&D and innovation and promoting effective linkages between industry and public research institutions.
- Fostering a taxation system which meets the revenue requirements to fund government activities without penalising production, trade, or decisions to work; and indirect taxes which favour one type of vehicle over another type (e.g. the so-called luxury vehicle tax).
- Providing efficient infrastructure for transport, telecommunications and energy.
- Facilitating access to internationally competitive debt and equity through an efficient capital market.
- Opening new markets for Australian manufacturers by promoting free trade through the World Trade Organisation, and in Multi and Bi-lateral agreements.
- Recommending that the Government establish automotive industry specific trade facilitation arrangements to ensure that Australian manufacturers are best able to access foreign markets.

### ***Creating the Right Conditions for Employment***

The core policy changes FAPM considers essential in creating the correct conditions for employment include:

- Up-skilling the workforce through improved vocational and employment training – this offers the most effective long-term solution.
- Increases in skilled migration – this offers a relatively simple, short-term policy response and mitigate some of the delay’s inherent in our other recommendations.
- Ensuring that Australia’s education and training infrastructure provides industry with access to people with the required set of skills and that those people have access to lifelong learning to cope with changes in skill requirements over time.
- Adoption of a truly competency based apprenticeship system – as with vocational and employment training, this offers significant long-term advantages for the industry and the economy.
- Having flexible and responsive labour supply conditions which match the requirement for companies to be able to respond quickly to rapid changes in market dynamics, and
- Changes to financial incentives for training for employers and employees – this offers a relatively quick, but potentially expensive, public policy approach.

## The Australian Automotive Components Industry

### *Industry Overview*

The Australian automotive industry is a key growth driver of Australian manufacturing - in investment, skilled jobs, design, engineering, manufacturing technology, production and management techniques, chip technology, innovation and R&D.

There are around 200 local component, tooling, and design and engineering firms providing products and services to the four Australian vehicle assemblers, to exports and to the after-market.

Automotive components manufacturing directly employs an estimated 30,000 people. It is an important industry in a number of regional centres across Australia including Albury, Geelong, Ballarat, Taree and Launceston. It is also a significant employer in parts of Melbourne, Adelaide and Sydney.

Total annual revenues generated by the automotive component manufacturing sector were around \$8.5 billion in calendar year 2005. Many of the world's leading automotive components suppliers are manufacturing in Australia. Four of the top five, seven of the top 10 and 11 of the top 30 component suppliers by world turnover are represented in Australia.

Automotive components supply in Australia is concentrated - the four largest companies account for around 40%; the top 30 companies account for more than 90%, of industry turnover.

The Australian components sector manufactures the full range of automotive components. The industry is fully QS-9000 rated - a supply requirement of each Australian-based automotive manufacturers - and is moving towards full accreditation under the TS16949 standard. Manufacturers are well supported by a number of design and tool making firms.

A wide range of components are exported including engines, electronics, braking equipment, wheels, driveline components, seating, transmissions, air conditioning equipment and friction material. Total exports by the whole automotive industry in the year to November 2005 were valued at \$4.62 billion, compared to \$4.21 billion in the year to November 2004.

Around 50% of the total Australian market for automotive parts and accessories is provided by imports, mainly from Japan and the US.

The automotive industry is one of the highest spenders on business Research and development in Australia. It is a leader in engineering design and production technologies and organisation methodologies. The industry invests heavily in workforce skills reflecting the need to continually improve quality and price performance.

Up to 100,000 jobs in other industries are directly or indirectly dependent on automotive manufacturing - jobs in industries such as steel, glass, plastics, textiles and services. Overall, the automotive industry contributes around 6% of manufacturing value added and about 1% of GDP.

Without the automotive industry, there would be a negative impact on Australia's balance of payments of between \$7 - \$9 billion.<sup>1</sup>

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<sup>1</sup> The Allen Consulting Group and Deloitte Touche Tohmatsu, The Automotive Industry's Contribution to the Australian Economy: A Modern Perspective, February 2002

The Australian automotive industry has worked hard over recent years to improve its competitive position by removing inefficiencies in the supply chain and by developing export markets. But there remains a way to go. The successful future of the Australian automotive components sector depends to a large degree on being able to further develop its innovation capability, to increase its capitalisation and to reduce its market reliance on the local assemblers.

### ***International Competition for Investment***

The Australian automotive industry will grow only if it continues to attract investment capital and is able to expand its markets beyond the limitations of the local economy. Both the markets for capital investment and for automotive products have been substantially opened up over the last decade under the forces of globalisation.

World-wide industry protection regimes which operated in the past, particularly for automotive, meant export markets were limited and manufacturing investment was often either less than optimum or suffered the disadvantages of having to operate with excess plant capacity.

That situation has changed substantially. Developed countries, with some exceptions, have largely open markets for automotive products and, where they existed, local content schemes and similar arrangements have been dismantled. The result is that markets in most developed countries are, in theory at least, capable of being supplied from production anywhere in the world<sup>2</sup>.

Global investment decisions in the automotive industry are dependent on three separate but interdependent sets of factors. The first set might be called the institutional prerequisites which determine the attractiveness or otherwise of the general investment climate. The second set is the country's relative competitiveness in providing investment incentives.

The third set is related to how easy it is to do business given a country's supply of economic and social resources and its available markets. There are four main groups of economic and social factors that are relevant to global investment attraction:

- Available market size
- Efficiency of communication and transport systems
- Availability of skilled labour
- Presence of efficient local support industries.

Australia generally has relatively strong economic and social attributes in terms of investment attraction in automotive industries. Domestic market size is however a limiting factor.

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<sup>2</sup> By contrast, some developing countries (including passenger vehicle producers such as Mexico) have certain exemptions and extensions from the WTO rules, including those on subsidies and TRIMS.

## Current and Future Employment Trends

### Employment in Automotive Component Manufacturing

FAPM undertakes an annual membership survey in January of each year. On 31 December 2004<sup>3</sup>, the 187 members of the Federation had revenues of just over \$8.5 billion and employed a total of 27,935 people.

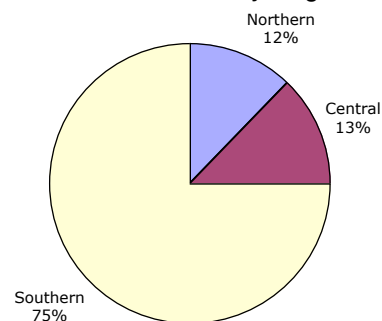
Membership of the Federation is distributed across Australia and divided into the following regions:

- Northern Region, including New South Wales and Queensland
- Central Region, including South Australian and Western Australia
- Southern Region, including Victoria and Tasmania.

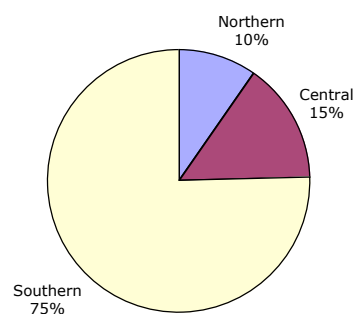
**Figure 1: FAPM Membership Statistics**

Membership of the Federation is distributed across three regions, with southern region having the majority (140) of member enterprises.

**FAPM Members by Region**

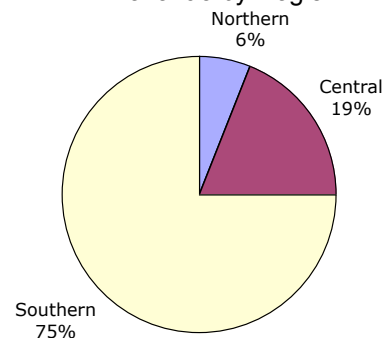


**FAPM Member Employees by Region**



The distribution of employment across the regions is roughly in line with the number of enterprises.

**FAPM Revenue by Region**



Central Region captures a larger proportion of revenues than the Northern Region, due to:

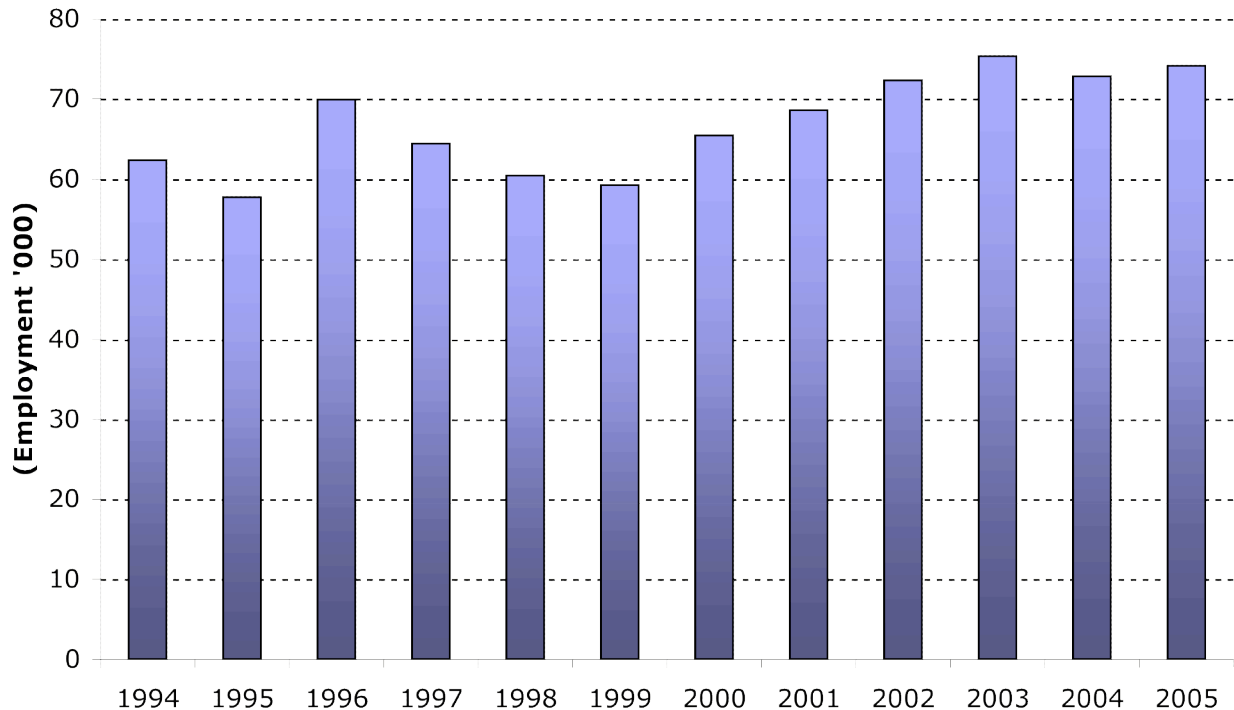
- a larger proportion of aftermarket manufacturing activities, and
- a decline in recent years of 'high value' automotive manufacturing that originally took place in the Northern Region.

Source: FAPM

<sup>3</sup> The 2005 data is currently being collected, and will be provided to the Committee as soon as it becomes available.

The Australian Bureau of Statistics notes that employment in the Motor Vehicle and Parts Manufacturing Sector fell in the 1990s before recovering in 2000 and remaining stable at just about 70,000 people between 2002 and 2005.

**Figure 2: Employment - Motor Vehicle and Component Manufacturers**



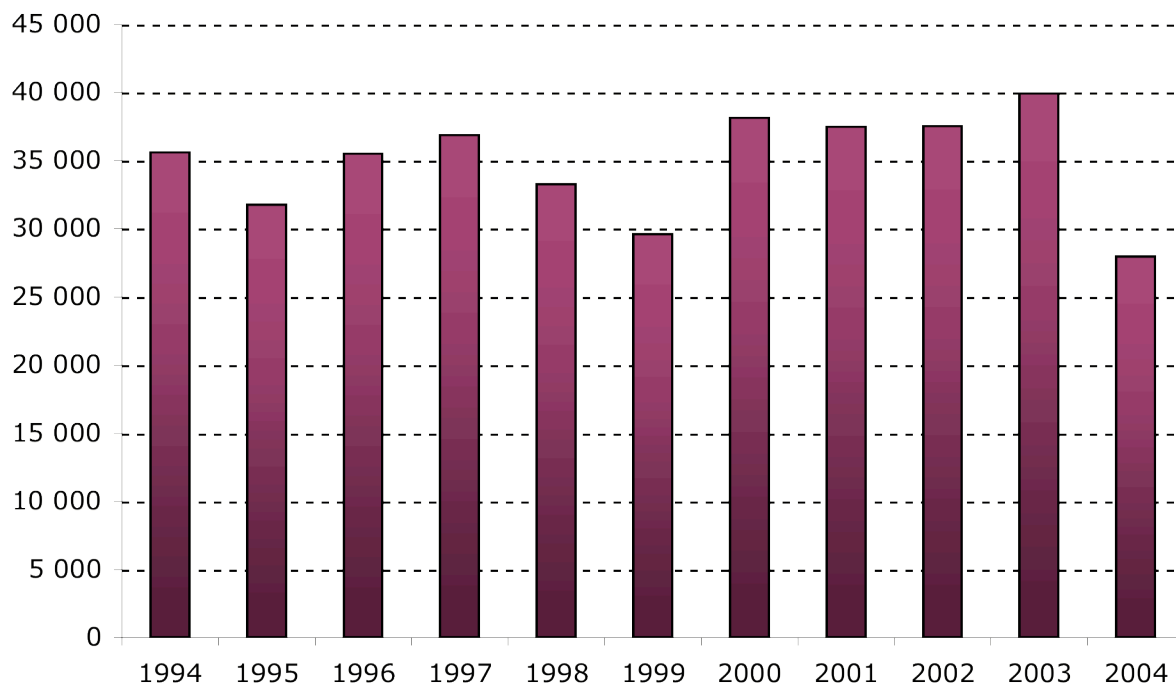
Source: ABS<sup>4</sup>

Data collected from FAPM member companies through an annual survey indicates a similar trend to the industry as a whole, up until 2003. The data for 2004 indicated a significant loss of employment in the sector, as the chart, below, indicates, leaving employment at around 27,500. Taking into account other automotive component manufacturing activities not represented in these figures, employment could be as high as 30,000.

The employment trend in component manufacturing over the last few years reflects increased outsourcing by the four local Motor Vehicle Manufacturers (MVPs). In the late 1990s the MVPs required suppliers to take increased responsibility for the design and development of components, in line with the trend towards the supply of pre-assembled automotive 'systems'.

<sup>4</sup> **General Note on ABS Industry Classifications:** The Australian Bureau of Statistics (ABS) publishes industry statistics on the basis of the primary activity of the business according to the Australian and New Zealand Standard Industrial Classification (ANZSIC). Some ANZSIC codes match automotive component supply activities well (although not perfectly). There are some other ANZSIC codes which mostly cover automotive components but include significant non-automotive component activities such as ANZSIC 2813 - Battery Manufacturing (which includes manufacture of dry cell batteries) and ANZSIC 2551 - Rubber Tyre Manufacturing (which includes tyre retreading activities). There is also a wide range of automotive component manufacturing activities which are part of broader ANZSIC activities. These include automotive seats which are part of the ANZSIC Furniture Manufacturing activities; fabrics and trims which are part of the ANZSIC Textile Product Manufacturing; and components made completely of plastic which are part of the ANZSIC Plastic Product Manufacturing.



**Figure 3: FAPM Member Employment**

Source: FAPM

In response to concerns raised by this data, FAPM asked members in June 2005 about the changes in employment and the reasons for these changes. We can make the following observations from the responses:

- In June 2004 the 48 companies (including subsidiary enterprises) which responded to the survey employed 15,804 staff
- In June 2005, they employed 12,626 – a decline of 3,178
- As far as they were aware, some 1,201 new positions were to be created in Australia – so the net Australian employment losses appear to be 1,977
- These companies believe on the basis of their known future work they will shed another 2,112 jobs by end of 2006.
- If the same ratio of jobs lost to jobs created holds, this will involve a net loss of another 1,314 jobs – a total of 3,291 from 2004 – 2006, or about 12% of the total workforce of around 27,500 in the automotive component manufacturing sector.

It is interesting to record the reasons for loss of jobs, the point of loss and the direction of loss:

- Of the 35 organisations which gave a reason for the change of employment, 25 said price of their product as compared to a competitor; 2 nominated technology change, 5 said industry 'politics', and 5 nominated the global supply strategy of their MVP customer.
- Seven lost the work during the life of a contract, 14 at model changeover, 14 did not list the point at which the business was lost.
- Eight of 35 business losses were to other entities based in Australia; 13 were to Thailand and 12 to China; sometimes contracts went to a number of overseas countries.
- Two thirds of respondents felt that local content of the vehicle that they were supplying had dropped as a result of their business losses; while no one thought it had increased.

We asked for comments and background to these losses. The Australian operation of Multi-National companies indicated in the following direct quotes:

- We will become an importer from our global company's lower cost operations.
- Our ongoing viability is threatened.
- We will now be investing in Asia and reducing local R&D.
- The work resourced will not now involve local manufacture.
- Skills we have built up here over years will be redeployed to our global operations.
- Shift to aftermarket is now imperative.

Australian owned companies said:

- Investment is not possible when contracts can be cancelled without notice.
- We are moving manufacturing to Asia. We will invest more overseas and less here.
- A toolmaker (so far successfully competing against overseas suppliers) says "the knock on effect of a sick and declining auto industry is catastrophic. We are trying to reduce our exposure to the auto sector".
- We made a substantial investment in new machinery, which is now idle.

It would however be wrong to relay only the bad news stories. Clearly many suppliers are maintaining their business. The supply chain retains considerable strengths and capabilities. Some Australian firms are already accomplished global suppliers, and we are working to build on those strengths.

Significant changes to employment in the industry will usually reflect a reduction in the local content of locally produced vehicles, and are likely to occur as steps associated with model changeovers. As there are a number of such changeovers scheduled for calendar 2006, with anticipated reductions in local content, we predict that there will be continuing losses in employment in the industry in 2006.

## ***Opportunities for the Industry***

### **The Industry is Changing**

Future employment trends in the Australian automotive component sector to rely directly on:

- 1) the manufacturing (including for export) activities of the four domestic Motor Vehicle Producers, and
- 2) the export markets pursued by automotive component manufacturers.

As can be seen from the following chart, the revenue growth of the sector has been quite strong and is currently at around \$8.5 billion, falling slightly from 2003. In the past two years, and in response to a fall in component sector exports, FAPM has asked members to provide details of the other revenue streams available to them. These other revenues include royalties, licences, engineering service provision (e.g. consultancies), and repatriated profits.

**Figure 4: Source of Component Sector Revenues**



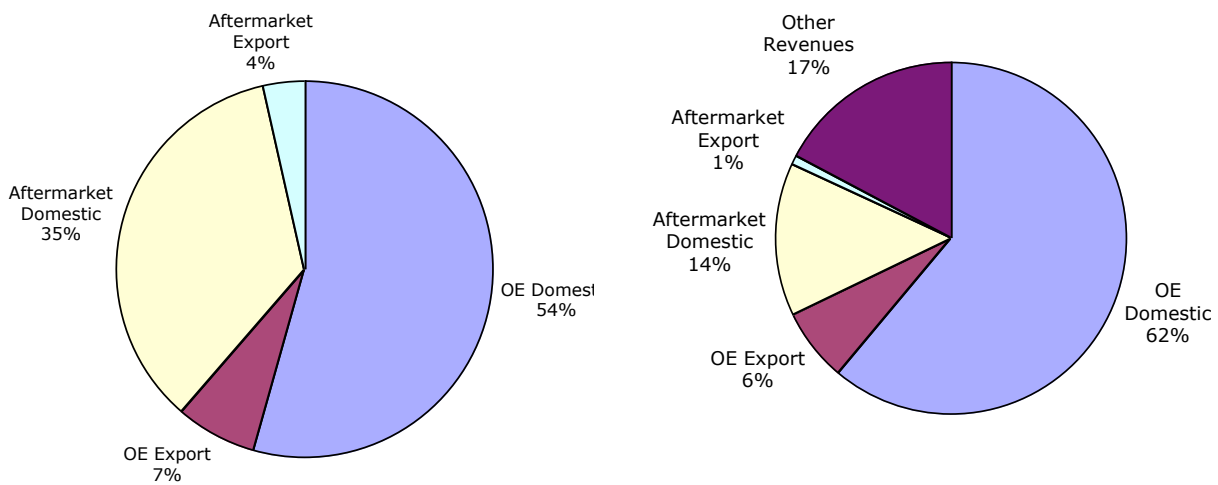
Source: FAPM

FAPM members rely heavily on their domestic sales, but direct exports and other revenues are becoming increasingly important. Also important, are the exports 'derived' from supplying components into an export program of one of the local OEMs.

Over time, the sources of revenue for the Australian automotive components manufacturing sector has changed, the most significant change being that by 2004, around 17% of industry revenues were derived from an automotive specific activity other than manufacturing. In the ten years to 2004:

- revenues from the domestic original equipment market have increased by around 8% of the total, and
- revenues from the domestic aftermarket have fallen from 35% of the total to around 14% of the total – due largely to increased import competition
- revenues from original equipment and aftermarket exports have fallen by 11% to 75% of the total.

**Figure 5: Sources of Revenue of the Automotive Components Sector, 1994 and 2004**



Source: FAPM

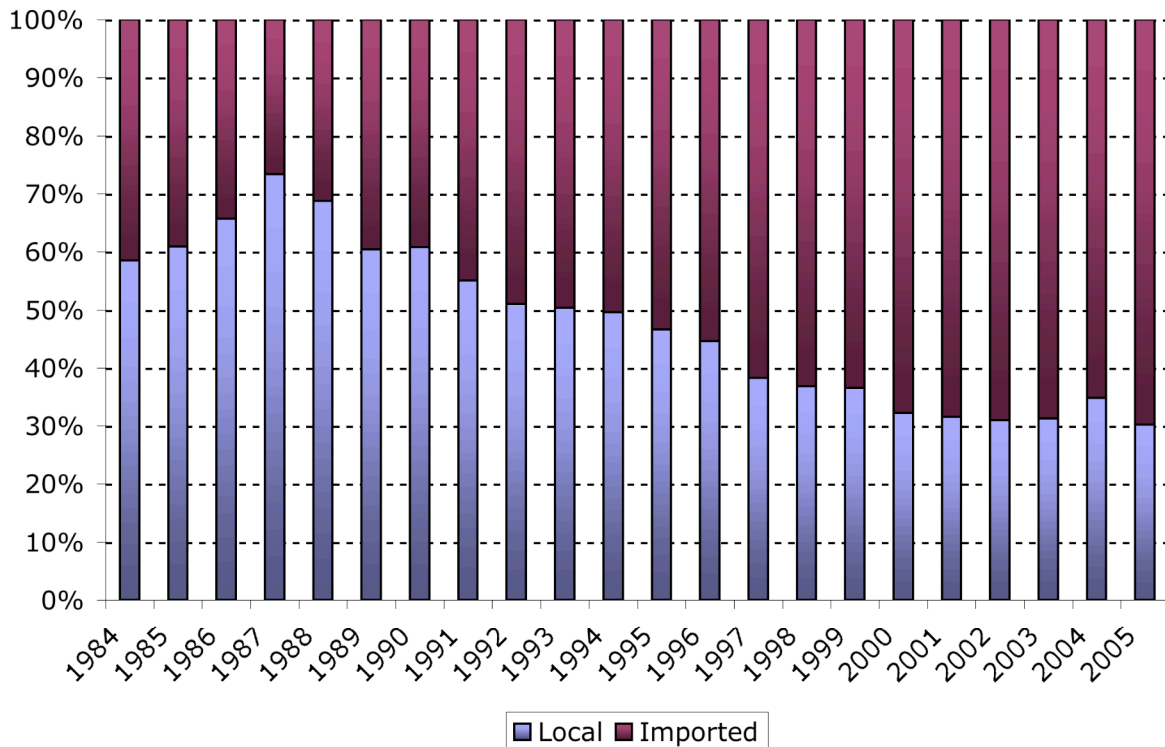
### The Domestic Vehicle Market

Sales of new motor vehicles in Australia were 988,269 units in 2005, setting a record for the fourth year in succession. Since 1987, however, locally produced vehicles have fallen as a percentage of all light vehicle sales in Australia, as tariff and other assistance to the automotive industry has declined.

Most of the loss of share has resulted from the end of production of smaller cars and the focus on larger cars and their derivatives. The limited range of light trucks made in Australia and, until recently, the lack of locally made SUVs have hampered the ability of the industry to compete in the faster growing sectors of the market.

As a result local share, for the markets in which Australian made products compete, fell from 73% in 1987 to 30% in 2005.

**Figure 6: Local and Import Share of Light Vehicle Market**



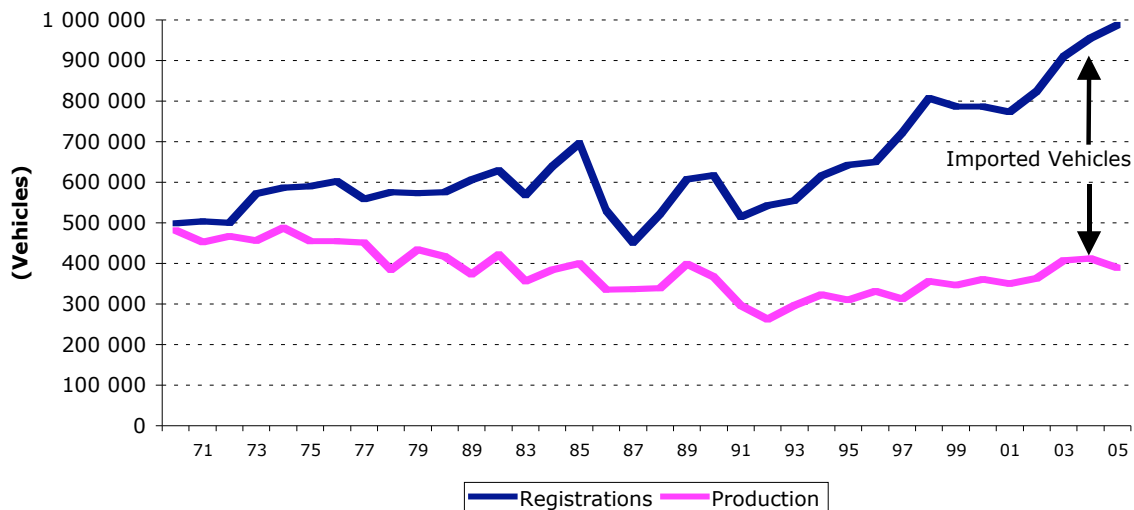
Source: FAPM, Vfacts

Export activity and the widening of the range of locally made models has partly compensated for the loss of local production of smaller cars. In particular, Holden and Ford have widened their light truck ranges, which are based on the Commodore and Falcon respectively.

As a small market in global terms, Australia is serviced by virtually all of the world’s motor vehicle producers, and we have one of the most diverse ranges of vehicles available to service every market niche.

With this increased diversification, FAPM acknowledges that the traditional market for ‘Australian-built family sixes’ (the core of our business) has been declining slowly over time as a share of all passenger vehicles sold in this country. This trend provides a challenge for both the MVPs (who are also the largest importers of vehicles to Australia) as well as the component manufacturing sector.

**Figure 7: Vehicle Sales and Light Vehicle Production in Australia (units)**



Source: FAPM, Vfacts

The growth in motor vehicle exports and the widening range of SUV's produced locally has led to some recovery, and production in 2003 and 2004 exceeded 400,000 units for the first time since 1982, but fell to 388,889 in 2005.

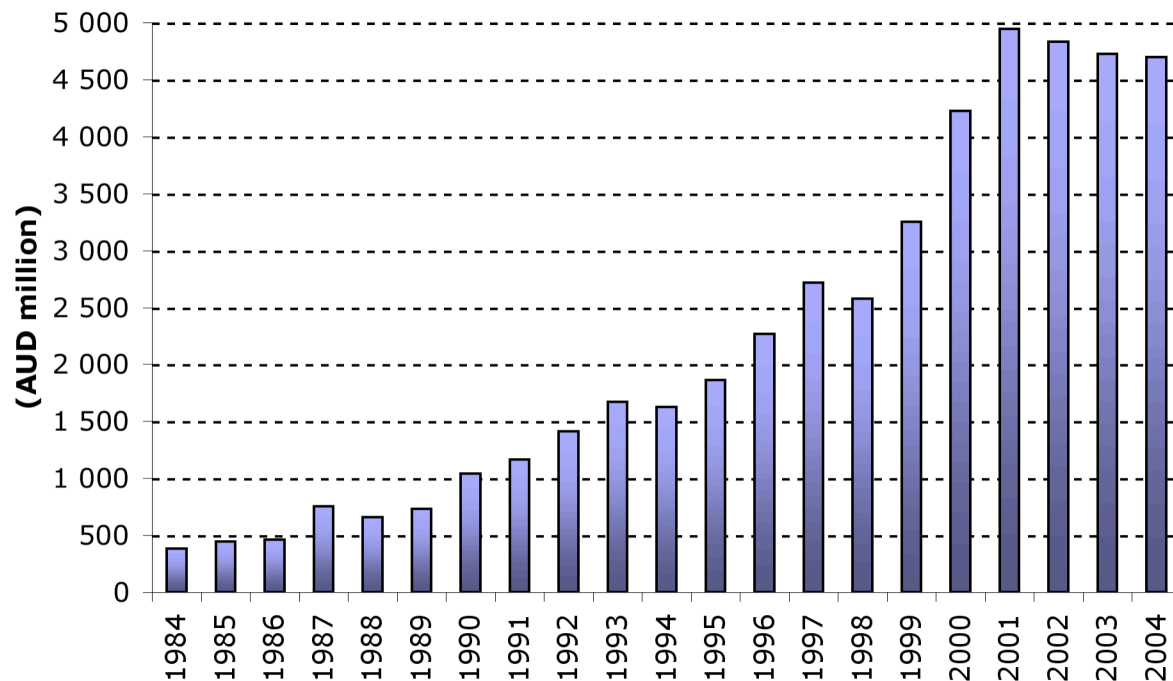
**Figure 8: Actual and Forecast Australian Motor Vehicle Production (units)**

	<b>Local</b>	<b>Export</b>	<b>Total</b>
1994	300 670	22 250	322 920
1995	283 376	26 304	309 680
1996	289 356	42 344	331 700
1997	264 049	48 479	312 528
1998	302 272	54 409	356 681
1999	270 265	76 130	346 395
2000	263 299	97 244	360 543
2001	234 247	116 155	350 402
2002	254 162	108 727	362 889
2003	287 910	119 579	407 489
2004	277 501	134 117	411 618
2005	247 692	141 197	388 889
<b>2006</b>	<b>236 045</b>	<b>134 639</b>	<b>370 684</b>
<b>2007</b>	<b>222 564</b>	<b>166 160</b>	<b>388 724</b>
<b>2008</b>	<b>234 312</b>	<b>164 000</b>	<b>398 312</b>
<b>2009</b>	<b>243 308</b>	<b>165 000</b>	<b>408 000</b>

Source: FAPM Economics and Statistics Committee

The forecasts of production indicate a significant fall in production for domestic consumption, with only limited growth coming from expected exports. Whilst remaining at reasonably high absolute levels the automotive industry will therefore need to adjust to a period of slower growth.

This fairly static level of activity in the automotive manufacturing sector means that the possibility of employment growth remains limited.

**Figure 9: Value of Automotive Exports (AUD million)**

Source: ABS

At present Australian export markets are rather concentrated - in the Middle East, USA, New Zealand and Korea. New and substantial markets ideally must be added in order to build growth in exports and reduce the critical dependence on so few countries.

To the extent that the Committee is able to comment, FAPM recommends that it highlight the link between increased international trading activities by MVPs and component manufacturers and employment growth, and further, that it:

- reinforces the importance of trade liberalisation, when due care is taken to ensure net gains are realized for the domestic manufacturing industry and the economy as a whole, and
- endorses the establishment of automotive industry specific trade facilitation arrangements to ensure that Australian manufacturers are best able to access foreign markets.

## Skill Shortages, Recruitment, and Training

### ***Is There a Skills Shortage?***

The Australian Industry Group (AiG) has undertaken considerable research on the drivers and impact of the skills shortage facing Australian manufacturing. AiG notes that Australia faces a critical shortage of skilled tradespersons in the next five years, with an expected large shortfall in the number of skilled tradespersons available to replace retiring employees. In late 2004, AiG noted that “170,000 people will retire from the manufacturing sector in the next five years with as few as 40,000 people being trained to replace them”.

In similar vein, an AiG Group Training and Skills Survey found that a significant portion of companies are experiencing skills shortages “... with the most difficult problems anticipated at trades/post trades levels”.<sup>5</sup>

This skills shortage represents a critical issue for the Australian automotive components industry:

- 72% of automotive equipment manufacturers are experiencing difficulties in finding skilled employees. Organisations identified a lack of applicants, lack of qualified applicants or applicants with inappropriate skills and experience as the key reasons why positions remained unfilled. Skilled vacancy rates were particularly high amongst smaller businesses,
- it is estimated that there are in excess of 3,000 vacant positions for skilled tradespeople in the transport equipment sector, of which automotive is the dominant category,
- 86% of business recognise that skills enhancement is very important to their business competitiveness, and
- 28% of productivity improvement over the next two years is expected to come from skills enhancement.

In summary, skills drive productivity improvements and competitiveness and there is overwhelming evidence that a large number of organisations are facing difficulty finding suitably qualified people to fill their needs. The skill shortage is being driven by a range of factors, not only by ones which can be addressed (see discussion below), but also much broader factors such as population aging and a robust, growing economy.

The Australian Chamber of Commerce and Industry has noted that it is “evident that employers view skills shortages as a critical issue overall”, with shortages consistently referred to in its surveys as a significant barrier to investment, or an important matter that needs to be addressed by Government and industry.

The Department of Employment and Workplace Relations has reported that shortages of certain tradespersons are currently widespread in Australia, with the most significant national current and emerging shortages in areas that include “the Metal Trades and Electrical Trades”.

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<sup>5</sup> Training to Compete, page xvii



## ***Where are the Skills Shortages?***

### **General Manufacturing**

In September 2004 the AiG released a report on the nature and depth of skills shortages in Australian manufacturing entitled “Australia’s Skills Gap - Costly, Wasteful and Widespread”.

This report stated that Australian industry faces many challenges and opportunities in the years ahead in responding to the rapidly changing dynamics of global competition from emerging industrial giants, such as China; the rebalancing of our currency; the push towards global outsourcing; and the erosion of Australia’s traditional export markets.

FAPM endorses AiGroup’s conclusion, that Australia’s dynamic and world competitive industries need, among other requirements, a highly skilled workplace to remain competitive.

The survey reported that:

- One in two firms surveyed were experiencing difficulties in obtaining skilled labour.
- The greatest difficulties in finding skilled employees were in metal-based sectors, particularly for transport equipment manufacturers.
- High levels of difficulty in finding skilled labour were also evident in the machinery and equipment; fabricated metals; and basic metal manufacturing sectors.
- Across manufacturing overall, there were 21.8 vacancies per 1,000 workers.
- The highest vacancy rates for skilled labour were in the wood, wood products and furniture sector (45.3 vacancies per 1,000 employees) and in the machinery and equipment sector (37.8 vacancies per 1,000 employees). All other metal-based sectors had high vacancy rates.
- Skilled vacancy rates were inversely related to firm size, with small firms having the highest vacancy rate (83.3 vacancies per 1,000 employees) and large firms the smallest (14.3).
- National skill shortages are estimated to be between 18,000 and 21,000 positions.
- Filling these positions would deliver a five-fold increase in the number of new people employed in manufacturing over the last 12 months.
- The largest numbers of skills shortages were in chemicals, petroleum and coal products; transport equipment; and machinery and equipment, each with estimated shortages of at least 3,000 positions.

FAPM commends this report to the Committee.

### **Engineering Shortages**

In December 2005 Engineers Australia conducted a qualitative survey to gauge the degree of professional engineering skill shortages in several Australian states. This suggested that:

- An overwhelming majority of the respondent organisations have experienced professional engineering skill shortages.
- The number of engineers currently employed by these organisations is 4,575 and they reported 902 current vacancies for professional engineers.

- All except 4 organisations, reported that they have been experiencing difficulties recruiting professional engineers for over 12 months.
- Of those organisations expressing a view, one believed recruitment would improve in 2006, 10 believed recruitment would be as difficult in 2006 as in 2005 and 17 believed that recruiting circumstances would worsen in 2006.

### ***Managing the Skills Shortage***

Trade shortages are more evident in the larger states, reflecting the general labour market conditions. Whilst shortages are being experienced in regional areas nationwide, increasingly those in the eastern states are finding it difficult to fill skill needs.

With an identified skill shortage, short, medium and long-term measures need to be identified to increase the pool of available, skilled workers in manufacturing. There is considerable discussion regarding the drivers that are directly under the control of organisations (such as training) and those that are under the broader government and society umbrella (such as industry perception).

### ***Organisational Issues***

The core strategies being considered by the automotive components industry to deal with the skills shortage are focussed on training and recruitment (discussed in detail below). However, other approaches are also employed, including:

- Outsourcing work through use of labour hire organisations, contract support or complete outsourcing – this has both short-term and long-term effects. While an organisation may fill an immediate need for specific services, outsourcing has the effect of “hollowing out” organisational capability. This is particularly evident where organisations outsource activities for their core, value-added functions. This approach also provides no solution for medium and long-term skills shortages, instead shifting the shortage to another organisation, and
- Lifting capital intensity (effectively automating manual tasks) – a popular, though long-term response to the skills shortage. Employing equipment to undertake the work previously performed by skilled labour is frequently a core economic consideration where the price of skilled labour rather than availability, is a key issue. However, the necessary connection between the two means that skills shortage in general make automation more cost effective. In a paradox, lifting capital intensity changes the skill requirements of organisations (e.g. requiring knowledge of newer technologies), potentially creating a skills shortage. As identified by the Centre for New Manufacturing at Swinburne University of Technology, employers are very keen for graduates to be competent with latest manufacturing technologies.

### ***Training and Recruitment***

Training and recruitment is the most significant response individual firms can make to address their individual skills shortage and is identified by the majority of manufacturing businesses as one of their key tools in dealing with the issue. At a broader level, activities include:

- Retraining existing staff,
- Employing better targeted recruitment, and
- Engaging additional apprenticeships / student placements.

Of real concern is that in response to the skills shortage, an AiG survey reported that more organisations identified apathy (“take no action” – 13% of businesses) as a preferred response to employing an apprentice (6%).

Despite this, the transport equipment sector specifically utilises a relatively higher number of apprentices (approximately 28 per 1,000 employees in comparison with the wider industry number of 17.9). In contrast, the use of student placements in the transport equipment sector is relatively less frequent (at approximately 6.5 per 1,000 employees).

Re-training existing staff is seen as the key priority for organisations – almost 60% of businesses focussing on this. In order to gauge the effectiveness of these strategies, FAPM has included a number of workplace training measures in its Benchmarking and Learning Program.

This program is an important resource which allows industry participants to objectively determine what they do well, and more importantly, to establish in which areas they need to improve in order to remain globally competitive.

### ***How Well Do We Training and Recruit?***

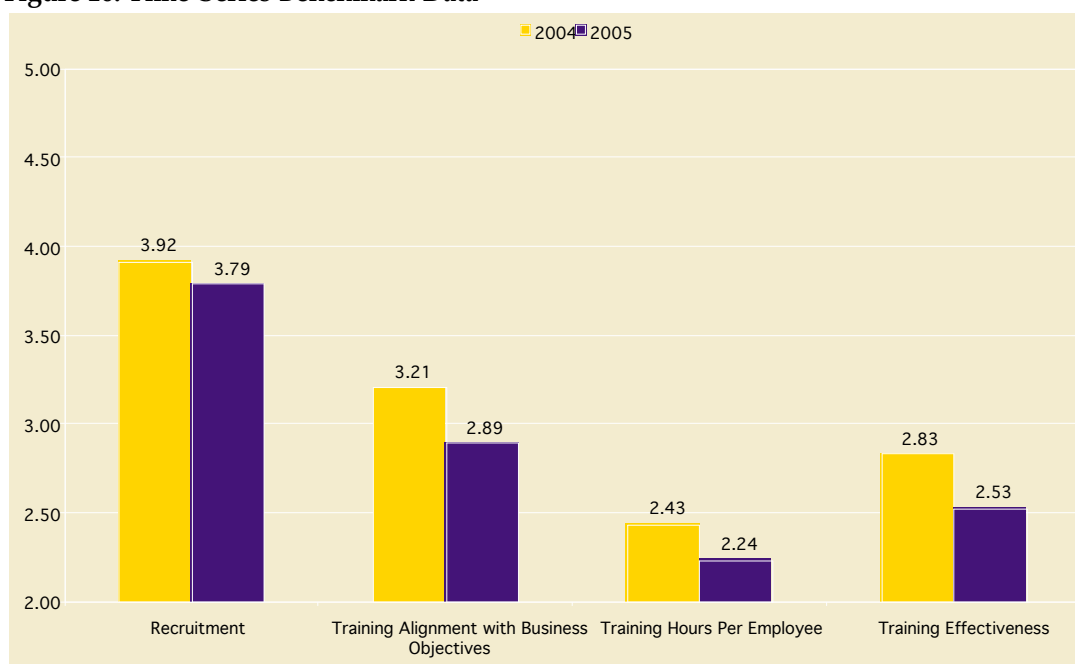
The FAPM Benchmarking and Learning Program have identified training as a key difficulty facing organisations over time.

As noted in the first industry paper released as part of the benchmarking program, the three training indicators in the HR module where the most improvement is necessary are:

- Training hours per employee,
- Training effectiveness, and
- Training alignment with business objectives.

Considering the data over time, these issues have become even more significant – and performance has deteriorated, gauged by the benchmarked assessment, between 2004 and 2005.

**Figure 10: Time-Series Benchmark Data**



Source: FAPM Benchmarking and Learning Program

Despite the relatively poor standing of training issues, it should be noted that the Australian benchmark data compares favourably with international benchmarks in Asia and Europe. Training per employee in Australia is significantly above that of Asian companies and is on par with European companies.

In specific measures, combining information from the benchmark program, AiG’s survey and ABS data, we know that:

- On average, employees in the automotive components sector receive 6.25 hours each per year of training or 0.4% of the standard full-time equivalent, and
- Organisations expend approximately \$620 per employee annually on training or 1.3% of the average wage in the industry.

This means that the sector spends less per employee than the manufacturing sector as a whole (\$645), but more as a percentage of the average wage (1.2%).

The automotive components manufacturing sector spends:

<p>More per employee on training than:</p> <ul style="list-style-type: none"> <li>▪ Food &amp; Beverage (\$425)</li> <li>▪ Textiles (\$240)</li> <li>▪ Clothing &amp; Footwear (\$255)</li> <li>▪ Paper, Printing &amp; Publishing (\$290)</li> <li>▪ Construction Materials (\$465)</li> <li>▪ Miscellaneous Manufacturing (\$200)</li> </ul>	<p>...but</p>	<p>Less per employee on training than:</p> <ul style="list-style-type: none"> <li>▪ Wood, Wood Products &amp; Furniture (\$1,010)</li> <li>▪ Chemicals, Petroleum &amp; Coal (\$1,090)</li> <li>▪ Basic Metal Products (\$640)</li> <li>▪ Machinery &amp; Equipment (\$1,310)</li> </ul>
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Source: AiG and ABS

In more qualitative measures we note that:

- While recruitment sources are used and selection processes are utilised, post recruitment activities are limited to induction only, and the number of employees who leave within one year of commencing service (excluding separations as a result of fixed term agreements, compassionate grounds, health & unplanned relocation) is 10% greater than normal (historical) benchmark,
- Training needs analysis is undertaken, but business training plans are infrequently developed and training is often only undertaken on an ad hoc basis,
- Training may not be in line with business objectives, and
- Ad hoc evaluation of training is undertaken, but is often restricted to crude measures of employee satisfaction with training.

### Improving our Training Strategy

The relatively poor results identified by the FAPM Benchmarking and Learning Program indicate an opportunity to consider what could drive or enable improved performance in the areas of recruitment and training. These issues are discussed below.

## Cross-issue Factors

Having regard to the survey results for the benchmarking program as a whole, we are able to assess the key drivers and effects of good and poor training systems. Statistical correlation across the many companies which have participated in the program identifies general trends and patterns<sup>6</sup> across all of the issues considered in the benchmarking program.

We are able to assess the organisational impact of improvements in these key areas of human resource management as well as identifying the key drivers or enablers for improvement in these areas. In Figure 11, we present the top five drivers (as measured by statistical correlation). For each of the four benchmarking issues, the table presents the five most highly correlated issues from other parts of the benchmarking program – good performance in one or several of the drivers parallels good performance in the core recruitment or training issue.

**Figure 11: Benchmark Issue Drivers**

Recruitment	Training Alignment with Business Objectives	Training Hours Per Employee	Training Effectiveness
New Model Introduction - Qual.	Financial Budgeting	Capital Productivity	Preventative Maintenance
Financial Budgeting	Capital Productivity	Net Margin	Net Margin
Machine Effectiveness	Effectiveness of Return to Work practices	Training Alignment with Business Objectives	Labour Productivity
Use of Standards	Labour Productivity	ROA - excluding government assistance	New Model Introduction - Qual.
Target/KPIs setting process	People / Process Alignment	Succession Planning	Shareholder Value

Source: FAPM Benchmarking and Learning Program

From the table, there are clear patterns or common features:

- There is a very strong cross-correlation with the training drivers – organisations which align training with business objectives spend more on training hours per employee (and the reverse holds true). Conversely, given the relatively poor showing on the benchmarking data, it highlights a potential vicious cycle, where poorly-designed training does not align with business objectives, reducing the training effectiveness and reducing the incentive for employers to commit employee time to training,
- When organisations invest in training and recruitment, there are strong improvements in key measures of organisational performance – improvements in new model introduction quality, improvements in capital productivity and improved waste elimination,
- Organisations are enabled to provide more and better training by getting key organisation activities operating effectively: strong financial budgetary control and a focus on shareholder value, and
- There is a strong correlation in the financial metrics of organisations.

<sup>6</sup> Where two issues are strongly correlated, it means that good performance in one issue (e.g. training hour per employee) parallels good performance in another (e.g. Net Margin). Conversely, poor performance in one issue also parallels poor performance in another. It should be noted that correlation does not prove a causal relationship between two issues – for example improving training hours may lead to improved margin but it is also possible that improved margin may lead to improved training hours. Assessing causal relationships requires an assessment of correlation combined with an understanding of industry practices.

The benchmarking data confirms that which is commonly known – that investing in training drives stronger financial performance.

The data in Figure 12 outlines the extent to which Net Margin is correlated with recruitment and training issues. Interestingly, it shows that Net Margin is more closely aligned with good recruitment policies and training alignment than it is with simple measures such as training hours per employee. Positive correlation is measured as a number between zero and one, with one representing perfect correlation. At .45 there is a moderate correlation between recruitment and net margin, however, there is a weak, but still positive link between training hours and net margin.

**Figure 12: Relationship to Financial Performance**

	<b>Correlation with Net Margin</b>
Recruitment	0.450
Training Alignment with Business Objectives	0.318
Training Effectiveness	0.202
Training Hours Per Employee	0.148

Source: FAPM Benchmarking and Learning Program

At Appendix 2, we present a more complete list of these four training and recruitment issues and their correlation with other benchmarking issues. These statistics only include correlates indicating moderate to strong relationships (that is, where correlation exceeds 0.5).

### **Different Approaches to Training are Required**

There is significant value in disaggregating the benchmark data by segment. For example, larger companies (over 200 employees) conduct more training hours per employee, but smaller companies report a much higher level of training effectiveness. This finding is consistent with the larger companies (which tend to be first tier suppliers) being forced to undertake a degree of training to keep pace with the technological advancement of their customer base.

The result is also further supported when analysed between exporters and non-exporters. Those companies that do export report a higher level of training hours per employee, while the effectiveness of that training is inferior to that undertaken by companies who do not export. Again, the hypothesis is that one segment of companies, exporters, are compelled to undertake training. Exporting companies may have training requirements set by the more sophisticated expectations of their international customers. Conversely, non-exporting companies have greater freedom to choose their training needs and choose to do less, but more effective training.

The presence of such an impact on the industry highlights the need for companies to ensure that the training deemed necessary to be undertaken reflects their business objectives. This would see a consequent improvement in effectiveness, and create a scenario where a positive influence on the investment in training is created.

## Opportunities for Improvement

From the above commentary, it is apparent that the effects of the skill shortage can be mitigated by a strong commitment to training. However, there is limited evidence that component companies are committing appropriate resources to training or structuring it appropriately. We conjecture that it is highly improbable that organisations simply do not want to improve their training, seeing it as rather more likely that they are constrained by resources or suitable opportunities. Given this, there are strategies organisations can adopt to improve training and, consequently, organisational performance:

There is a need to educate the senior management of companies about the positive effects of training, and organisational improvement that is possible from a targeted, aligned training program. This should help to characterise training as a proactive response to the challenges companies are facing rather than as a discretionary spend to be restricted during difficult periods. Some of the strategies that FAPM suggest to our members include:

- pay extra attention to the content of training to ensure it is relevant. Frequently, specific training programs are undertaken because they are industry standard or mandated by law. This often results in organisations feeling that training is a compulsory cost to be minimised, rather than an opportunity to improve skills and capabilities. As a consequence, it results in poorly structured training that does not align with business objectives.
- work directly with higher education institutions (including TAFEs and universities) to bring new staff in who are adept with new technologies relevant to the workplace. This approach does not so much require financial resources as commitment – offering more student placements for example provides access to affordable, though inexperienced labour while bridging the gap between higher education and vocational skills,
- exchange best practice across segments. For example, best practice companies can engage with less capable companies to discuss how they might achieve superior training effectiveness,
- increase the time allocated to training, without increasing the net cost to the organisation by finding opportunities to reduce the non-labour costs of training (e.g. facilitates and external costs). Training which is undertaken using skilled and trained in-house resources, rather than consultants can be more cost effective and, more importantly, can often be more relevant to the specific organisation.

## Redeployment, Skills Development, Innovation and Investment

FAPM is primarily concerned with assisting the continuing success of businesses operating in or entering the Australian automotive components industry, and had no great expertise in assessing the labour adjustment measures used to assist redeployed workers.

We do, however, recognise the need for programs which assist workers facing retrenchment or otherwise disadvantaged job seekers when existing employment and training services cannot respond to the scale or impact of downsizing by local industries.

FAPM is aware of two specific labour adjustment packages that became available in 2005, the first for former Mitsubishi employees, and the second, for former Holden employees.

FAPM acknowledges the significant financial support provided by both State and Federal Governments in these circumstances. In both cases however, while the extent of job losses at the OEM level takes the headlines, there will have been a flow on effect of significant job losses to the automotive components sector stemming from the changing activity levels of our major customers

Therefore we encourage governments to ensure that either general arrangements or automotive industry specific arrangements are available to the industry as a whole – on an as required basis. The arrangements should also be:

- flexible, in order to recognise the different circumstances of firms and their employees,
- cost effective for firms and their employees to access,
- designed for smaller as well as larger firms, recognising that the vast majority of firms in the automotive components sector are small or medium sized enterprises.

We understand that the Committee will receive submission from other organisation and individuals who are more directly involved with these matters.

### ***WorkChoices***

FAPM notes the passage of the WorkChoices legislation and has supported labour market reform. However at this time, FAPM and its member companies are still assessing the direct impact that this legislation may have.

### ***International Comparisons***

#### **Automotive Industry Support Policies**

Most countries provide substantial levels of public support to their automotive industries. In developed countries, the nature of that support has shifted over the last decade away from market protection measures (high tariff and non-tariff barriers, minimum local content requirements, etc) to subsidies of various forms (investment attraction, designated regional development zones, innovation and R&D, skills development, tax concessions, etc). Automotive support policies internationally can be broadly classified into eight types:

- Import tariffs
- Non-tariff import barriers
- Investment incentives
- Regional aid
- Trade blocs
- Corporate tax rates
- R&D assistance, and
- Education and training support.



This submission highlights the education and training education support provided in a number of companies with automotive industries at different levels of maturity. We have also briefly noted R&D assistance as it impacts on education and training opportunities. We can address the other mechanisms if the Committee would like to pursue these further.

## Education and Training Support

The existence of specific measures for education and training support varies across automotive manufacturing countries, but most provide some kind of support either nationally or at the regional level. Many countries which do not provide specific national support e.g. Canada, Germany and Japan), have recognised high levels of public support for education generally.

**Figure 13: Education and Training Support in Selected Countries**

<b>Canada</b> -	no specific support measures.
<b>Germany</b> -	education and training grants offered as part of the incentives in the New Lander States.
<b>Japan</b> -	no specific support measures.
<b>Sweden</b> -	education and training grants of up to A\$10,300 per employee over two years.
<b>UK</b> -	US\$65 million training grants provided to Ford to upgrade its Halewood facility.
<b>US</b> -	Southern States in particular (Kentucky, North Carolina, West Virginia, Tennessee and Alabama) offer education and training grants, course tailoring, and tax credits as part of investment attraction measures.
<b>Korea</b> -	no specific support measures.
<b>Malaysia</b> -	grants to companies of up to 95% of training expenditure and double tax deductions for a range of training expenditures.
<b>Poland</b> -	support for employment of unemployed persons and graduates for up to 12 months.
<b>South Africa</b> -	cash grants of up to 50% of training costs through the Automotive Industry Development Centre and Skills Development Program.
<b>Thailand</b> -	no specific support measures.

Source: FAPM Research

## Research and Development Assistance

Nearly all countries provide government support for R&D at various levels and in various forms. Mainly the R&D support is either in the indirect provision of R&D public infrastructure or it is aimed at directly encouraging firms to undertake R&D themselves. The direct support can be firm, industry or project specific; debt or equity involvement; loans repayable on concessional terms; or grants; subsidies; and tax concessions.

**Figure 14: R&D Assistance in Selected Countries**

<b>Canada -</b>	offers substantial R&D support between 50 to 66 cents in the dollar through tax credits linked to company size; strong support also given to syndicated automotive R&D such as that for the AUTO21 project.
<b>Germany -</b>	strong public commitment to R&D. R&D grants available to SMEs and for R&D undertaken in the New Lander States; low interest loans and venture capital for R&D also available.
<b>Japan -</b>	tax credit of 15% of value of incremental R&D expenditure compared with the higher of the previous two-year's expenditure; tax incentives and R&D subsidies for development of 'eco-friendly' cars.
<b>Sweden -</b>	strong public infrastructure support for R&D and grants and generous loan terms available for companies engaging in collaborative R&D with institutes such as Chalmers University.
<b>UK -</b>	generous direct grants particularly for SMEs; specific automotive industry support through the Foresight Vehicle Program.
<b>US -</b>	federally the US offers a tax credit of 20% for incremental R&D expenditure over historical levels of expenditure. Fifteen individual States offer further R&D incentives.
<b>Korea -</b>	SMEs supported through Industrial Technology Support Grants; tax credits based on company size.
<b>Malaysia -</b>	200% tax deduction for eligible R&D; funding for 50% to 70% of eligible R&D expenditure for any Malaysian majority owned company.
<b>Poland -</b>	subsidies and credit guarantees for companies launching innovative products, processes or technologies.
<b>South Africa -</b>	support provided through the government funded Automotive Development Centre.
<b>Thailand -</b>	no specific R&D support.

Source: FAPM Research

## Competitiveness of Australian Government Automotive Support Policies

### Competitiveness Measures

Just as firms compete internationally, it is vital to the industries in respective countries to have competitive education, training and research infrastructure and capabilities. This means that in effect government policy is also internationally competitive.

However, FAPM is unaware of independent measures of Australia's relative competitiveness on education and training support or R&D for the automotive industry.

### Automotive Competitiveness and Investment Scheme

The 125% tax concession and its accompanying definition of R&D would make the Australian automotive industry very uncompetitive in global terms as a location in which to undertake automotive R&D.

With an Australian corporate tax rate of 30%, the effective subsidy of the 125% R&D tax concession is around 7.5%. This is generally well below R&D support available for the automotive industry in Tier 1 countries. Also the narrow definition of R&D for the purposes of the Australian Tax Act precludes much of the R&D undertaken in the local automotive industry - and companies have to be profitable in order to claim a tax concession.

The Automotive Competitiveness and Investment Scheme (ACIS) was designed to provide specific support to Australia's automotive industry, and in the case of the component sector, to R & D. While ACIS afford more generous support to automotive R&D, its effectiveness has been somewhat eroded by modulation currently at around 0.50.

## Conclusion

### ***The Industry Has Come a Long Way***

In the mid to late 1980s, the Australian automotive industry was at a crossroads. It was faced with greatly increased competition induced by a dismantling of import quotas and much lower levels of tariff assistance. It responded to this challenge by rationalising industry structure, increasing specialisation, introducing new product and process technologies, investing in research and development, changing management and work practices, increasing capital investment and improving product quality and integrating with the global industry.

In 1985, there were five local car makers in eight plants around Australia. There are now four vehicle assemblers each operating one assembly plant. The industry has invested heavily in new manufacturing technology; improved average production throughput per plant; and established automotive R&D centres; while many independent Australian companies now sell engineering design and R&D services to the international market.

Lean manufacturing organisational techniques such as *kanban* (demand driven, just-in-time production) and *kaizen* (quest for continuous improvement) are now commonplace across the industry. Improvements have been made to workplace design and industrial relations. Enterprise bargaining has led to more flexible work practices. The amount of training to support skills development is one of the highest in Australia's manufacturing sector. Net capital stock growth is well above the manufacturing sector average.

These changes have transformed the Australian automotive industry. Although it has worked hard to establish a position as a participant in the global automotive network, it remains constrained by the relatively small size of the domestic market.

The automotive industry network is a complex interaction between raw material suppliers, specialised component producers, vehicle manufacturers, sales and service agents and a wide range of related activities such as fuel distributors and road infrastructure builders.

Despite those achievements, and a significant improvement in productivity performance the business performance of automotive manufacturing over recent years has been modest. The return on the substantial funds invested in Australian automotive manufacturing has been only slightly better than manufacturing as a whole while the operating profit margin has been significantly below the manufacturing average.

### ***Creating the Right Conditions for Industry***

There are a number of elements of Government policies, in addition to sound fiscal and monetary policy, which FAPM believes are essential to wealth creation, job generation and rising living standards which are as important to the automotive industry as they are to any other industry.

- Supporting public R&D and innovation and promoting effective linkages between industry and public research institutions.
- Fostering a taxation system which meets the revenue requirements to fund government activities without penalising production, trade, or decisions to work; and indirect taxes which favour one type of vehicle over another type (e.g. the so-called luxury vehicle tax).
- Providing efficient infrastructure for transport, telecommunications and energy.

- Facilitating access to internationally competitive debt and equity through an efficient capital market.
- Opening new markets for Australian manufacturers by promoting free trade through the World Trade Organisation, and in Multi and Bi-lateral agreements.
- Recommending that the Government establish automotive industry specific trade facilitation arrangements to ensure that Australian manufacturers are best able to access foreign markets.

### ***Creating the Right Conditions for Employment***

As part of public policy debate, there is significant attention placed on the role of government policy and broader social attitudes in addressing the skills shortage. Businesses have an important, but limited sphere of influence in their ability to affect the broader pool of talent in manufacturing. The core policy changes FAPM considers essential include:

- Up-skilling the workforce through improved vocational and employment training – this offers the most effective long-term solution.
- Increases in skilled migration – this offers a relatively simple, short-term policy response and mitigates some of the delay’s inherent in our other recommendations.
- Ensuring that Australia’s education and training infrastructure provides industry with access to people with the required set of skills and that those people have access to lifelong learning to cope with changes in skill requirements over time.
- Adoption of a truly competency based apprenticeship system – as with vocational and employment training, this offers significant long-term advantages for the industry and the economy.
- Having flexible and responsive labour supply conditions which match the requirement for companies to be able to respond quickly to rapid changes in market dynamics, and
- Changes to financial incentives for training for employers and employees – this offers a relatively quick, but potentially expensive public policy approach.

At a broader social level, a key element in dealing with skills shortages is to address the basic perceptions of the manufacturing industry to attract young people into the industry. This approach has an even longer-term outlook than basic training approaches considered above.

FAPM recognises that there are limits to what governments can do to ensure economic growth. In the end, it is the private sector which must respond and drive the growth process. It is private sector competition, risk taking and investment which sustain growth. But that process works best when governments set the broad institutional, regulatory and policy framework in accordance with the elements described above.

## Appendix 1: About the FAPM

The Federation of Automotive Products Manufacturers (FAPM) is an association of manufacturers engaged in the production of a comprehensive range of automotive products. It was formed in 1958 and currently consists of nearly 200 member companies, employing more than 27,000 people with sales of over \$8.5 billion.

FAPM is recognised by politicians, government officials and the industry at large as “The Voice of the Automotive Components Industry.” Regular consultation is maintained with State and Federal Governments, and the vehicle builders to directly address matters affecting the industry.

### **Objectives**

The basic policy objectives of the Federation are:

- to promote the interests and welfare of the automotive components industry in particular and the motor vehicle manufacturing industry in Australia in general;
- to encourage and support Government policies which support the operation of a large and diverse industry engaged in the manufacture of motor vehicles and automotive components;
- to support and promote the development in Australia of an increasingly efficient and internationally competitive motor vehicle industry.

Specific policy objectives pursued by the Federation over many years, are to implement actions and support actions taken by others aimed at:

- taking cost out of the product of the Australian motor vehicle industry;
- putting quality into the product of the Australian motor vehicle industry;
- improving the product and manufacturing technology of the Australian industry;
- expanding the market in Australia and overseas for Australian motor vehicles and components;
- raising the image and public perceptions of the Australian motor vehicles industry;
- developing information and databases of value to FAPM and its members.

### **Activities**

Effective representations by FAPM were integral to the establishment of the first Passenger Motor Vehicle Manufacturing Plan in 1965. Representations and inputs to successive governments considering amendments to these plans have continued to be a major and successful focus for the Federation. The FAPM's activities also cover a wide range of services:

- Consultations with all levels of Government on matters affecting the industry.
- Regular discussions with vehicle builders and governments in relation to matters of competitiveness, quality, vehicle safety standards and pollution controls.
- Production of "The Australian Automotive Industry Products Directory" which lists who makes what in the industry.
- Provision of a statistical service covering production, registrations, stocks, imports and exports.

- Enabling interested members to be part of Standards Australia's standards drafting committees.
- Conducting regular regional group meetings so that members have access to the latest developments within the industry.
- Maintaining a library of selected documents relating to the automotive industry here and overseas.
- Providing access to a worldwide unique product liability and recall insurance scheme at attractive premium rates.
- Providing regular ACIS Duty Credit brokerage sales.

## **Membership**

The FAPM organisational structure is designed to provide members with goods and services that will enable them to reduce costs, improve quality, increase exports and enhance their international competitiveness.

Membership of the FAPM confers the following benefits:

- The opportunity to network regularly with industry peers, customers and suppliers at FAPM events.
- The opportunity to contribute to automotive industry policy development through FAPM committees, workshops and meetings.
- The opportunity to participate in overseas trading missions, and to meet delegations visiting Australia.
- Access to “member only” information and forecasts about automotive industry performance, both here and abroad.
- Access to FAPM's “members only” automotive product recall and liability insurance scheme, which offers unique cover.
- FAPM “member only” advisory services on a range of policy matters, including, but not limited to, the Automotive Competitiveness and Investment Scheme (ACIS) which will deliver more than \$7 billion of assistance to the Australian automotive industry over 15 years. FAPM's involvement was critical to the decision to provide this ongoing assistance.
- The opportunity to contribute to the FAPM's lobbying and representational work, which focuses on:
  - maximising the scope for our local manufacturers
  - improving the industry's research and development base
  - removing impediments to the industry's continued growth and success
  - influencing developments in the industry's regulatory environment in the interest of members
  - enhancing the scope for international trade.

- The opportunity to work through FAPM to promote world best practice in every aspect of company business, and to push for fair access to export markets.
- Discounted attendance at a highly regarded, informative, industry-specific, annual FAPM Convention.
- A heavily discounted listing in FAPM's Australian Automotive Industry Products Directory, which is a highly regarded industry reference source. Five thousand (5000) copies are distributed around the world annually, and the Directory is accessible online.
- Australian vehicle registration statistics at a "members only" rate (a quarter of the regular price, delivering a saving of over \$1500 each year).
- Specially negotiated "member only" car hire rates from Thrifty Car Rental.
- FAPM is the sole source of QS-9000 and ISO/TS16949 manuals in Australia and supplies these to members at cost.
- FAPM pioneered the establishment of the EFS/ACIS credit brokerage scheme. The FAPM scheme effectively puts a floor under the price of ACIS credits and, means that members sell credits for prices approaching 100 cents in the dollar, rather than less than 50 cents as was often the case before FAPM took this pioneering step.

## Appendix 2: List of Members as at 31 January 2006

### **Full Members**

3M Australia Pty Limited Automotive Industry Centre	Berklee Limited Robert Bosch (Australia) Pty Ltd
Active Plastic Industries Pty Ltd	Bostik Findley Australia Pty Ltd
ai Automotive Pty Ltd	Bridgestone Australia Ltd – Tyre Division
Air International Group Limited Air International Pty Ltd Air International Seating Pty Ltd	Bridgestone TG Australia Pty Ltd Broens Industries Pty Ltd
AISIN (Australia) Pty Ltd	Calsonic Australia Pty Ltd
Arrowcrest Group Pty Ltd ROH Automotive ROH Wheels Australia Unicast Diecastings Pty Ltd Tristar Steering & Suspension Australia Limited	Centre Tooling Mold Makers Pty Ltd Clyde-Apac (a division of EAH Air Handling) CMI Operations Pty Ltd Ballarat, Victoria Campbellfield, Victoria Kensington, Victoria
Australian Arrow Pty Ltd	AN Cooke Manufacturing Co Pty Ltd
Australian Springs Pty Ltd	Cooper-Standard Automotive Pty Ltd
Autocaps (Australia) Pty Ltd CPC Auto Components Preslite Drive Technologies Pty Ltd	Delphi Automotive Systems Australia Ltd
Autofab Australia Pty Ltd	Denso International Australia Pty Ltd Australian Automotive Air Pty Ltd
Autoliv Australia Pty Ltd VOA Webco Pty Ltd	Diver Consolidated Industries
Automotive Components Limited ACL Head Office ACL Bearing Company ACL Gasket Company	Dolphin Products Pty Ltd D.R.I. Metal Treatment Services Pty Ltd
BASF Australia Ltd Performance Polymers Performance Chemicals Styrenics & Polyurethanes	<b>Enviro Pax Pty Ltd</b> Excellent Plating Works Pty Ltd
BlueScope Steel Limited	Exide Australia Pty Ltd
Backwell IXL Pty Ltd	Fidax Foundry Pty Ltd Finlay Engineering Co Pty Ltd



Flexdrive Group Flexdrive Cables Australia Pty Ltd Flexible Drive Agencies Pty Ltd	MTM Pty Ltd Macam Rubber Pty Ltd
FMP Group (Australia) Pty Ltd – (formerly Bendix Mintex Pty Ltd)	Mahle Engine Components Australia Pty Ltd
Foseco Pty Ltd	Marand Precision Engineering Pty Ltd
Fuchs Lubricants (Australasia) Pty Ltd	Mark IV Automotive Pty Ltd
Global Engineered Fasteners Pty Ltd Ajax Engineered Fasteners Global Automotive Logistics	Marplex Australia Pty Limited Milford Industries
Green Bros Group Pty Ltd	Miric Industries Pty Ltd
GUD Automotive Pty Ltd	Mullins Wheels Pty Ltd
G A & L Harrington Pty Ltd	Noble Metal Processing Australia Pty Ltd
Hella Australia Pty Ltd	Norma Pacific Pty Ltd
HPG Engineering & Associates Pty Ltd	Nornda Pty Ltd JP Engineering Products JP Pistons JP Performance Products
Hook Plastics	NSK Australia Pty Ltd
Huon Corporation Pty Ltd Empire Rubber Mills Elastomers FRN (A Division of Nylex Industrial Products Pty Ltd)	Numetric Manufacturing Pty Ltd
INC Corporation Pty Ltd	Nylex Limited - Automotive Products Exacto Plastics Hendersons Industries Pty Ltd Melded Fabrics & Kennon
Intelematics Australia Pty Limited	OneSteel Market Mills
Intercast & Forge Pty Limited	OneSteel Sheet & Coil Melbourne, Victoria Adelaide, South Australia
Irons Engineering Pty Ltd	Orbital Engine Corporation Ltd
ITW Deltar	Orrcon Operations Pty Ltd
Johnson Controls Australia Pty Ltd (Membership Approved 16/6/04)	Pacifica Group Limited PBR International Pty Ltd
Kemalex Plastics	Palm Plastics & Tooling
Kozma Industries Pty Ltd	
Lasslett Rubber and Plastics Pty Ltd	
MHG Plastic Industries (VIC) Pty Ltd	

Parish Engineering Co Pty Ltd

Parker Electroplating Pty Ltd

Performance Industries Pty Ltd

Pilkington (Australia) Limited - Automotive OE

Plexicor Australia

Pressfast Industries Pty Ltd

RMAX Rigid Cellular Plastics  
RMAX – Victoria  
RMAX – South Australia

Schefenacker Vision Systems Australia Pty Ltd

Sensis Pty Ltd

Siemens VDO Automotive Pty Ltd

Simmons Components Pty Ltd, trading as  
Simmons Wheels Pty Ltd

Socobell OEM Pty Ltd

South Pacific Tyres

Southern Recycling

Startronics Pty Limited (*formerly Australian  
Electronic Manufacturing Services Pty Ltd*)  
Sydney, New South Wales  
Melbourne, Victoria  
Brisbane, Queensland

Sumitomo Australia Limited

SWS Australia Pty Ltd

Tenneco Automotive Australia  
Monroe Australia Pty Ltd  
Monroe Springs (Australia) Pty Ltd  
Walker Australia Pty Ltd

tesa tape Australia Pty Ltd

Teson Trims (Victoria Quilt Mfg Co Pty Ltd  
trading as Teson Trims)  
Euroa, Victoria  
Mitcham, Victoria

Textron Fastening Systems Pty Ltd

TI Automotive (Bundy Tubing Co (Australia)  
Pty Ltd, Trading as TI Automotive)  
Kilburn, South Australia  
Dandenong, Victoria

TNT Logistics (Australia) Pty Ltd

Toll AutoLogistics  
Toll Packaging  
Toll Holding Limited

Toyo Tyre & Rubber Australia Limited,  
Automotive Parts Division  
Enfield, New South Wales  
Sunshine, Victoria

Tubalco Manufacturing Pty Ltd

Tyco Electronics Pty Limited  
Tyco Lambda

Unbrako Pty Limited

Venture Industries Australia Pty Ltd

Viscount Plastics (Australia) Pty Ltd

John While Springs Pty Ltd

Wilcox Metal Finishing (Snellco Pty Ltd,  
trading as Wilcox Metal Finishing)

## ***Associate Members***

Aspect Packaging

Automated Solutions Australia

Auto Nexus (Pty) Ltd

Chep Australia (Brambles Aust Ltd, Trading  
As)

    Chep Automotive Services

    South Australia Branch

    Victoria Branch

Cevol Industries Pty Ltd

Deloitte Touche Tohmatsu

Kenmar Corporation

    Asia Pacific Region

KPMG

Methode Electronics, Inc.

Munro and Associates, Inc.

OneSteel Distribution

QAD Australia

Richard Oliver & Co Pty Ltd

Southern Steel Group

Brice Metals Australia

TCF Services Pty Ltd

Vipac Engineers and Scientists Limited

    Melbourne

    Adelaide

Victorian Centre for Advanced Materials  
Manufacturing

Watson Automotive

WD Scott

William Buck

## Appendix 3: Correlation Tables

The tables below represent more detail from the correlation analysis across the benchmarking issues. The tables present all of the issues which are significantly correlated with training and recruitment identified as part of the analysis. The correlation between two issues is represented as a number between minus one and one. A positive correlation represents positive relationship, whereas a negative correlation reflects and inverse or negative relationship. The closer a number is to one (or minus one), the stronger the relationships is. The table presents only correlations greater than 0.5 and less than -0.5

Issue	Correlation with Recruitment
New Model Introduction - Qual.	0.769
Financial Budgeting	0.751
Machine Effectiveness	0.748
Use of Standards	0.734
Target / KPIs setting process	0.730
Target Completion/Achievement	0.679
Manufacturing Cycle Time	0.670
Effectiveness of Investment in Quality	0.661
Waste Elimination	0.653
Preventative Maintenance	0.647
Training Effectiveness	0.645
Labour Productivity	0.636
Supplier Development Program	0.629
Effective Tax Rate	0.609
Equal Employment Opportunity	0.607
Manufacturing Systems	0.597
Mistake - proofing	0.588
Effectiveness of Return to Work practices	0.583
Lean Manufacturing Techniques	0.575
Standards - Time	0.564
Financing Structure	0.563
Exit analysis	0.561
Assessing Employee Performance	0.560
Performance Management	0.556
Supplier quality	0.556
Recognition of success	0.553
Change Management	0.550
Maintenance Costs	0.547
Employee Participation	0.541
People / Process Alignment	0.539
Shareholder Value	0.535
Non-EBA dispute resolution	0.524
Standards - Materials Utilisation	0.517
Quality to customer	0.507

Issue	Correlation with Training Alignment with Business Objectives
Financial Budgeting	0.866
Capital Productivity	0.762
Effectiveness of Return to Work practices	0.756
Labour Productivity	0.750
People / Process Alignment	0.743
Training Hours Per Employee	0.743
Manufacturing Cycle Time	0.730
HR alignment to business objectives	0.724
Gross Margin	0.715
Employee Contribution to Net Profit	0.713
New Model Introduction - Qual.	0.696
Target / KPIs setting process	0.676
Assessing Employee Performance	0.650
Use of Standards	0.650
New Model introduction - Quant.	0.649
Performance Management	0.643
Succession Planning	0.638
Change Management	0.632
Effectiveness of Investment in Quality	0.620
Mistake - proofing	0.612
Managing Finished Goods	0.606
Implementation	0.597
Recognition of success	0.582
Equal Employment Opportunity	0.582
Effectiveness of Managing EBA Negotiations	0.581
Continuous Improvement	0.570
Standards - Time	0.564
Training Effectiveness	0.561
Employee Participation	0.560
Employee Communication Strategy	0.537
Application of Benchmarking	0.516
Absenteeism - Unplanned	0.502

Issue	Correlation with Training Hours Per Employee
Capital Productivity	0.968
Net Margin	0.888
Training Alignment with Business Objectives	0.743
ROA - excluding government assistance	0.714
Succession Planning	0.673
Financial Budgeting	0.645
Labour Productivity	0.645
RONA - excluding government assistance	0.641
Debtors Turnover (Days) Receivable	0.637
Change Management	0.636
People / Process Alignment	0.633
Employee Participation	0.633
Performance Management	0.604
Return on Total Assets (ROA)	0.598
Training Effectiveness	0.588
Financing Structure	0.570
Assessing Employee Performance	0.565
Inward IFOT	0.546
Human Resource Reporting	0.531
Capital Purchasing Decisions	0.520
Continuous Improvement	0.512
Employee Communication Strategy	0.508

Issue	Correlation with Training Effectiveness
Preventative Maintenance	0.911
Net Margin	0.868
Labour Productivity	0.849
New Model Introduction - Qual.	0.842
Shareholder Value	0.827
Waste Elimination	0.766
Financial Budgeting	0.746
Performance Management	0.724
Managing Finished Goods	0.722
Manufacturing Cycle Time	0.717
HR alignment to business objectives	0.690
Human Resource Reporting	0.688
Organisation Planning	0.683
Manufacturing Systems	0.683
ROA - excluding government assistance	0.683
Recognition of success	0.677
Inward IFOT	0.661
Implementation	0.656
Target / KPIs setting process	0.652
Recruitment	0.645
Return on Total Assets (ROA)	0.643
Visual Management	0.639
People / Process Alignment	0.638
Assessing Employee Performance	0.637
Machine Effectiveness	0.637
RONA - excluding government assistance	0.636
Financing Structure	0.632
Training Alignment with Business Objectives	0.631
Efficiency of compliance	0.624
Equal Employment Opportunity	0.615
Effectiveness of Investment in Quality	0.592
Debtors Turnover (Days) Receivable	0.592
Training Hours Per Employee	0.588
Injury Prevention and Corrective Action	0.578
Succession Planning	0.577
Change Management	0.569
Employee Participation	0.566
Capital Productivity	0.566
Standards - Time	0.559
Capital Purchasing Decisions	0.540
Warranty costs	0.536
New Model introduction - Quant.	0.530
Workforce Skill Flexibility	0.523
Proportion of R&D	0.516
Lost Time Injury Frequency Rate	0.512