

VOCATIONAL EDUCATION AND TRAINING IN THE AUSTRALIAN AUTOMOTIVE INDUSTRY

2004 - 2007

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1. Executive Summary

Industry dimensions

The automotive industry is a major sector of the Australian economy, with an annual turnover exceeding \$50 billion and employment in excess of 300,000. Over 60,000 individual businesses are represented in the industry, with a small number of large businesses, and many small businesses.

The industry is represented by two main sectors:

- Vehicle manufacturers and component producers
- The Retail, Service and Repair sector

Industry advisory arrangements have also provided for coverage of the following synergistic industry segments:

- Outdoor power equipment
- Bicycles
- Recreational boating

Automotive manufacturing is the largest global manufacturing industry. It is intensely competitive, and it is strongly supported by Government in many countries due to the significant 'spill over' benefits (technology diffusion) it creates for other activities resulting from the industry's position as an intensive developer and user of advanced technologies. Australia is well represented in automotive manufacturing, and the Commonwealth's December 2002 announcement of post-2005 Industry assistance arrangements provides a stable platform for the local manufacturers, including the component manufacturers.

The size of the Australian manufacturing industry (less than 2% world production) has established Australian vehicle manufacturers as leaders in niche models, small production and research and development. In many areas, Australia is highly regarded as a leader in small-scale manufacturing and the innovative approaches adopted by the industry.

The industry is a major exporter, with total exports approaching \$5 billion in 2003, projected to increase to \$10 billion by 2010. The industry is also a significant contributor to Research and Development activities.

Growth projections

The industry projects strong growth in both domestic sales and exports. The growth in domestic sales will benefit the Retail, Service and Repair sector of the industry, which is a significant employer in its own right. The Federal Chamber of Automotive Industries (FCAI) is confident that retail sales will continue to grow beyond the 2003 record levels of almost 910,000 units.

Key Issues in Vocational Education and Training

'Continual learning' epitomises the industry, and there is a substantial non-funded industry contribution to lifelong learning activities. The manufacturing sector of the industry is leading edge and is exposed to intense global competition; as a consequence, the upgrading of skills of the existing workforce is paramount. At the same time, there has been recent substantial growth in the uptake of New Apprenticeships.

Key issues identified by the industry include:

- Identified and ongoing skill shortages, particularly in the Retail, Service and Repair sector, exacerbated by:
 - retention problems with experienced people;
 - workforce ageing;
 - rapidly changing technology,
 - poor industry perception as a career,
 - wages and conditions.
- Solutions to skill shortages require broad industry responses, with Vocational Education and Training being one enabler to assist with the attraction and retention of people for the industry. This document recognises that some fundamental re-evaluation of the industry's approach to formal VET programs and qualifications may be required as one element of this response. A sub-set of this approach also involves expansion of VET in Schools programs, particularly School-Based New Apprenticeships. In addition, the skill sets demanded by the industry require a new target among secondary school students. There is a need to attract physics, chemistry and electronics students. A targeted approach to significant teacher groups such as science teachers could be worthwhile.
- The rapidity of technological developments in the industry, placing pressure on:
 - the industry, in order to maintain the currency of employee skills
 - providers in terms of the capital, human resource and other infrastructure requirements needed to keep pace with technological developments
 - sound underpinning training and knowledge especially in the sciences in secondary schools
- The industry emphasises its concern about the current and future capabilities of VET providers to meet industry requirements
- The need to consider further industry/ provider partnership arrangements as one response to the preceding challenge
- The need to expand VET activities in sectors of the industry that have experienced low participation rates in the past and are at risk in the future, including:
 - retail sales activities;
 - the Aftermarket sector;
 - smaller industry segments including outdoor power equipment, bicycles and recreational boating;
 - new and advanced technology and management; and,

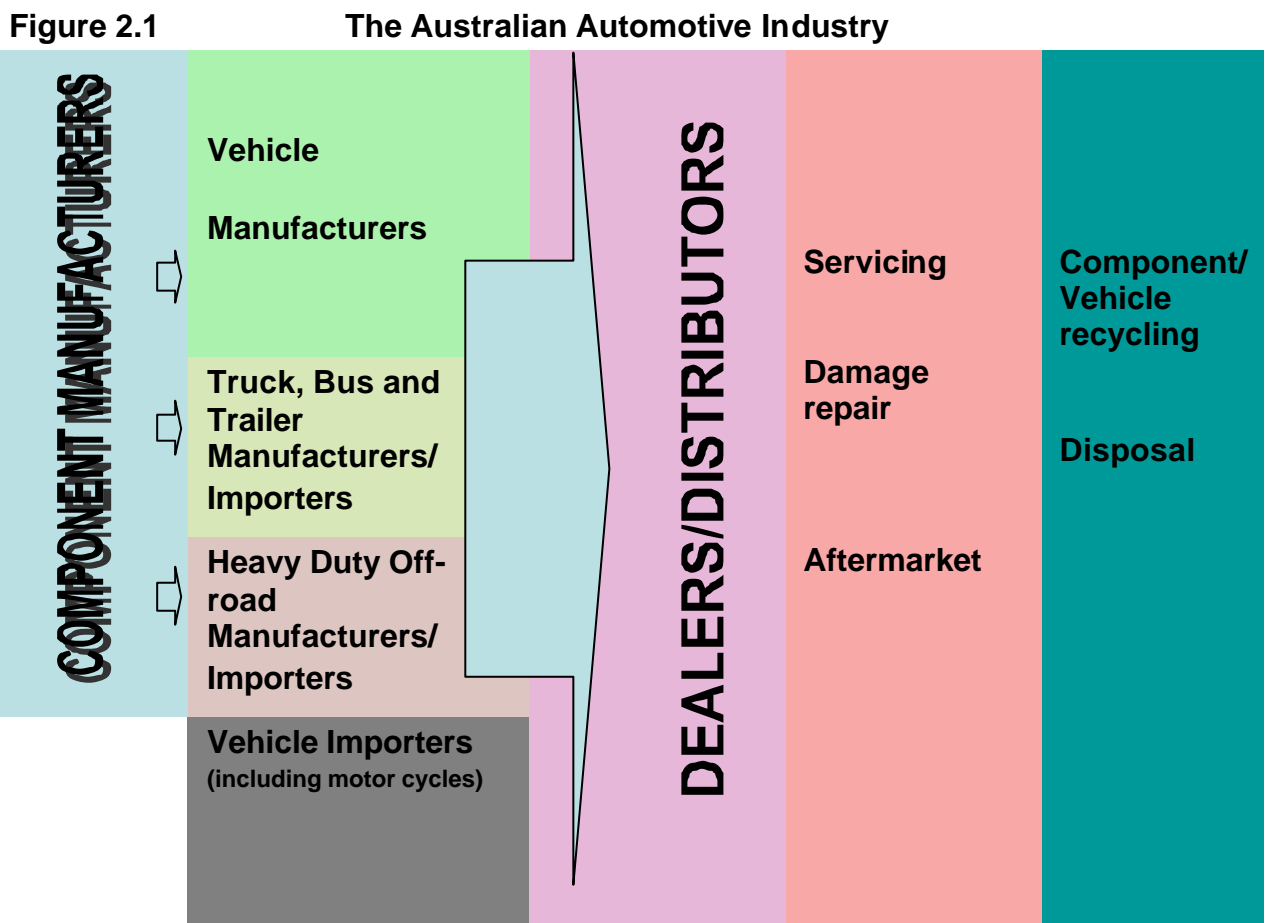
- realistic career path progression,
 - trades,
 - middle level and senior management.
-
- The need to maintain effective industry advisory arrangements at National, State and Territory level.

 - The need to actively address opportunities in the industry for people traditionally disadvantaged in employment.

2. General Industry Overview

2.1 Dimensions – a significant globally integrated industry

The automotive industry is the world's largest manufacturing industry. The industry extends into a long upstream and downstream value chain, and is highly integrated through this value chain. All segments of this global industry are present in the Australian automotive industry as represented in the following chart.



Industry advisory arrangements for this industry have also provided that ATA covers the following closely synergistic segments:

- Outdoor power equipment
- Leisure craft boating
- Bicycles

The following sub-sections provide greater detail on the various segments of the Australian industry illustrated in figure 2.1

Segment descriptions

Vehicle Manufacturers	Importers	Bus, Truck, and Trailer Manufacturers Heavy duty off-road sector
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The central part of the industry value chain is represented by these three groups. Other upstream and downstream segments interact closely with this central core and are heavily dependent on the activities of these central segments. The size of this industry sector is set out in the following table.

Table 2.1 Employment, turnover and value added in the automotive manufacturing and component sector, 2000- 2001

ANZSIC	Activity	Employment (persons)	Turnover (\$ million)	*Value Added (\$ million)
2811	Motor vehicle mfg.	23,243	16,323	2,174
2812	Motor veh. body mfg.	9,908	1,434	444
2813	Automotive electrical and instrument mfg.	5,085	1,613	357
2819	Automotive components mfg. n.e.c.	24,424	4,395	1,681
Total		62,661	23,764	4,657
<i>Share of total manufacturing (%)</i>		6.0	7.6	5.7

Source: ABS (8221.0, 2000-01)

**Value added is the return from the manufacturing process from raw materials*

The following sections detail the activities of these three central segments.

Vehicle Manufacturers

- There are four vehicle producers based in Australia – Ford, Holden, Mitsubishi and Toyota. All four are subsidiaries of major overseas producers. They produce a range of passenger vehicle models (and derivatives of those models) at eight plants in Melbourne and Adelaide, augmenting this range with vehicles sourced from affiliates overseas.¹

¹ Mitsubishi has announced that, as a result of global restructuring of its operations, it will close its Lonsdale, South Australia, foundry and engine plant at the end of 2005. Vehicle production at its Tonsley Park, SA, operation will not be affected.

- The locally produced passenger vehicles account for approximately 41 percent of the domestic passenger vehicle market. Locally produced light commercial and sport utility vehicles account for 13% of this market segment.
- The industry is a significant **exporter of cars, engines and other components**. Exports now account for more than 30 percent of production compared to less than 10 percent in the early 1990's. The industry is now the country's sixth largest exporter, ahead of wool and wheat.
- Employment categories in the vehicle manufacturers are diverse ranging from professional areas, particularly engineering, through para-professional and trade skills to the majority employment areas where traineeships are extensively utilised. The manufacturers were leaders in the development and implementation of qualifications at traineeship levels.

Vehicle Importers

- In 2003, 40 companies imported 350,000 vehicles into Australia. (These figures include vehicles sourced from overseas affiliates by the four local vehicle manufacturers).
- Importers are related to a substantial employment base in their own right through their retail networks and head office infrastructure.

Bus, Truck, and Trailer/ Heavy duty off-road segment

- These segments of the industry include varying degrees of local manufacture and/or assembly or full importation of vehicles. Companies such as Iveco, Volvo Commercial Vehicles Australia (incorporating the Mack brand of products) and Paccar (Kenworth) operate local plants to assemble specialised trucks to order, utilising overseas and locally sourced components.
- Local companies such as Volgren manufacture and build bus and coach bodies onto imported chassis.
- In the heavy duty off-road sector, Caterpillar is a significant employer involved with both its own plants and those of distributors such as Westrac in the assembly and maintenance of heavy duty off-road equipment.

Component Producers

- There are more than 200 firms producing automotive components for use as original equipment in new vehicles and for the replacement and accessories markets. There are also several hundred, mainly small, firms around Australia producing components and accessories exclusively for the aftermarket.

- There are around 500 mainly small firms providing specialised tooling to vehicle and component producers. Vehicle and component producers also have some in-house tooling capacity.
- Employment profiles and skill requirements for component producers are similar to those of the vehicle manufacturers.
- There are also a number of firms providing specialist automotive engineering, design, testing and customising services, although much of this activity is undertaken in-house by vehicle and component producers.²

Turnover in the automotive component producer segment exceeds \$5 billion per annum. Nearly 30,000 people are employed in this industry segment.³

The component sector is inextricably linked to the local vehicle manufacturing sector, and to a smaller extent the vehicle importing, truck, bus and trailer and heavy-duty off-road sectors. In these latter sectors, component producers may provide specialised accessories (e.g. ARB Limited is a large local producer and exporter of specialised accessories for four wheel drive vehicles).

The very close linkages to the four local vehicle manufacturers are highlighted in the Productivity Commissions' 2002 *Review of Automotive Assistance*.⁴ The Commission notes that "As in other countries, there is a high degree of interdependence between vehicle producers and their suppliers..."⁵ This is illustrated in the following box.

Box 2.1 Some recent changes in the nature of component supply

Component suppliers are usually differentiated by the sort of components they produce. For example:

- Tier 1 companies supply pre-assembled components such as drive-trains and brake assemblies directly to the vehicle manufacturers.
- Tier 2 companies supply individual components and pressed metal fittings to both Tier 1 firms and the vehicle manufacturers.
- Tier 3 companies supply a range of smaller components (such as fasteners, bearings and computer chips) to firms further up the production hierarchy.

However, an additional distinction is increasingly made between Tier 1 and so-called Tier 0.5 or 'full service' suppliers. The latter are large, multi-site companies that can supply vehicle producers with sub-assembled components in large volumes. These firms usually have advanced technology capabilities, can provide sequenced production flows into the assembly process and can manage the sub-supply base on behalf of the vehicle producers.

The impetus for the development of Tier 0.5 suppliers has been the outsourcing by vehicle producers of responsibility for product development and the related growth in supply of components as part of full systems or modules, rather than on an individual basis. Examples include:

- heating, ventilation and air-conditioning systems;

² Material sourced from Productivity Commission 2002, *Review of Automotive Assistance*, Report No. 25, Canberra. P. 19.

³ *Ibid.* Table B. 13, p. 230

⁴ Productivity Commission, *op.cit.* especially pages 14,15 – Box 2.2 and page 20.

⁵ *Ibid.* page 20

- drive-trains (comprising, drive-shaft and front and rear axle modules); and
- interiors (cockpit, seats, overhead, floor and door modules).

Amongst other things, module and/or systems supply can:

- improve the quality of componentry by concentrating product development expertise in the hands of a single firm selling to a number of vehicle producers; and
- offer cost savings through facilitating commonisation of some of the components in the system or module, reducing assembly times and assisting the in-line sequencing of supply leading to reduced inventory costs.

For vehicle producers, there is also a benefit from the transfer of some of the cost and risk associated with product development to their suppliers.

Modular and systems supply is still in its infancy, accounting for less than 5 per cent of global component sales in 2000. However, intensifying cost pressures in the industry are likely to see its application increase significantly over the next decade.

Source: Productivity Commission, *op. cit.* page 15

The Retail, Service & Repair (RS&R) Sector

The RS&R sector is a major part of the industry as illustrated in the following table.

Table 2.2 Employment and turnover in the automotive Retail, Service and Repair sector, 1998-1999

ANZSIC	Activity	Employment (persons)	Turnover (\$ million)
5311	Car retailing	34,054	14,060
5312	Motor cycle retailing	5,224	1,758
5313	Trailer & caravan retailing	1,105	343
5322	Automotive electrical (Repair)	6,125	481
5323	Smash repair	32,659	3,040
5324	Tyre retailing	11,490	2,365
5329	Automotive repair & services n.e.c. (incl aftermarket, bicycles, outdoor power equipment)	48,093	4,513
Total		138,750	26,560

Source: ABS (8622.0, 1998-99)

NB: These statistics especially for car retailing need to be compared with MTAA research as outlined below which indicates the difficulty the industry has on relying on ABS statistics (which are now quite outdated):

New Motor Vehicle Dealer Statistics as at 30 June 2002

	Number of Dealers	Franchises Held	Locations Operated	Aggregate Employees
TOTAL	1,328	2,355	1,489	51,099

Source: Motor Trades Association of Australia

The Retail Dealer Network

Motor vehicle manufacturers and importers sell their products through predominantly independent franchised dealer networks. MTAA research (June 2002) indicates that there are 1328 dealers in 1489 locations covering 2355 franchises.

Dealers are significant employers in their own right. Many skills are required and there are established career paths through to supervisory and management positions. Dealers carry out six primary activities:

- New vehicle sales
- Used vehicle sales
- Servicing of products (in some instances including damage repair facilities)
- Sale of spare parts and accessories
- Financing and insurance of product sales
- General management and administration

A number of skill areas are required in dealers, including trade and technical skills, together with retail and administrative occupations. In this segment of the industry, New Apprenticeship pathways involving both traditional **trades** together with **traineeships** are relevant.

Although the majority of dealers are essentially independent businesses, very close **linkages** with the manufacturers and importers exist through franchise arrangements. Similarly, training and development needs are closely linked to the manufacturers and importers.

Service and Repair segments

Motor vehicles require regular maintenance. Service requirements are delivered both through the service sections of the retail dealer networks, and the independent aftermarket service providers. These include local workshops, some service stations, specialised outlets such as Ultratune and mobile organisations like LubeMobile.

The increasing segmentation in the industry is spawning a number of specialist enterprises. The Victorian Automobile Chamber of Commerce published a report⁶ on segmentation in 2002, which outlines the degree of specialisation and its implications for the industry including training.

Some specialists concentrate on specific vehicle functions such as Midas (exhaust systems), Fluidrive (automatic transmission repairs), Bridgestone (tyres) and member companies of the Vehicle Air Conditioning Association.

The second major segment in this industry sector is the repair industry, essentially aimed at accident repairs. Three major functions are carried out: body repairs, mechanical repairs and spray painting.

The service and repair segments of the industry are heavily reliant on four **trade** skills: motor mechanics, automotive electricians, panel beaters and spray painters. Specialist areas use a number of traineeship qualifications such as the Certificate II in Automotive (Mechanical – Exhaust Fitting and Repair).

These industry segments are geographically dispersed and include a large number of predominantly small businesses.

⁶ Skills and Segmentation in the Retail Motor Industry (2002)

The Aftermarket segment

The automotive aftermarket industry is an important component of the overall automotive industry. It turns over \$7 billion annually and employs over 25,000 people.

The aftermarket industry includes:

- Manufacturers engaged in the manufacture or re-manufacture of automotive parts, accessories, tools and equipment for local and/or export markets;
- Distributors, including companies engaged in wholesaling, importing, warehousing or acting as manufacturers' agents; and
- Retailers including independent or group stores engaged in the retailing of parts, accessories, tools and equipment.

Skills are mainly reflected in both Certificates II and III ***traineeships*** across Aftermarket Retail and Aftermarket Warehousing/Distribution Operations, although higher-level management programs are a part of the Aftermarket Training Package.

Component/Vehicle recycling and disposal segment

This activity is assuming greater importance as greater emphasis is placed by Government and industry on the need for effective recycling or disposal of the industry's products at the end of their life-cycle. In this regard, Australia is likely to follow the European car recycling strategy that has as its target a 95% recovery rate for vehicle materials by the year 2015.

More than 300 automotive parts recyclers operate around Australia in a geographically dispersed segment of the industry. Skills are mainly represented in ***traineeships*** such as the Certificate II in Automotive (Vehicle Body – Dismantling).

A Statement on Industry Advisory Arrangements.....

The industry, as represented by the Federal Chamber of Automotive Industries (FCAI), Motor Trades Association of Australia (MTAA), and the Australian Manufacturing Workers Union (AMWU), has been unanimous in opposing the direction proposed by the Board of the Australian National Training Authority (ANTA) to consolidate all segments of the automotive industry within an overall Manufacturing Skills Council. This opposition continues for the following reasons:

- The manufacturing sector of the industry is a unique, leading edge, world class integrated operation which lacks close synergies with some of the other constituent parts of the Manufacturing Skills Council,

- There are very close synergies through the automotive industry value chain extending from the upstream component manufacturing sector through the manufacturers and particularly into the retail and aftermarket sectors of the industry. Industry partners are particularly concerned that these synergies could be weakened in a conglomerate Manufacturing Skills Council.

As a consequence, the shareholders (FCAI, MTAA and the AMWU) have unanimously resolved to maintain Automotive Training Australia Limited as a stand-alone body.

2.2 Future of the Industry

The world's largest manufacturing sector...

“Vehicle production is the largest manufacturing sector in the world – a key activity in leading industrial nations and of increasing significance elsewhere. It draws on a range of supplier industries, from raw materials (such as steel, aluminium, plastics and chemicals) through to sophisticated component assemblies, design, tooling and engineering services.

Moreover, as an intensive developer and user of advanced technologies, the automotive industry is typically viewed as generating significant ‘spill over’ benefits for other activities. As well as undertaking product and process development relevant to other manufacturing activities, the industry is seen as contributing to skill development in areas such as production, design, engineering, computer programming, software development and management systems.”⁷

All these features may be observed in the Australian automotive industry. In many areas, it is a technological leader and therefore a leader in technology diffusion.

A strong future for local vehicle manufacturers and component producers...

In December 2002, the Commonwealth Government and key industry leaders participated in a joint announcement of the assistance arrangements which will apply to the local vehicle manufacturing industry post 2005. These are detailed in the Commonwealth Treasurer’s *Response to Productivity Commissions Report on Automotive Assistance*.⁸ The assistance arrangements for the post 2005 period are regarded as providing a stable base for the local vehicle manufacturers and component producers to continue to build on the achievements of recent years. Industry forecasts also predict that exports will rise from the current level of \$4.7 billion in 2003 to approach \$10 billion by 2010.⁹ These forecasts appear to be reasonable based on the export growth achieved in recent years demonstrated in the following table:

Table 2.3 Australian automotive exports by value, 1990 to 2003

Year	\$ million		
	Vehicles	Components	Total
1990	420	620	1 040
1991	430	740	1 170
1992	450	800	1 250
1993	580	890	1 470

⁷ Productivity Commission, *op.cit.* page 9

⁸ www.treasurer.gov.au/tsr/content/Publications/AutomotiveResponse.asp

⁹ Federal Chamber of Automotive Industries (FCAI)

1994	590	940	1 530
1995	660	1 110	1 770
1996	1 020	1 240	2 260
1997	1 270	1 450	2 720
1998	1 300	1 280	2 580
1999	1 760	1 490	3 250
2000	2 420	1 800	4 220
2001	3 260	1 700	4 960
2002	3 080	1 750	4 830
2003 (est.)	3 000	1 700	4 700

Sources: DISR (1999), DITR (Key Automotive Statistics 2002), AAI Yearbook 2004

Export values will be boosted substantially in 2004 by the following programs:

- A full year of Holden exports of left hand drive versions of the Monaro to the USA and the Middle East (volumes will exceed 18,000 units in 2004).
- Increased exports by Toyota of the Camry
- A full year of Holden exports of the new High Feature V6 engine to Europe and the USA
- Other export programs by component producers, including Pacifica's export programs of braking components and systems

Holden has also announced that a batch of luxury cars will be sent to China early in 2005 to test that market, and exports of the Statesman and Caprice models to South Korea will commence in the first quarter of 2005.

Further stimulus to exports will result from the free trade agreement (FTA) with Thailand (October, 2003), and the FTA with the USA (before Parliament in June, 2004). The FTA with Thailand will open up the Thai market to Australian made cars, although volumes are likely to be modest for the foreseeable future, while there will also be progressive removal of tariffs on components.

The FTA with the USA will remove tariffs from Australian vehicles exported to the USA as well as for Australian component exports. In return, tariffs will be removed for US components imported into Australia and car tariffs phased out by 2010. As well as aiding growth in current exports and a change in the mix of imports, removal of the 25 percent US tariff on pickups raises the chance of exports of Australian utilities.

The ability of the industry to remain competitive in a free trade environment so it may take full advantage of these increased export opportunities will be enhanced by the continuing development of a skilled workforce.

The exciting outlook for exports accompanies record domestic markets benefiting all industry segments...

The positive outlook for the local vehicle manufacturers and component producers is also reflected in overall domestic market growth. New vehicle sales for the full year 2003 reached 909,811 units, and in doing so established a new record mark for the Australian automotive industry. The previous record was set at 824, 309 in 2002.¹⁰

Industry forecasts project continuing growth in forward years. The Federal Chamber of Automotive Industries (FCAI) recently revised the industry forecast for 2004 to another all-time record of 960,000 vehicles.

¹⁰ FCAI, *V Facts*, January 2004

Table 2.4 Automotive Market Forecasts

Segment Forecasts
Units, VFACTS data and segments

CALENDAR YEAR	1992	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Light and Small	138013	251532	229875	244377	228988	231178	252367	248000	251000	251000	265000
Medium (4 Cylinder)	86020	51251	45266	40628	37387	38951	47164	47000	45000	47000	49000
Large (6 and V8)	131855	217354	208123	198766	190303	188348	203524	211000	220000	220000	223000
People movers	6839	7163	7559	11736	12140	12791	11852	12000	12000	12000	12000
Sports	14304	9376	7932	7866	8820	13988	10175	10000	11000	11000	13000
Luxury and Prestige	29459	47684	48817	50300	51814	54984	63429	62000	58000	56000	68000
Total Passenger	406490	584360	547572	553673	529452	540240	588511	590000	603000	603000	624000
All Terrain Wagon	42229	96551	104055	105510	116236	138064	150578	148000	154000	154000	160000
Other Light Commercial	78797	107390	114911	108332	108034	122393	146589	131000	130000	130000	135000
Total Light Commercial	121026	203941	218966	213842	224270	260457	297167	279000	284000	284000	295000
Heavy Commercial	14561	19368	20277	19585	18959	23612	24133	21000	21000	21000	23000
Total	542077	807669	786815	787100	772681	824309	909811	910000	908000	908000	942000

Source: Australian Automotive Intelligence Report, February 2004

The industry and its products are at the forefront of technological and other significant changes...

The Products.....

A number of characteristics make the industry's products unique. This has a significant impact on skill requirements. These characteristics include:

- The exponential rate of increase in the incorporation of new technology in vehicles, however;
- Unlike other advanced consumer products e.g. computers, mobile phones, digital cameras, etc., vehicles:
 - Have extended life periods (the average vehicle life in Australia is over 11 years),
 - Incorporate many sub-systems which may be fully mechanical, electronic or a combination of both,
 - Require regular maintenance,
 - Are normally repaired when bodies are damaged, or parts may be removed, repaired or replaced,
 - Are on-sold to second and subsequent owners rather than being disposed of after the first two to three years of use,
 - Are the second largest piece of expenditure for a household after residences. Customers have high expectations that their vehicle will:
 - Be of superior quality,
 - Perform to their expectations,
 - Be reliable,
 - Be maintained at a high standard, and not require repeat visits to rectify faults.

These characteristics apply equally to the non-passenger vehicle segments of the total vehicle market. An example may be found in a modern heavy-duty off-road piece of mining equipment which is controlled by advanced electronic systems requiring specialised maintenance skills. Continuing high utilisation rates of these expensive pieces of capital equipment place significant skill demands on tradespeople in remote areas. Significant skill shortages are apparent in this industry segment requiring specific approaches such as Westrac's extensive in-house apprenticeship programs.

Consequently, retailing, servicing and repairing the industry's products involves many specialised skills.

Manufacturing the Products.....

Motor vehicle manufacturing is the largest and most sophisticated manufacturing industry in the world, (as highlighted in section 2.2 on Page 11). The local component and vehicle manufacturing segments are world class in terms of their product design and engineering and manufacturing capabilities and processes. Skill requirements are similarly at a high level in this segment of the industry.

ATA's Approach....

ATA and the industry agreed that a pro-active approach needed to be taken to recognise these developments as part of a rolling strategic plan and in Training Package reviews. Two comprehensive "**Futures Reports**" were commissioned:

*Review of Training for the Retail, Service & Repair (RS&R) Sector Meeting Future Training Needs.*¹¹ (RS&R Review)

*Future Directions in Automotive Manufacturing*¹² (Manufacturing Review)

The reports have already been used to assist the redevelopment of the Retail, Service & Repair Training Package and highlight future directions for the Stage 1 (scoping) review of the Manufacturing Training Package.

The *RS&R Review* concluded that four major constructs, namely:

- customer service and focus;
- technology;
- work practices; and
- the impact of environmental considerations

are, and will continue to be, critical drivers affecting this major industry sector, and their influence will be of increasing importance over the time frame of this Report for the Australian Automotive Industry. In turn, these drivers will continue to impact training needs in the industry.

Similarly, the *Manufacturing Review* supports the view that automotive manufacturing is a leading edge, globally competitive industry. It has led development in best practice manufacturing techniques and will continue to do so. This view is supported

¹¹ Causeway Consulting Pty. Ltd. December 2001, www.automotivetraining.org.au/about/FuturesExecSumm.pdf

¹² Causeway Consulting Pty. Ltd., February 2003, First Draft

by the Productivity Commission report.¹³ This report highlights the need for full implementation of lean manufacturing principles among suppliers and manufacturers, and a need for greater supply chain management and linkage between vehicle manufacturers and first tier suppliers.

Implicit in the continuing development of best practice manufacturing techniques is an evolution of trade skills especially into cross-functional areas, away from the traditional demarcation between mechanical and electrical/electronic skills.

These developments continue to impact workforce skill demands...

ATA took these conclusions as key elements of training package reviews. They will continue to impact on workforce skill demands. As an example, box 2.2 illustrates some changes in product technology which impact on the traditional “motor mechanic” who is now required to work on combined mechanical and electronic systems.

Box 2.2 Changes in product technology

The industry’s products have been characterised by a continuous move from mechanical/hydraulically based operating systems to electronic/electrically based operating systems:

- 20 years ago, virtually all new vehicles had engines incorporating mechanical carburettor fuel systems. Today the change to electronic fuel injection systems supported by sophisticated engine management computers is complete. These enable precise control of vehicle emissions and reduce fuel consumption.
- Other systems are supported by sophisticated body computer modules e.g. immobilisers, air bags, headlights/wipers
- Electronically controlled systems such as anti-lock braking, traction control and air bags have virtually become standard in the past ten years. Further developments of similar technology now being introduced include electronic stability systems, electronic brake-force distribution, electric steering (as distinct from hydraulic power steering), active head restraints, rear obstacle detection (park assist) systems and electronic throttle systems
- Emerging technology in the process of being introduced includes electronic braking, adaptive cruise control systems, and entertainment options such as DVD players and movie downloads
- Changes in power technology such as hybrid engines and fuel cells will largely impact outside the period of the National VET Review

Industry skills – a many-faceted picture...

The Productivity Commission included the following critical review of skilling and training issues in its report on assistance to the manufacturing sector (including component manufacturing):

“The industry’s skill base: a source of competitive advantage”

The automotive industry draws on a wide range of skills including trade skills, engineering, design, project management, finance, and marketing and general management skills. The required skill set has expanded and deepened as motor vehicles have become more sophisticated and workplaces more flexible, and as

¹³ Productivity Commission, op. cit. page 9 and chapter 3

various tasks have been automated. Access to workforce skills, and the quality of the associated education and training infrastructure, has therefore become increasingly important for competitiveness in this industry.

In this regard, Australia is generally well served. In recent years, ‘entry level’ skills in the Australian automotive industry have increased more rapidly than in the rest of manufacturing (see table 5.1).

But these sorts of data do not reflect the very substantial specific skills acquired through on-the-job training. Thus, Holden (sub. PP101, p. 30) remarked that it was no longer appropriate to view production workers in the industry as being unskilled. Indeed, the skill base available to the industry is widely regarded as integral to its growing innovativeness and flexibility and to the improvements in its productivity and quality over the last decade. Moreover, other industries and activities have benefited from the skills development that has taken place in the automotive sector.

“The industry’s skill base is developed in a number of ways”

As intimated above, the development of the automotive industry’s core skill base relies mainly on the initial skilling provided in educational institutions, followed by extensive on-the-job training. For example, according to Holden (sub. 72, p. 33), over the last 10 years, vehicle producers have lifted spending on ‘continual learning activities’ to more than 4 per cent of total wages. While recent data comparing training levels across industries are very limited, it appears that automotive firms do spend considerably more on training than their counterparts in many other areas of manufacturing.

Table 5.1 Educational attainment of automotive industry workers, 1996 and 2001

	<i>Automotive a</i>		per cent		<i>All industries</i>	
	<i>1996</i>	<i>2001</i>	<i>All manufacturing</i> <i>1996</i>	<i>2001</i>	<i>1996</i>	<i>2001</i>
Bachelor degree or Higher	10	9	8	11	16	21
Skilled vocational	24	32	25	25	17	15
Other post-school b	13	16	13	14	17	18
Total with post-school qualifications c	46	56	46	50	50	53
Total without post-school qualifications	54	44	54	50	48	44

a ANZSIC 281: Motor vehicles and parts manufacturing.

b Includes basic vocational training, undergraduate diplomas and associate diplomas.

c A small percentage of workers are still at school — hence the total figures for workers with and without post-school qualifications may add to less than 100 per cent.

Source: ABS (unpublished data).¹⁴

The Commission continued to note the industry’s links with a range of educational institutions. The Commission then went on to conclude that:

“Views differ on the significance of emerging skills shortages”

¹⁴ Productivity Commission, *op. cit.* pages 71- 72.

The industry faces emerging skill shortages in a number of areas, including: virtual engineering; mechatronics; die moulding and setting; CAD/CAM; electronic diagnosis, and foundry skills. Also, firms located in regional areas can find it more difficult to attract skilled workers than their city-based counterparts.

Despite these specific shortages, some in the industry do not see access to skills as a general problem — particularly given the scope to build skills through on-the-job training. Also, at the public hearings, the Society of Automotive Engineers commented on the increasing emphasis being given in some university engineering courses to skill acquisition in emerging areas such as mechatronics (trans., p. 353).

However, others suggested that skill shortages would become a more pressing issue for the industry in the next few years:

- Some participants, including the Department of Employment and Workplace Relations (sub. 79, p. 7), indicated that there is already evidence of skills shortages and/or recruitment difficulties in Victoria and South Australia for a number of the core trades in the automotive industry.
- There is also concern that the decline in apprenticeship numbers will create problems for the industry in accessing necessary trade skills in the longer term.
- Several participants suggested that the industry's ageing workforce poses further risks for skills availability down the track.
- Others indicated that traditional sources of skilled workers such as new migrants had dried up.
- And, more broadly, several submissions reiterated concerns enunciated in the recent Audit of the Victorian Automotive Industry (Victorian Government 2000) about the negative image of the sector as a career choice.

The South Australian Government (sub. PP115, p. 12) went on to argue that ensuring adequate future access to emerging specialised skill requirements will be particularly important in enhancing the industry's competitiveness.¹⁵

The Commission continued on to observe that: "**A responsive educational and training system is crucial**"¹⁶

In reviewing these aspects of the Productivity Commission's findings, the industry strongly supports the view that:

- The skills shortage and recruitment difficulties evident in Victoria and South Australia, particularly at component producers, requires a review of the apprenticeship structure, including the adherence to 4 year time-based structures, rather than competency based systems,
- There is a fair body of evidence to suggest that many component suppliers are failing to "grow" in line with the needs and demands of the internationally competitive manufacturers, particularly in the requirements of global, streamlined manufacturing techniques.

By contrast, the RS&R sector faces definite skill shortages...

Data produced from twice yearly labour market surveys by the Department of Employment and Workplace Relations have indicated that all major areas of the Retail, Service and Repair section of the industry are suffering both national and state shortages. An example is provided by the following 2003 data from the

¹⁵ Ibid. page 73.

¹⁶ Productivity Commission, *op.cit.* page 73

Queensland Department of Employment and Training which confirms both state-wide shortages, but also particularly severe areas of regional shortages:

Skills Shortages throughout Queensland (Source: Queensland Department of Employment and Training 2004)	
Brisbane	Specific shortages in Sandgate, Pine Rivers and Caboolture Specific demand increases in Brisbane Area as a result of growth for mechanics, panel repair and auto electrical.
Wide Bay/ Sunshine Coast	Skills shortages for mechanics, body repair, diesel mechanics (Bundaberg) and auto electricians
South West Qld	Specific shortages for mechanics, body repair, diesel mechanics (Toowoomba and Kingaroy) and body repair (Ipswich)
Central Queensland	Ongoing <u>extreme</u> shortages for motor mechanics; diesel fitters and small engine repair/maintenance
North Queensland	Shortages for motor mechanics; body repair specialists; and auto sales representatives.

Automotive Training Victoria has identified the following occupational areas are currently in short supply and are projected to remain as skill shortages over the next five years:

- Mechanics – heavy vehicle (on-site mechanical, hydraulic, pneumatic and electronic diagnosis and repair).
- Mechanics – light vehicle (electronic diagnosis and repair,
- Panel beating (materials technology), and
- Vehicle painting (materials technology).

Similar examples may be cited from other States and Territories. As indicated in the Queensland table, there is no uniform pattern in terms of occupations or locations of the shortages.

The National Industry Skills Initiative Program in the R, S and R section of the industry highlights the problems with skills shortages.....

In acknowledgment of the ongoing skills shortages in the industry, ATA has been a leading participant in the Department of Education, Science and Training (DEST) National Industry Skills Initiative (NISI) program, and the related Career Information Industry Partnership Program (CIIPP) directed specifically at the RS&R sector.

Unfortunately, the automotive industry has been unable to access further funding from these sources to adequately support the initiatives.

Participation emerged from the initiative of the Victorian Automobile Chamber of Commerce (VACC), in conjunction with the Motor Trades Association of Australia (MTAA), to partner with the Commonwealth Government in an assessment of current and emerging skill shortages in the RS&R sector. The studies concluded that these skill shortages were real and are expected to continue. A number of initiatives are summarised in the final NISI report.¹⁷ The report notes:

¹⁷ National Industry Skills Initiative: *National Retail Motor Industry Task Force*, Final Report, November 2002

“Over the past decade the industry has become acutely aware of decreasing levels of applications from new entrants to the industry and a significant ageing of its existing workforce. The retail motor industry has suffered the cyclic effects of skill and labour shortages particularly in the areas of skilled tradespeople and new apprentices seeking to enter the industry.”¹⁸

Low retention rates of skilled people in the RS&R sector is a serious concern...

One issue of considerable concern raised in the report relates to the retention of skilled people in the industry. In this regard, the report notes:

“Retention rates are also an issue requiring deeper analysis, with over 40% of the workforce leaving the industry five years after joining. The industry is acutely aware of the costs and training implications associated with low retention rates amongst mature workers in the industry.”¹⁹

A related subject not specifically covered in the NISI report is the suggestion supported by a deal of anecdotal evidence that a number of skilled people tend to leave the industry after about 20-25 years (particularly in the 40-45 age group). Research undertaken by an industry survey²⁰ in 2002, confirms this situation in NSW. It is suggested that, in many instances, this is caused by concern among older employees that they are unable or unwilling to keep up with the rapid changes in technology evident in the industry.

The industry survey also suggested that wages and working conditions were significant factors in the overall loss of people from the industry.

The Report identified a number of key issues. These are:

1. *“A shrinking youth base in Australia will lead to increased competitive activities from employer and trade organisations designed to attract school leavers into their ranks.*
2. *The need for immediate exploration of the ways of attracting adults into the industry through skills cross-streaming and recognition.*
3. *Employer groups, ITABs and schools need to market trade occupations in new and dynamic ways. They need to appeal to youth and their families and in particular, mothers. (The CIIPP activities confirm this).*
4. *Significant in transition between school and work are the depth and breadth of local connections between schools and industry. Local employers need to find ways to become more deeply engaged in school/career activities.*
5. *Employers need to clearly articulate what it is that they have to offer apprentices and trainees. They need to recognise that they are competing with a diverse range of attractions and options in the job market.*
6. *VET in schools is imperative to the supply of appropriate labour to the industry in the future. Without hands-on exposure to technology it is unlikely that young people will explore the potential in the trades sector.*
7. *Schoolteachers and career advisors often have outdated views of the industry. Unless these groups can gain a realistic understanding of the industry it is unlikely that they will promote automotive trades to their pupils as a viable career option.*
8. *It is unlikely that the current training models will meet the emerging needs of the industry. New models will need to be explored and tested.*

¹⁸ Ibid. page 4

¹⁹ Ibid. page 6

²⁰ *Reasons for the high wastage rates of trades people in the motor vehicle repair industry – ATB(NSW) Report*

9. *The industry will need to find ways in which to retain and continually retrain and reward its existing and ageing workforce.*²¹

These issues are critical and it is vital that the industry and policy makers continue to act on the findings. A number of the issues are addressed further in Section 3 of this National VET Review.

The Career Industry Information Partnership Program (CIIPP) – a successful initiative worth continuing...

As mentioned above, the industry CIIPP program²² was conducted as part of the NISI initiative. ATA was a key partner in the CIIPP initiative with industry. The CIIPP was focussed on school students in aiming to help address skill shortages by:

- improving the perceptions of students, their parents, teachers and career advisers in the educational system regarding the image of the industry;
- developing and distributing better careers information; and
- promoting automotive employment, training and career options.

The CIIPP was designed to focus on the key areas of information and promotion. The activities relating to the development of print and other products, the establishment of a new web site (<http://www.autocareers.com.au>) and the conduct of regional pilots, all contributed to an increase in information available about the industry. Students are able to make more informed choices about their future education training and employment options. Many teachers and parents now have information not previously available. The program challenged previous negative thinking regarding the merits of a career in the automotive industry.

Industry representatives, including ATA, have maintained a continuing dialogue with DEST regarding the potential to continue CIIPP initiatives. However, to this end, bids for further funding have been unsuccessful. DEST has funded a continuation of the partnership program in WA and nationally funded a reprint of brochures to workshops and dealers through schools. The target group are customers who are parents of school age young people.

The Industry Training Strategies Program (ITSP) – a further opportunity to address skill shortages...

ATA was contracted by DEST during 03-04 to provide the automotive industry ITSP program. This is a partnership program with New Apprenticeships Centres (NACs) and Registered Training Organisations aimed at increasing New Apprenticeship commencements in automotive qualifications by informing stakeholders on training packages. ATA has sub-contracted the network of State and Territory automotive ITABs (where they exist) for delivery of these programs. These arrangements are currently under review as a result of the changes regarding industry advisory arrangements at State and Territory level.

Recent ITSP activities throughout the automotive industry include:

- a community-based approach to skill shortages and New Apprenticeships in the Maroondah (Victoria) region. This project is being sustained through future

²¹ NISI Report, op.cit. pages 10-11.

²² Refer particularly to: Automotive Career Industry Information Partnership Program, *Final Activities Report*, Motor Trades Association of Australia (MTAA), Canberra, August 2001.

- planned activities including industry tours, an industry forum and the Maroondah “Grand Prix”.
- A program of activities in the Mount Gambier (SA) region commencing in July/August 2004. Continuing activities will encompass:
 - An Auto Careers Expo
 - Tours to automotive enterprises
 - Visits to schools by automotive employers
 - Displays at Schools
 - Media coverage
 - The regionally-based schools industry initiatives are among the most successful undertaken by the industry. It appears that the initiatives are capable of self-funding after initial seed money. Unfortunately, ATA was unable to secure additional funding to further expand this initiative.
 - Expansion of New Apprenticeships into ancillary industry sectors in regional areas. These ancillary sectors include bicycles, outdoor power equipment and farm machinery. So far, the project has netted a total of 142 New Apprenticeship commencements, with 15 mature age trainees included in those numbers.
 - Establishment of a co-operative New Apprenticeship Program in the Automotive Component Manufacturing Sector. A Component Manufacturer Liaison Officer works in the southern and eastern metropolitan regions of Melbourne through a linkage with Bayside Employment Skills Training.
 - Similar programs are in place in South Australia.
 - A project to develop opportunities for Mature Age New Apprenticeships within the heavy vehicle sector, including Defence and Caterpillar Distributors.

School Based New Apprenticeships – a critical avenue for future recruitment...

One conclusion from the NISI report detailed above is that “VET in Schools is imperative to the supply of appropriate labour to the industry in the future.”²³ The industry is concerned about the different approaches to VET in Schools, including School Based New Apprenticeships, between the different States and Territories. This is evident in the substantial difference in take-up rates in the jurisdictions. ATA believes this is an issue that the Australian National Training Authority (ANTA) and bodies such as the Employment and Career Education Foundation (ECEP) need to address seriously on a cross-industry basis.

There needs to be multiple pathways including:

- school-based traineeships
- full time theory-based programs
- full time programs as part of secondary schooling leading to a tertiary entrance score based on standards from the appropriate training packages.

One very successful School Based New Apprenticeship program in the industry is the T3 program described in Box 2.3. As indicated in the box, this initiative is expanding among the automotive manufacturers and importers (to service their retail networks) and beyond its state of origin, New South Wales. Again, the rollout into other jurisdictions has been inhibited by policy and procedural variations, and the difficulties in enabling a number of public providers to work in effective partnership

²³ NISI Report, op.cit. page 10

arrangements. A number of others are looking at application of the salient features of the T3 across the RS&R sector in general.

The program now badged “Technology Training for Tomorrow” has now been adopted by all manufacturers and a number of importers.

Box 2.3 Toyota T3 and beyond

The well-publicised Toyota T3 program is an example of an initiative aimed squarely at the skill shortage program. In 2000, Toyota recognised that its dealer network faced critical skill shortages. Forward projections suggested that these would intensify. Toyota entered into a partnership with the New South Wales Department of Education and Training and TAFE NSW to develop and implement a comprehensive, well-marketed School-based New Apprenticeship program. Students in years 11 and 12 undertake Certificate II programs as part of their curriculum and work one day per week in a sponsoring Toyota dealership.

The first intake of students completed year 12 in 2002. Of the 62 Students who commenced the program in 2001, 59 remained to complete their certificate II (and year 12) and 57 commenced full-time employment in 2003 in Toyota dealerships.

The T3 program has been renamed as T3 – Automotive Technology and Training for Tomorrow, and now includes dealerships from the following companies:

- Toyota
- Ford
- Mazda
- Porsche
- Nissan
- Holden
- Mitsubishi
- Volkswagen
- Hyundai
- Saab

Throughout 2003, a total of 297 students undertook the T3 program, indicating a genuine level of success

In addition to the T3 initiative, in South Australia, school-based body trades traineeships have been implemented in partnership with Douglas Mawson Institute of TAFE and Master Collision Repairers. The Insurance Australia Group is supporting similar initiatives across the body repair industry in other States.

The industry believed that the Commonwealth’s announcement in 2002 of an improved incentive regime supporting School Based New Apprenticeships would support increased interest and uptake of these programs by the industry. Unfortunately, the expansion has not been as great as anticipated. There is still a requirement for a concerted co-ordinated approach to changing the image of the industry among young people, their parents and their teachers.

The industry offers a variety of career paths...

A variety of career paths are available through all segments of the industry. The ATA website illustrates a number of these: <http://www.automotivetraining.org.au/careers/index.html> The development of this web site (with support from the Industry Training Strategies Program) has allowed for significant levels of access to the broader community in terms of gaining a deeper understanding of the career paths available in the industry.

The recently revised RS&R Training Package (AUR04) is structured to support career path development.

New Apprenticeship growth has been impressive...

The most recent data available from the National Centre for Vocational Education Research (NCVER) shows impressive growth in New Apprenticeship commencements in all States and Territories, as illustrated in the following table:

Table 2.5 New Apprenticeship Commencements – Automotive Industry – 2000 –2003 (12 months to December 31) – All Automotive Qualifications.

	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	*AUST
2000	1890	700	830	30	750	210	180	150	4650
2001	3230	2840	2010	270	1050	260	190	200	9940
2002	3600	3490	3040	980	1390	330	170	200	13200
2003	3420	3910	2970	1110	2670	320	470	210	15080
%	80.9	458.5	257.8	3600.0	256.0	52.4	161.1	40.0	224.3
change 2000-03	incr.	incr.	incr.	incr.	incr.	incr.	incr.	incr.	incr.

Sources: NCVER New Apprenticeships commencement data, March, 2004

n.b. The substantial growth in Western Australia is mainly due to the increased availability of a number of qualifications as New Apprenticeship pathways.

*Due to rounding, some totals may not tally exactly.

The majority of growth has been in traditional trade areas rather than traineeships. The industry projects continued growth in New Apprenticeship commencements, particularly in the RS&R sector as a result of the actual and projected skill shortages in the industry. Increased emphasis is being placed on traineeship commencements particularly in areas of past low participation such as the Aftermarket Warehousing/Distribution areas.

3. VET Priorities of the Industry

Training Package Reviews

- There are two core training packages – *RS&R and Manufacturing*. The review of the former has just been completed. , The review of the Manufacturing Training Package has been scoped and recommendations for review have been presented, however further work is on hold pending the outcome of the advisory arrangements restructure. Key priorities that have been addressed in these training package reviews are:
 - Addressing the key constructs identified in the *RS&R Futures Report*²⁴ i.e.:
 - customer service and focus;
 - technology;
 - work practices; and
 - the impact of environmental considerations.
 - In the light of the Productivity Commission's findings²⁵ in respect to skill levels and needs in the vehicle and component manufacturing sector, maintaining a continuous improvement approach to the training package review to ensure skill levels meet the requirements of this globally competitive sector of the industry. The Manufacturing Training Package review must provide an enabling base for training across the vehicle and component manufacturers to match and exceed global competition in a low protection environment. The Manufacturing Package must remain relevant or it will not be used.
 - Ensuring that the synergies between the major industry sectors and the smaller segments including outdoor power equipment, bicycles and recreational boating are properly recognised in Training Package reviews enabling greater take-up of New Apprenticeships in these industry segments.

Addressing Skill Shortages

An extensive discussion of industry skill shortages is found in section 2.2 of this Report. Addressing the skills shortage issue requires a combined approach by all industry stakeholders. Vocational Education and Training must play a key role through:

- recognising and acting upon the training issues that assist the attraction of new entrants into the industry and the retention of existing employees within the industry; and
- supporting career path opportunities in the various industry sectors by offering Training Packages that meet and exceed industry needs and are attractive to new entrants into the industry

The industry and ATA recognise that **a fundamental re-examination of entry-level** training approaches may be an avenue that **needs to be explored** further. This is

²⁴ Causeway Consulting, *op. cit.* Executive Summary pages 1 -12

²⁵ Productivity Commission, *op.cit.* section 5.4 pages 71 - 76

recognised in the final NISI Report²⁶. The following conclusions from that section of the Report need to be reinforced and carefully considered:

"In many ways the industry is in a state of metamorphosis. The mechanic and the body technician of the future will be typified by an IT diagnostic skill set with highly developed communication, team work and team building skills.

Automotive based services to the community, in the future, will be based on large but segmented organisations, dealerships, front end specialists, brake specialists, and niche organisations. It is quite probable that the generalist mechanic found today will be marginalised by more economic parts change-over operations in the future. That is, it is likely to be cheaper to replace the part than to repair it. A broad based mechanic with a deep skill set and knowledge set will in many ways become a specialist; our generalist mechanic of today will become a specialist of tomorrow residing in a segmented area of the industry. In this segmented industry environment, dominated by narrow but deep occupations in specialised areas, broad skill sets will be less common and less sought after by employers.

In a sense this position contradicts the need to lessen the pressure on youth to stay at school in favour of starting an apprenticeship at an earlier age. It does however have to be viewed on the basis that the future will see significant changes in the types of training required to meet the skill needs in industry.

If four year apprenticeships are an unpopular choice for youth leaving school at 18 years then quicker, more streamlined approaches to skills development and remuneration will need to be developed.

It is possible that given these tensions between school leaving age and periods of apprenticeship, an intersection may occur on narrower skill base requirements in the industry and shortened training cycles required in some areas of the industry to achieve competency and certification. An example of this situation is where apprentice motor mechanics in dealerships spend up to four years carrying out routine servicing processes due largely to a lack of diagnostic and repair work required in new vehicles. It could be argued that for apprentices in that they are employed in extremely segmented areas of the industry a four year apprenticeship is not required and a different skill mix that provided broader workplace applications could be considered. This new skill mix could include broader, cross-functional activities that would enable the apprentice to be employed in a number of different functions in the dealership."²⁷

In spite of the restructure of the RS&R Training Package, there is a need for an in-depth examination of the future structure of apprenticeships in the industry.

Maintaining skills currency

This issue is examined in more detail in section 4.2 below. In essence the industry is concerned that:

- existing employees in the industry need effective avenues to maintain the currency of their skills in the light of rapidly changing technology and related issues;
- similarly, the education sector needs an effective means of maintaining both the currency of staff skills, and the associated infrastructure requirements associated with the new technology.

²⁶ NISI Report, *op. cit.*, section 2.2, pages 6-7

²⁷ NISI Report, *op. cit.*, pages 6-7

Maintaining effective Industry Advisory Arrangements through a network at National, State and Territory level

Automotive industry representatives strongly support the maintenance of effective industry advisory arrangements covering the full extent of the automotive industry value chain.

Industry believes that a body covering the entire automotive industry provides a co-ordinating and implementation base for VET initiatives over the broad range of industry for stakeholders representing the various sectors of the industry. This view is reinforced by the fact that none of the industry peak bodies covers the entire automotive industry and, in fact, many areas of the industry are not affiliated with industry peaks as demonstrated in the following table.

Table 3.1 Automotive Industry Representative Bodies with an interest in Vocational Education and Training

	Component Producers	Vehicle Manufacturers/ Importers	Retail Dealer network	Service and Aftermarket sector	Recycling/ Disposal sector
Industry Bodies	FAPM IAME SAE	FCAI IAME SAE	MTAA and affiliates AADA IAME SAE	MTAA and affiliates AAAA VACA IAME	Automotive Dismantlers Association (division of MTAA)
Employee bodies	AMWU	AMWU	AMWU	AMWU	AMWU
		Truck, bus, trailer manufacturers/ importers			
Industry bodies		TIC IAME SAE			
Employee bodies		AMWU			

Legend:

FAPM	Federation of Automotive Parts Manufacturers
IAME	Institute of Automotive Mechanical Engineers
SAE	Society of Automotive Engineers
FCAI	Federal Chamber of Automotive Industries
MTAA	Motor Trades Association of Australia
AADA	Australian Automobile Dealers Association
AAAA	Australian Automotive Aftermarket Association
VACA	Vehicle Air Conditioning Association

Affiliation with Industry Peaks:

- The majority of component manufacturers, vehicle manufacturers and a few importers are members of the Australian Industry Group
- Three of the four local vehicle manufacturers are members of the Business Council of Australia

- The Victorian affiliate of MTAA (Victorian Automobile Chamber of Commerce) is a member of the Australian Chamber of Commerce and Industry
- The remaining industry bodies and individual employers are generally not members of industry peaks

The industry is also concerned that there is now inequality of representation of industry advisory arrangements at State and Territory level, following the withdrawal of Commonwealth financial support in the 2002 Federal budget. Following this decision, a variety of arrangements have been put in place at State and Territory level. For a geographically widespread and diverse industry, inequality of industry advisory arrangements at State and Territory level produces ineffective outcomes and needs to be addressed as a matter of urgency. An effective network for automotive advice at National, State and Territory level is necessary.

This point is illustrated by the different arrangements existing in South Australia and Victoria. Both states are key players in terms of vehicle and component manufacturing, and have strong RS&R sectors. The Victorian Government has provided ongoing support for effective ITAB arrangements, a position that does not apply in South Australia. Currently, no State automotive ITAB exists in South Australia or Tasmania, while in Northern Territory and ACT, the automotive industry is amalgamated with other industries.

Continue to develop industry/provider partnership arrangements

This issue is discussed in detail in section 4.2 below. It reflects the industry's concern about the ability of providers to support the infrastructure requirements to provide effective training outcomes for a capital-intensive industry sector undergoing rapid technological and other changes.

Development of Learning Resources

ATA and the industry are concerned that support learning and assessment resources need to be developed or strengthened to assist many industry segments, particularly in the following areas:

- Aftermarket support package
- Bicycle package support
- New and emerging technologies
- Motorsport
- Outdoor Power Equipment

Further development of a training culture within the industry

Table 2.3 demonstrates an impressive increase in the take-up of New Apprenticeships in the automotive industry. The increase, however, is essentially concentrated in the traditional trade areas. During the life of this Report, emphasis must be placed on the development of a training culture that encourages employers to utilise traineeships in areas with a prior record of low acceptance. This includes:

- the Retail dealer sector, particularly in sales areas;
- the Aftermarket sector, particularly in retail and warehousing areas; and
- smaller industry segments, including outdoor power equipment, bicycles, recreational boating and farm machinery.

4. Policy and Planning Context

4.1 Industry environment

The key area of Policy affecting the industry involves the assistance arrangements developed by the Commonwealth Government.

Automotive Assistance Arrangements

As noted in section 2.2 above, in December 2002, the Commonwealth Government announced Automotive Assistance Arrangements to apply post 2005. These mainly impact the local automotive manufacturers and component producers.

Key features of the post 2005 arrangements are:

- **Post-2005 Automotive Competitiveness and Investment Scheme (ACIS)**
Similar to its predecessor, the post-2005 Automotive Competitiveness and Investment Scheme will be a transitional assistance scheme that will encourage competitive investments by firms in the automotive industry in order to achieve sustainable growth. The Scheme has been announced well before its implementation date of 1 January 2006 to provide certainty for the industry in its planning for the next decade. It will run for ten years with all industry specific support ceasing on 31 December 2015.
- **ACIS capped incentives**
During the 2006-2010 period, ACIS capped incentives will be limited to \$2 billion. Over 2011 to 2015, ACIS capped payments will be limited to \$1 billion, with assistance declining progressively over this period. From the first quarter of 2003, capped payments will be divided into two funding pools in a ratio of 55:45, one for Motor Vehicle Producers and one for the supply chain respectively.
- **ACIS uncapped production credits**
Motor Vehicle Producer uncapped production credits will continue as at present, but will conclude in 2015. They will continue to be tied to the tariff applying to Passenger Motor Vehicles and related components.
- **Research and Development fund for car producers**
A \$150 million R&D Fund will be created to encourage vehicle producers to invest in high-end R&D activities. The Fund will be conducted on a competitive grants basis with three annual rounds of applications to be held over 2006, 2007 and 2008. Up to \$50 million will be allocated for each round, with unallocated funds returned to the Motor Vehicle Producer funding pool.

- **Automotive tariffs**
From 1 January 2005, the tariff for passenger motor vehicles and automotive components will be 10%. From 1 January 2010, it will be 5%.
- **Free Trade Agreements**
As noted in section 2.2 above, Free Trade Agreements have been negotiated in the last 12 months with Thailand and the USA. These will be of benefit to the local automotive industry

The industry has welcomed the stability and certainty provided by these new assistance arrangements which will support a variety of new vehicle programs that are either announced or are being planned by the four local vehicle producers and their partner component producers.

In addition to the overall Policy framework, the automotive industry is subject to a number of legal and regulatory controls, together with some voluntary standards. Many impact directly on the work of employees in the industry. Industry training packages need to continually reflect these controls, and knowledge of current and pending requirements is a critical part of training package development. The principal areas are as follows:

Australian Design Rules

All locally produced and imported motor vehicles are subject to Australian Design Rules (ADRs). These are administered by the Vehicle Safety Standards branch of the Department of Transport and Regional Services. The ADRs set out design standards for vehicle safety and emissions. They are developed through a consultative process involving government, industry, employee and consumer representatives.

The ADRs use United Nations vehicle categories and are harmonised to a considerable extent with international standards.

Box 4.1 *Mechanics/technicians and ADRs*

ADR requirements are incorporated in Training Package standards for mechanics. They are required to maintain vehicle emission standards and be aware of the appropriate ADRs when conducting roadworthy tests for used vehicles. Compliance is also essential when damaged vehicles are being repaired.

Fuel consumption standards

As part of the industry's contribution to the Greenhouse issue, the industry has committed with the Commonwealth Government to a significant voluntary program to improve fuel consumption figures for new vehicles. By 2010, the program aims at a 15 percent fuel efficiency improvement target by over 1997.

Licensing

Uniform licensing standards do not apply in the industry. Motor mechanics are required to be licensed in New South Wales and Western Australia but not in other

jurisdictions. Installing, repairing and servicing of Liquefied Petroleum Gas (LPG) and Natural Gas (NGV) systems is carried out by licensed people in most States and Territories, with the pre-requisite being that a qualified Motor Mechanic (Certificate III) undertakes the work.

New licensing agreements are likely in Victoria, Queensland, Northern Territory and Western Australia over the next 12 months. Standards are also being introduced to cover air conditioning.

The industry is concerned that developments in this area are piecemeal with insufficient consultation between the States and Territories on a national outcome. It is ironic that vehicles which frequently cross State and Territory borders are subject to different regulations in respect to the people responsible for their maintenance and repair.

Environmental standards

The RS&R *Futures Report*²⁸ contains a comprehensive discussion on this subject and the widespread implications for the industry. These issues have been taken into account in the review of the RS&R training package.

Occupational Health and Safety (OH&S)

OH&S laws are also a major feature of the industry training packages. Apart from acknowledging the passive requirements of the laws, the industry has taken a number of initiatives in pro-active OH&S. Again, these are incorporated, where appropriate, in training packages.

QS 9000

Component manufacturers are required, as part of global agreements with automotive producers, to achieve and maintain QS 9000 certification. QS 9000 is an automotive specific version of ISO 9001. QS 9000 incorporates ISO 14000 which sets environmental standards. All subsets of QS 9000 apply equally to vehicle manufacturers who will not accept products from suppliers who do not comply with this standard.

4.2 Other key policy and planning issues facing the industry

Earlier sections of this Report, particularly section 2.2, have demonstrated an optimistic scenario for the industry, based on growth projections and the stable long-term planning context afforded by the post- 2005 Industry Assistance arrangements.

This optimistic scenario applies to all sectors and segments of the industry including the smaller segments such as bicycles, outdoor power equipment and recreational boating.

A number of issues, however, impact on ***planning for VET in the automotive industry***. The principal issues are:

²⁸ Causeway Consulting, op. cit. section 8, pages 47 to 57

- **The skills shortage issue**, particularly in the RS&R sector, discussed extensively in section 2.2 above. A wide range of fundamental issues need to be considered in this context. A number impact directly on the training sector. These issues include:
 - The structure of qualifications within the industry,
 - The duration of apprenticeships, and their content,
 - The attractiveness of apprenticeships and traineeships within the industry, and;
 - The appropriateness of pay structures and career paths in today's environment.
- Factors which will exacerbate the skills shortage issue, including the **ageing workforce** coupled with the **premature exit** of many skilled people from the workforce. Some responses to this issue are discussed in section 2.2 above, including the importance of **nationally consistent School Based New Apprenticeship programs**.
- **Rapid changes in technology** coupled with **comprehensive environmental requirements**. A closely related factor which the industry believes needs to be carefully considered by ANTA as part of national VET priorities is the issue of **maintaining and updating currency of skills**. This issue also needs to consider the **ability of providers** to accommodate both the challenge of maintaining skills currency and the infrastructure requirements associated with keeping facilities and equipment up to date. In this context, the industry is also concerned about the **ageing permanent workforce in public providers**.
- The industry seriously questions the **ability of providers to meet these challenges in the absence of widespread industry partnerships**. By this we mean, the need for industry and providers to develop effective partnership programs that may reduce the need for capital and other investments by providers to maintain currency. In this regard, the industry can point to some current examples.

Box 4.2 **Industry/Provider partnership arrangements**

A number of examples of effective industry/provider partnership arrangements apply in the industry. Some examples include:

- The industry's component donation program facilitated by the Federal Chamber of Automotive Industries and administered by ATA. Under this program the industry donates over \$4 million worth of vehicles and components annually to providers around Australia strictly for training purposes.
- A partnership of automotive spray-painting companies based around Townsville in Queensland operates a spray painting Skills Centre on one of the company sites. Barrier Reef TAFE conducts delivery of mostly on-the-job apprenticeship training using the Centre facilities.
- The multi-million dollar Fordstar program which is an inter-active satellite communications program between Ford and its dealers in Australia, New Zealand and Taiwan. Interactive training is provided through this facility to dealers in partnership with local providers.
- ATA has a close relationship with the National TAFE Automotive Network. The aims of this network include effective co-ordination of public provider automotive programs around the country.
- Cummins Diesel who deliver training on-site for internal and external employers as part of Certificate III Heavy Vehicle and Mobile Plant.

- The need to promote **greater take-up of formalised nationally accredited training** in the industry, particularly in areas like retail sales, spare parts and after-market sectors.
- This area is closely related to **increased customer service expectations** which are important throughout the industry. Simply put, customers expect the highest standards to be applied by industry people when dealing with a product which is normally a customer's second biggest investment after their place of residence. **Customer service standards** must be reflected in training packages.

5. Strategic Issues and Industry Skill Development and Formation

A substantial industry contribution to training and development...

The industry makes a substantial contribution to training and development in its own right. In the case of many enterprises this contribution significantly exceeds publicly funded contributions. The Productivity Commission highlighted this in Section 5.4 of its report.²⁹ This section of the Commission's report is also discussed in section 2.2 above. The Commission found: "...the development of the automotive industry's core skill base relies mainly on the initial skilling provided in educational institutions, followed by extensive on-the-job training. For example, according to Holden....over the last 10 years, vehicle producers have lifted spending on 'continual learning activities' to more than 4 per cent of total wages. While recent data comparing training levels across industries are very limited, it appears that automotive firms do spend considerably more on training than their counterparts in many other areas of manufacturing."³⁰ The Productivity Commission findings relate in this instance to the local vehicle manufacturers and component producers. Significant industry contributions may also be found in the RS&R sector.

Non-funded training in the automotive industry – a life-long learning experience...

The Productivity Commission found, as noted in the previous paragraph, that 'continual learning activities' are extensive through the industry. What are these 'continual learning activities' that go well beyond the 'initial skilling provided in educational institutions'? Some examples follow:

- "continual learning" is implicit in the parallel concept of "continuous improvement" which is an integral part of the production systems or "lean manufacturing" systems adopted in the global automotive industry. Lean manufacturing is a methodology aimed at reducing waste in the form of over production, lead-time, or product defects thus enabling a business to become more effective and competitive.³¹ Continual learning occurs within lean manufacturing through employee participation in quality, product and process improvements as a normal part of business
- continual learning may then expand into formal activities such as quality circle programs, six sigma implementation and similar improvement programs, together with employee involvement in the design of new model and process introductions.
- continual learning activities extend well beyond manufacturing areas into corporate areas. In the retail sector, dealer staff are constantly involved in learning activities associated with the introduction of new technology and new models – the need to maintain and update **skills currency**.

²⁹ Productivity Commission, op.cit., section 5.4 pages 71 to 76

³⁰ Productivity Commission, op.cit. page 71

³¹ An extensive discussion on the adoption of lean manufacturing based on the Toyota Production System by the local vehicle producers and the component producers is contained in the *Manufacturing Futures Review*, op.cit. pages 44 - 51

Box 5.1 *Continuous learning in the aftermarket sector*

The constant introduction of new technology and new models mean that the aftermarket sector must keep employee skills current. Some examples include:

- LubeMobile, a national company operating over 200 mobile service vans across Australia relies on its technicians providing prompt, efficient, quality service to customers at their home or work locations. LubeMobile must ensure that their technicians are up to date with new technologies at all times. Formal classroom activities are supplemented by modern technology including the electronic downloading of technical data from a central repository via PDA technology. Learning activities of this nature are entirely self-funded.
- The body construction of modern vehicles, including the use of materials such as light-weight steel, double-sided galvanised steel, magnesium, aluminium and plastics places particular demands on the skills of body repairers and spray painters. The maintenance of skills currency in this part of the industry is again a 'continual learning' experience requiring constant interface between this sector of the industry, and sources from manufacturers and importers.

Maintaining **skills currency** is a critical element for survival in an industry characterised by the rapid and ever-increasing introduction of new technology. This is almost entirely **self-funded** by the industry and represents a substantial amount of the Productivity Commission's observation about the extent of learning activities in the industry – "more than 4 percent of total wages."³² In section 8 of this National Review, ATA has proposed a project aimed at more precise quantification of the extent of non-funded learning activities throughout the industry.

The strategic implications of this extensive non-funded activity for the VET system include:

- An industry learning profile where the formal education system is essentially the provider of **entry-level skills**. The majority of this training is publicly funded; however, there are also many examples of self-funded or fee-for-service activities. On the other hand, the critical issue of **maintaining skills currency** is almost entirely self-funded. The dilemma that emerges for education authorities from this equation relates to the ability of providers to keep up to date with the rapid technological and other developments in the industry in order to maintain the currency of entry-level programs.
- It follows from this that considerable pressure will continue to be placed on **capital infrastructure** requirements for providers. It is suggested that ANTA and the VET system needs to give serious consideration to this issue, particularly as it relates to high technology/ capital intensive learning areas such as the automotive industry.
- Further developments of the type of **industry/provider partnerships** discussed in section 4.2 and illustrated in box 4.2 need to be seriously considered.
- Evidence from the various industry sectors suggests the issue of maintaining skills currency is a **particular problem for smaller businesses**. Small businesses face the dual problem of maintaining their internal capital and technical infrastructure together with the need to maintain the skills currency of their employees. Industry evidence points to the fact that there is **increasing rationalisation of small businesses** as the technical and capital demands of the modern industry are placing increasing pressure on small businesses and their ability to remain competitive.

³² Productivity Commission, op. cit. page 71.

Box 5.2 **Rationalisation pressures on small businesses**

The challenges faced by small businesses, particularly in the aftermarket sector also manifest in the extended **linkages** from the manufacturer/importer sector into the aftermarket area. Examples include:

- The purchase by Ford Motor Company of the Woods Crash Repair network
- The establishment of specialist body repair and spray painting facilities such as the BMW Bodyshop located in Port Melbourne, Victoria
- Growing numbers of accreditation programs by product manufacturers and insurance companies
- Examples of high-technology vehicles such as the current model Mercedes Benz CLK series. The integration of a variety of structural materials together with the body construction methodology has led to only one repairer (which is linked to the company) being authorised to carry out body and paint repairs for the whole of Australia. In this example, a vehicle damaged in Perth would be taken to the authorised repairer in Sydney for repairs, and the customer would be provided with a temporary replacement vehicle.

The occupation structure and skill demands on jobs are changing...

Considerable discussion on these issues is found in earlier sections of this Review. The key strategic implications that need to be addressed in training package reviews are:

- The **convergence of mechanical and electronic skills** in many areas of the industry in line with the changes in vehicle technology
- Advanced body construction techniques often incorporating a variety of materials together with high precision welding requirements are increasingly impacting the repair segment of the industry. This is leading to increased specialisation in this segment of the industry. In some instances, this has led to the establishment of dedicated workshops for particular products.
- Significantly greater **environmental responsibilities**
- The need for **'continual learning'** and reskilling
- The need for constant focus on **customer expectations** requiring **customer focus skills in all areas of the industry**. One particular implication for the industry is the need to place much greater focus on **traineeships**, particularly in retail and aftermarket areas, together with the need to incorporate **customer awareness training** within these **traineeships**.
- The inconsistent pattern of emerging **licensing requirements**

Skill shortages are a continuing problem, particularly in the RS&R sector...

Extensive discussion on these issues is contained in section 2.2 above; together with details of actions the industry is taking. ATA and industry representatives maintain a continuing dialogue on this subject with the relevant Government departments particularly DEST. Specific occupations with **Australia-wide skills shortages** are:

- Motor mechanics
- Panel beaters
- Spray painters
- Retail salespersons

Regional skills shortages are apparent in the following occupations in the manufacturing/ component supplier sector:

- CAD – CAM draftspeople
- Engineering tradespeople
- Electricians

These shortages particularly affect component manufacturers in Melbourne and Adelaide. Discussion on the issue of skill shortages together with industry plans is contained in section 2.2 above.

Research data on industry employment growth creates a misleading first impression:

The following tables from the Monash University Centre of Policy Studies suggest a longer-term decline of employment in the industry with the highest area of decline being in Automotive Tradespersons.

**Monash University Centre of Policy Studies
Employment Growth by ITAB – Automotive
2001/2002 - 2008/2009**

	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	% change	Av % ch
	"000 pers	%	%	%	%	%	%	%	%	%
Aust.	401.8	0.5	-0.51	-0.19	-1.16	0.19	1.26	-0.3	-0.29	-0.04
NSW	113.6	3.96	-1	-0.6	-1.63	-0.21	0.83	-0.72	0.02	0
Vic	121.8	-0.72	0.06	0.1	-1.17	0.07	1.07	-0.6	-1.68	-1.21
Qld.	78.75	-4.74	0.22	0.69	0.16	1.64	2.78	1.27	3.5	0.43
SA	35.33	5.98	-2.81	-1.66	-3.06	-1.95	-0.93	-2.63	-9.45	-1.23
WA	37.54	1.63	-0.1	0.02	-0.47	0.82	1.94	0.52	5.4	0.6
Tas	7.7	-11.25	1.53	-0.85	-1.49	0.19	1.57	0	-10.01	-1.31
NT	3.2	7.55	-1.03	-0.66	-0.51	0.18	1.13	-0.31	6.07	0.74
ACT	3.895	0.43	-2.44	-0.47	-1.87	0.62	1.94	0.59	0	0

Employment Growth - Automotive Tradespersons

Aust	140.8	-1.42	-1.53	-1.25	-1.85	-0.39	0.71	-0.76	-6.66	-0.86
NSW	45.3	-0.55	-1.52	-1.54	-2.23	-0.77	0.32	-1.15	-7.9	-1.02
Vic	37.8	-4.57	-1.35	-1.1	-1.74	-0.24	0.87	-0.63	-8.71	-1.13
Qld	27.16	-4.54	-0.88	-0.19	-0.69	0.8	1.9	0.42	-2.43	-0.31
SA	9.72	10.14	-3.96	-3.4	-4	-2.72	-1.68	-3.2	-11.84	-1.56
WA	14.64	0.13	-0.87	-0.67	-1.18	0.24	1.27	-0.17	-1.02	-0.13
Tas	2.835	-0.35	-2.43	-2.59	-3.26	-1.79	-0.53	-2.06	-13.81	-1.84
NT	1.668	5.07	-2.58	-1.22	-1.71	-0.82	0.16	-1.19	-3.25	-0.41
ACT	1.605	8.43	-3.46	-2.52	-3.15	-1.59	-0.48	-1.84	-6.32	-0.81

At first instance, these figures appear to contradict the points made about skills shortages throughout this VET Review. The following analysis qualifies the effect of the figures.

Some factors will contribute to an overall decline in employment in the longer-term...

These factors include:

- Product technical development which is leading to changes such as greater intervals between required services for motor vehicles. Service intervals have stretched from every 5,000 kilometres to 10,000, 15,000 or, in some instances 20,000 kilometres. Accompanying this are developments such as longer life oils extending oil change intervals up to 150,000 kilometres.
- Better product reliability leading to reduced breakdown servicing.
- Increasing modularity of replacement parts where many components are replaced by a new or reconditioned module rather than requiring disassembly and repair on the spot.
- Rationalisation and concentration of dealer outlets enabling greater productivity from reduced numbers of dealer staff in retail and other occupations

The industry is concerned, however, that the net position still suggests ongoing skill shortages due to the following factors:

- The overall growth in total sales as demonstrated by the growth projections in Table 2.2 above which will offset some of the reduced demand created by increased vehicle service intervals and other technical developments
- The low retention rates in the RS&R sector detailed in section 2.2 above. As mentioned above, retention issues occur with:
 - people exiting trades a few years after qualification; and
 - older employees failing to maintain skills currency and being unable to handle new technical requirements
 - high turnover of retail salespeople exacerbated by factors such as seven day a week new and used vehicle selling in Sydney
- General demographic factors demonstrated in a steadily ageing workforce.

Greater emphasis needs to be placed on improving opportunities in the industry for people traditionally disadvantaged in employment

Indigenous people

- Considerable work was undertaken in past years in the development of programs and learning resources for Certificate II programs to assist remote communities. Implementation of these programs fell away, but is now being revived on a limited basis. Examples include programs at Oenpelli, Maningrida and Weipa.

Women

- The industry is conscious that its traditional image has not attracted women. Specific initiatives to support the employment of women in the industry and the accompanying training opportunities include:
 - Programs targeting female New Apprentices in traditional trade areas
 - Comprehensive programs encouraging female employment and training in companies like Autoliv
 - The establishment by Holden of industry-leading maternity leave provisions
 - The steady introduction of family-friendly policies by many leading employers in the industry

- Individual companies have individual approaches, such as Ford's support of female engineering students

Disabled people

While delivery mechanisms such as online delivery and electronics-based materials such as CD-Rom/video will facilitate access for people with disabilities, ATA has not looked specifically at catering for this group. The Access & Equity consultant attached to the review steering committee will assist in addressing the issues within the revised training packages.

The four vehicle manufacturers have appropriate mechanisms in place to cater for people with disabilities as part of their equal opportunity philosophy.

Employees whose primary language is not English

Workplace English Language and Literacy (WELL)

Using WELL funding ATA has developed a multi-media resource to enable the improvement of literacy skills of people wishing to enter the Automotive industry, or for those currently employed wishing to undertake further training to gain industry recognised qualifications.

The CD ROM based product has introduced a variety of workplace reference materials including:

- manufacturers' manuals;
- machinery and equipment operating manuals;
- individual enterprise records and documents; and
- relevant service contracts.

National Units of competence relating to the project are:

- AUR 51356A Read in the Workplace;
- AUR 51179A Write Routine Texts in the Workplace
- AUR 70314A Contribute to Workplace Communication.

The project was completed in September 2003.

6. National Products and Services

Training Packages Take-up

Whilst overall employment in the industry will be fairly static, it is anticipated that the take-up of automotive training packages will increase. Tables 2.3, 2.4 & 2.5 illustrate increasing trends in exports, vehicle production & sales and New Apprenticeships indicating an increased training need. The anticipated increase in take-up will also be reflected through:

- the recognition of skills, assessment and certification of existing workers, particularly targeting the areas of vehicle sales, Aftermarket retail & warehousing and spare parts;
- the recently reviewed Retail, Service & Repair and Manufacturing training packages providing for a range of qualifications with more attractive and better pathways into and throughout the industry. This will include recognised training in areas where non-funded training previously occurred;
- increased demand for Certificate IV and V training appropriate for areas of advanced technology; and
- school-based New Apprenticeships providing a pathway into the industry and supported by the availability of Federal Government financial incentives.

Training Packages – Status

- The current training packages are:
 - AUR99 Retail, Service and Repair (including Automotive Aftermarket)
 - AUM00 Manufacturing Sector – Passenger Motor Vehicle (including Bus, Truck and Trailer)

The review of the AUR99 Retail, Service and Repair training package has been completed, and the endorsement process will be finalised by the end of 2004. while the Phase Two redevelopment of the Manufacturing Training Package is yet to commence.

- The following additions to the training package were endorsed in May 2003:
 - AUR99 Retail, Service and Repair – Motorsport
 - AUR99 Retail, Service and Repair – Diploma of Automotive (Technology)

Resource Materials – Status

Overall, it is considered that the existing range of teaching and learning support materials currently available to Registered Training Organisations (RTOs) is generally inadequate.

Rapid technology advances and the expansion into more specialised occupational areas within the industry have put greater pressure on the appropriateness of existing resources. Training delivery by the vehicle manufacturers and importers, including their own internal training activities, are well supported by the latest training materials. However, this is not the situation across the broader range of RTOs.

There are examples of high quality materials being developed outside of the training activities of the manufacturers and importers; however they cover a narrow range across a large number of RTOs, particularly TAFE Colleges. The deficiency is partly addressed through the Component Distribution Program administered by ATA involving industry donations of over \$4 million worth of vehicles and components annually to providers around Australia for training purposes. This program significantly assists RTOs, particularly TAFE Colleges, to upgrade their resources and support materials.

Some of the sub-sectors of the industry, i.e. bicycles, marine, outdoor power equipment, bus and truck & trailer have some adequate resources but are limited in coverage across RTOs. There is an overall need to develop and share further resources in the areas of greatest need; however a lack of available funding is preventing this development.

7. Methodology used to Develop and Evidence this Document

The following approaches were taken in developing and validating the document –

1. Aligning the roles and strategic context of ANTA's VET Review to ATA's existing Strategic Plan.
2. Research
 - use of library and other resources available at Automotive Training Australia Limited, in particular:
 - Review of Automotive Assistance, Productivity Commission Report No.25, August 2002
 - National Retail Motor Industry Task Force, Final Report, National Industry Skills Initiative, Commonwealth Government, November 2002
 - Australian Automotive Intelligence Report, 2004 Year Book and regular reports published in 2004
 - Federal Chamber of Automotive Industries VFACTS data
 - VACC Segmentation Report
 - Monash University Centre of Policy Studies - Employment Growth by ITAB – Automotive 2001/2002 - 2008/2009
 - search of the Internet particularly the following sites –
 - Australian National Training Authority;
 - Department of Education and Youth Affairs;
 - National Industry Skills Initiative;
 - National Centre for Vocational Education Research
 - statistical data from
 - Australian Bureau of Statistics
 - NCVER
 - surveys to national enterprises, Registered Training Organisations and New Apprenticeships Centres (see attachment A for survey instrument)
 - Government Departments
 - Department of Innovation & Regional Development – Automotive Strategic audit of Manufacturing
 - Department of Industry, Tourism & Resources – especially Automotive Action Plan
 - Department of Employment & Workplace Relations

3. Consultation and Validation

3.1 Consultation with key industry stakeholders including industry associations, State/Territory ITABs and ATA's Advisory Boards.

3.1.2 Consultation and data gathering

Face-to-face interviews were conducted with:

- personnel from all vehicle manufacturers, AMWU officers at head office and company level, 23 first-tier suppliers (CEO's, HR Managers and Directors of Manufacturing)
- executive officers and Chairs of State & Territory ITABs, MTAA Federation Members
- All ATA Board Members
- MTAA Executive Board

Forum was held and feedback gathered from the National TAFE Automotive Network.

Three forums conducted with Victoria TAFE Heads of Automotive Departments.

3.2 Validation

Draft report initiated and feedback gathered from:

- FCAI Executive together with 23 members of FCAI Service Managers Panel
- State & Territory ITABs
- RS&R Advisory Group
- Manufacturer's Advisory Group
- ATA Board direction
- MTAA Federation members
- National TAFE Automotive Network
- Senior STA officers responsible for automotive
- Victorian State Department for Innovation and Regional Development
- Members of FAPM Southern Region

4. Participation of industry consultant

5. Endorsement by the ATA Board

8. Smaller industry sectors

The majority of the discussion in the National Industry VET Review has concentrated on the passenger and commercial vehicle sectors and the segments of the industry linked to these sectors, including component manufacturers, dealers and the aftermarket sector.

ATA is conscious of the needs of the smaller industry segments, namely:

- Outdoor power equipment
- Recreational boating
- Bicycles

In many ways, these segments represent a microcosm of the larger industry segments, and many similar issues face these smaller industry sectors, including:

- Rapid changes in technology
- Segment growth
- Skills shortages

This may be illustrated by the following points relevant to the bicycle industry. Sales of bicycles have grown rapidly in recent years, and now run at over 800,000 per annum, a similar level to the sale of new vehicles. Growth is forecast to continue. The technology being incorporated into new bicycles is amazing, including 24 speed gear sets, suspension systems, lightweight frames and use of specialised materials including aluminium and carbon. Many in the higher price brackets require specialised servicing and tools to carry out the servicing.

ATA is conscious of the needs of these smaller industry segments, and continues to incorporate industry requirements into Training Package development.

The industry makes a substantial contribution to training and development in its own right. In the case of many enterprises this contribution significantly exceeds publicly funded contributions. The Productivity Commission highlighted this in Section 5.4 of its report.³³ This section of the Commission's report is also discussed in section 2.2 above. The Commission found: "...the development of the automotive industry's core skill base relies mainly on the initial skilling provided in educational institutions, followed by extensive on-the-job training. For example, according to Holden, over the last 10 years, vehicle producers have lifted spending on 'continual learning activities' to more than 4 per cent of total wages. While recent data comparing training levels across industries are very limited, it appears that automotive firms do spend considerably more on training than their counterparts in many other areas of manufacturing."³⁴

³³ Productivity Commission, op.cit., section 5.4 pages 71 to 76

³⁴ Productivity Commission, op.cit. page 71