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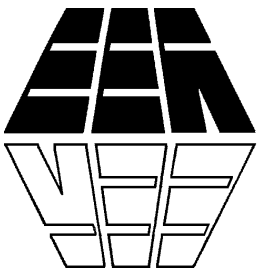
AUSTRALIAN INDUSTRY GROUP
&
ENGINEERING EMPLOYERS ASSOCIATION OF SOUTH AUSTRALIA
SUBMISSION
To the
SENATE EMPLOYMENT, WORKPLACE RELATIONS AND EDUCATION REFERENCES COMMITTEE INQUIRY
Into
CURRENT AND FUTURE SKILL NEEDS

AUSTRALIAN INDUSTRY
GROUP



ENGINEERING EMPLOYERS ASSOCIATION
SOUTH AUSTRALIA

Employment, Workplace Relations and Education References Committee Inquiry Terms of Reference:

1. Areas of skills shortage and labour demand in different areas and locations, with particular emphasis on projecting future skills requirements

2. The effectiveness of current Commonwealth, State and Territory education, education and training and employment policies, and programs and mechanisms for meeting current and future skills needs, and any recommended improvements

3. The effectiveness of industry strategies to meet current and emerging skill needs

4. The performance and capacity of Job Network to march skill availability with labour market needs on a regional basis and the need for improvements

5. Strategies to anticipate the vocational education and education and training needs flowing from industry restructuring and redundancies, and any recommended improvements.

6. Consultation arrangements with industry, unions and the community on labour-market trends and skills demand in particular, and any recommended appropriate changes.

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Introduction

The Australian Industry Group (Ai Group) is Australia's largest, multi sector employer association with over 10,000 member companies throughout the country. The Ai Group draws members from all industry sectors with the majority of its membership in the manufacturing, construction, engineering and service industries. These member companies produce more than $100 billion in output; they employ over 1 million people and produce export worth some $25 billion.

The Ai Group has a long history of leadership in the field of vocational education and training in industry. It understands that the future of Australian industry in the global economy is dependent on the development of a highly skilled workforce and it continually promotes the importance of education and training to its members

The Ai Group directly employs some 250 apprentices and trainees through its Group Training Company in Victoria and NSW. In addition maintains a network of Group Training Companies throughout all mainland States, which collectively employs over 2,300 apprentices and trainees. The Ai Group is a Registered Training Organisation for the delivery of nationally accredited courses and through a contract with the Federal Government; it employs six Education and Training Advisers under the Industry Training Strategies Program to advise members on national education and training issues. Ai Group also has a strategic alliance with the Enterprise and Career Education Foundation to facilitate the transition from school to work in manufacturing.

At both national and State level, the Ai Group sits on numerous committees and advisory bodies and is a regular contributor to the debate on the national education and training agenda through its lobbying of Governments and its submissions to public forums.

The Engineering Employers Association, South Australia services approximately 450 member companies in the State's metals and engineering manufacturing sector, including automotive component, toolmaking, foundry, plastics, whitegoods, electronics, defence and metal products sectors. The Association provides a range of advice in the areas of industrial

relations, human resource management, environment, industry development, education, training and industry performance, and is affiliated nationally with the Australian Industry Group

Recommendations

The Commonwealth in conjunction with the States should develop a truly National labour market forecasting system. The Commonwealth could delegate this responsibility to the Australian National Education and Training Authority.

This national system should have the capacity to predict future skill needs and identify skill gaps.

Governments at all levels need to recognise the skill formation needs of the future and provide adequate resources and incentives for education and training authorities to respond to these future needs.

States and Territory Governments should provide adequate funding for education and training of existing workers, including both technical and non-technical skills.

Funding policies should have in mind future skill needs and not just react to short-term cyclical skill shortages.

The Government should explore ways to more effectively link employer incentives (particularly for existing workers) to industries and occupations where skills are most in demand.

Australia's labour market forecasting system should be incorporated into State education system's forward planning procedures. Commonwealth resourcing of VET in schools should recognise the strategic skill formation needs of industry when allocating resources to occupationally specific VET in schools programs.

There needs to be more options for VET in Schools programs outside of education and training packages and the Australian Qualifications Framework. There should be provision for learning and assessment against agreed employability skills that can also articulate into the Australian Qualifications Framework, provide for a tertiary ranking where appropriate, and/or an entry point to employment.

An industry led system should have as its primary objective, measures to secure the future skill supply of industry. In doing so, it should give equal to the training of existing employees and new entrants. Current funding arrangements are biased towards new entrants and this issue must be addressed if skill shortages are to be resolved.

Educators need to recognise the constantly changing skill requirements of industry. What may be relevant to an enterprise skill needs today may have no bearing on that same enterprise's skill needs in five years time.

ANTA training funds should only be provide to schools that can demonstrate a significant commitment to integrating VET in schools into mainstream schooling

There needs to be a robust debate about VET in Schools to ensure that programs are relevant to industry needs now and into the future. Employers need to have faith in the learning and assessment systems used by schools, including a more overt method of identifying achievement against generic and underpinning skills and knowledge

Currency of industry skills and knowledge are critical for a school delivering a training package qualification. Professional development associated with VET should attract at least the same opportunities as other professional development activities

Labour market forecasting systems should be incorporated into State education systems forward planning procedures. Commonwealth resourcing of VET in Schools should recognise the strategic skill formation needs of industry when allocating resources to occupationally specific VET in schools programs.

Enterprise and Career Education Foundation (ECEF) funding to States for school to work coordinators should require reporting against strategic skill formation activity as a performance measure.

The OECD research into career delivery in Australia highlights the disparity of resources devoted to careers counselling and subsequently VET in schools programs. State differences in the provision of such information should be addressed so as to achieve minimum mandatory levels of career and VET information and counseling.

The image of the manufacturing sector cannot be left to the perceptions of those who are not involved in it. Those who deliver VET in schools programs need to experience first hand the level of technology, automation, safety, skill formation and opportunity which now abounds in that sector. These experiences could take many forms of involvement in the workplace, with the resulting experience being tailored to accommodate the needs of VET in schools, students and the wider community.

Registration procedures for schools should be the responsibility of the State Training Authority and not delegated to other agencies

Teachers who deliver VET in Schools should be given the appropriate professional development and relevant industry experience before and during the time they are required to teach VET courses

Where training package programs are used, particularly in school-based apprenticeship/traineeships then the issue of curriculum and school timetabling needs to be addressed. Competency acquisition in some programs requires significant periods of equipment use in a workplace setting.

Funding and reporting arrangements for RTOs should recognise the importance of skill formation in manufacturing for middle and higher level occupations and provide incentives for strategic skill formation activities.

AiGroup and EEASA do not support scarce resources being used to duplicate training infrastructure where creative partnering can provide the necessary training opportunities. This is particularly the case where schools seek to duplicate 'workshops' that are available through TAFE and are often underutilised. The issue of third party access to publicly funded infrastructure for training purposes needs further investigation.

The potential to involve local councils in a coordinating role should be investigated. Local councils may be able to be the 'catalyst' in any regional partnering arrangements.

The restructured industry advisory arrangements should incorporate intelligence gained from State advisory arrangements. Any industry based skill council should include logical groupings of industry sectors and not disaggregate sectors across skill councils.

Skill Shortages

Ai Group's work on skill shortages has identified several sectors of Australian industry, including manufacturing that have, and currently still experience severe skills shortages. Unless strategies are implemented to overcome these skill shortages the impact may have severe and lasting consequences for Australian enterprises and ultimately Australian society.

AiGroup has undertaken a range of national skill shortage projects with support from the commonwealth through the National Industry Skills Initiative (NISI). These projects have been in the industry sectors of:

- Engineering
- Aerospace
- Emerging Technologies- Photonics and Nano Technology
- And is currently preparing an action plan for the Marine industry

The reports of these projects are attached to this submission.

These skill shortage projects have resulted in a set of action plans with objectives and supporting strategies, which will assist in resolving skill shortages. They require a commitment from industry, State and Commonwealth governments, schools and parents working together within a framework of policy and legislation that facilitates vocational education and training as an attractive and viable entry to work and career. There is much work to be done for this to happen and this submission identifies some of the issues that require attention.

Skills shortages are found in both metropolitan and regional areas. A recent survey by the Australian Industry Group identified skill shortages as a major issue facing regional businesses.

Over half of the businesses surveyed currently face skill shortages. Regional businesses in NSW (60% currently face skill shortages) are most acutely impacted followed by businesses in regional Victoria (48%) and Queensland (41%).

Recently released NCVER statistics tabled on page 12 show a decline in commencement numbers in mechanical, fabrication and automotive apprenticeships from 1995-2002 and only a marginal increase in electrical commencements across the same period. This overall decline is not keeping pace with industry requirements because of normal wastage and industry expansion.

The non-completion rates for apprentices are also higher than desirable at around 20-30% over the same period.

What is of most concern is the significant increase in non-trade areas of manufacturing, specifically in the lower AQF levels. While there is obviously some need by industry for 'below trade' skills the current training package qualifications (based on industrial awards that necessarily lag behind the changing needs of industry) do not facilitate access to the higher-level qualifications. Often skills acquired in these lower level qualifications are not recognised for credit transfer or advanced standing in higher trade focussed programs.

In short there appears to be a disproportionate level of activity within the lower qualifications, when compared to skill shortage areas and the rhetoric of seamless pathways does not translate into the necessary movement into the higher value skill rich areas of shortage.

National Centre for Vocational Education Research

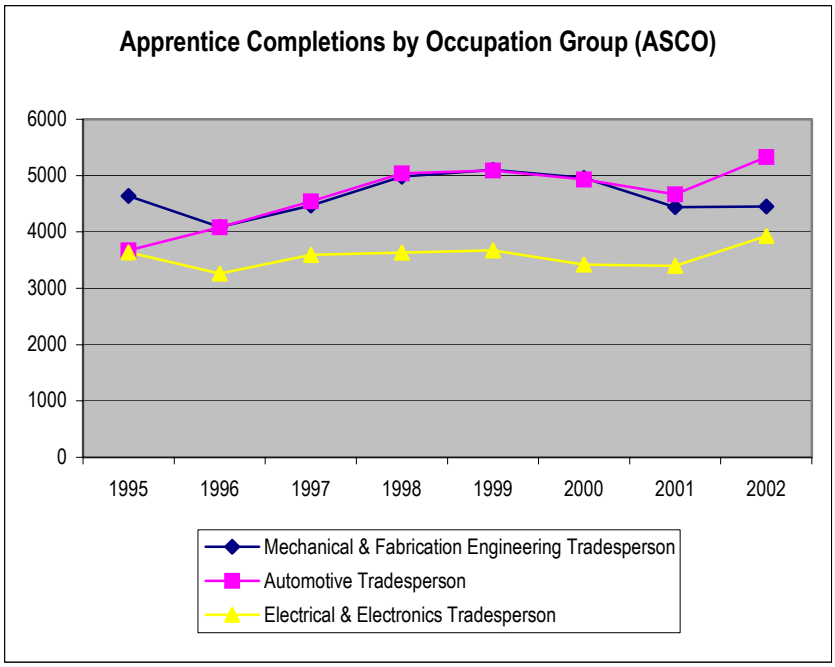
Apprentice and Trainee Commencements and Completions 12 months to December 1995 to 2002 by Occupation Group (ASCO), Australia
Based on December 2002 estimates

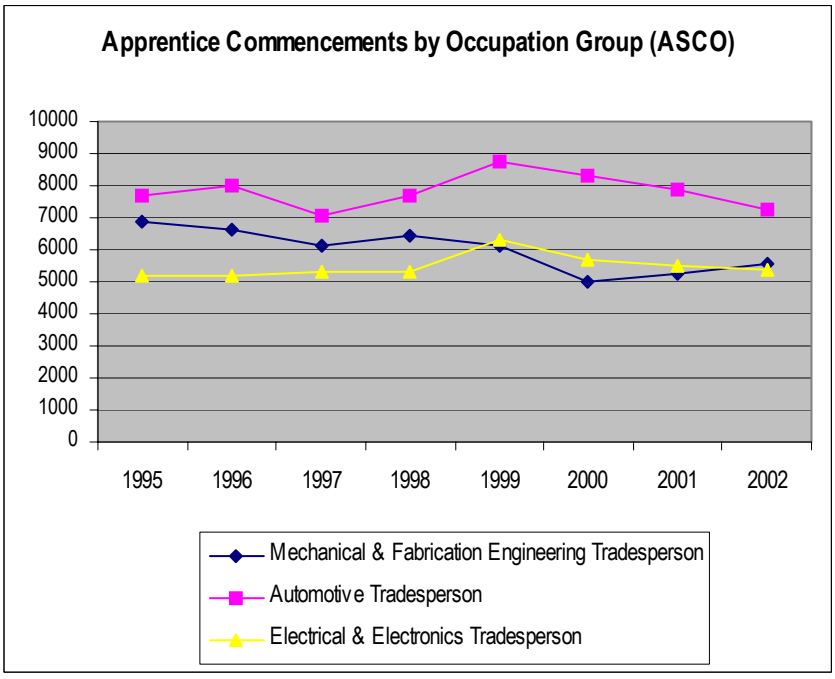
Commencements 12 months to December	1995	1996	1997	1998	1999	2000	2001	2002
41 Mechanical and Fabrication Engineering Tradespersons	6,880	6,630	6,100	6,430	6,100	4,980	5,230	5,590
42 Automotive Tradespersons	7,700	8,010	7,060	7,660	8,750	8,340	7,880	7,250
43 Electrical and Electronics Tradespersons	5,160	5,180	5,320	5,330	6,290	5,680	5,480	5,380
Total	19,730	19,820	18,470	19,420	21,140	18,990	18,590	18,210

Completions 12 months to December	1995	1996	1997	1998	1999	2000	2001	2002
41 Mechanical and Fabrication Engineering Tradespersons	4,640	4,090	4,470	4,980	5,100	4,960	4,440	4,450
42 Automotive Tradespersons	3,670	4,080	4,540	5,040	5,090	4,930	4,670	5,330
43 Electrical and Electronics Tradespersons	3,640	3,260	3,590	3,630	3,670	3,420	3,400	3,930
Total	11,950	11,440	12,600	13,640	13,860	13,300	12,510	13,710

Ref Source: NCVER Australian Apprentice and Trainee Statistics

These figures as shown in graphical form below, demonstrate that there has been a decline in occupational groupings 41 and 42 over the period 1995-2002.





The DEWRSB skill shortage listings below indicate skill shortages across all manufacturing sectors.

Skill Shortage List – Trades 2002

ASCO	OCCUPATION	AUST	NSW	VIC	QLD	SA	WA	TAS	NT
ENGINEERING TRADES									
4112-11	Metal Fitter*	N	D	S*		S	S*	S	S
4112-13	Metal Machinist*	N	R*	S*	S	S	S		S
4113-11	Toolmaker*	N	S*	S*	S	S	D		
4122-11	Metal Fabricator	N	S*	S		D	S		R
4122-15	Welder	N	S	S		S	S		R
4124-11	Sheetmetal Worker*	N	S*	S*	S	S		S	S
VEHICLE TRADES									
4211-11	Motor Mechanic*	N	S*	S	S	S	R*		S
4212-11	Auto Electrician	N	S	S	S	S	S	S	S
4213-11	Panel Beater	N	S	S	S	S		S	S
4214-11	Vehicle Painter	N	S	S	S	D		S	R
ELECTRICAL/ELECTRONICS									
4311-11,13	Electrician*	N	S*	R	S*	S*		R-D	S
4312-11	Refrigeration & Air-conditioning Mechanic*	N	S*	S	S	D		S	S
4314, 4316	Electronic Instrument Trade*	R*						R-D	
4315-11	Electronic Equipment Trades*		S	D*				R-D	
CONSTRUCTION TRADES[1]									
4411-11	Carpenter & Joiner			R-D	S	S			D
4413-11	Roof Slater & Tiler			S					
4414-11	Bricklayer	N	M	S	S	M	S	S	S
4415-11	Soldier Plasterer			S					
4421-11	Painter & Decorator				S				
4431-11	Plumber	N	M*	D*		S	S*	S	S
FOOD TRADES									
3322	Chef*	N	S	S	S*		S*	S*	S
4513-11	Cook	N	S	S	R				S
4512-13	Pastry cook*	N	S	S	S*		S		S
PRINTING TRADES									
4911-11	Graphic Pre-Press Tradesperson				R				
4912	Printing Machinist		M	R	R	S			
4913-11	Binder & Finisher			S	R				
WOOD TRADES									
4921-11	Wood Machinist		S						
4922-11	Cabinetmaker*	N	S*	S	S	S	S	S	R
OTHER TRADES									
4931-11	Hairdresser	N	S	S	S	S	S	S	R
4942-11	Furniture Upholsterer*	N	S*	S	S	S		S	

[1] = *Not all occupations assessed in all States*
R = *Shortage in Regional areas*
R-D = *Recruitment difficulties in regional areas*
* = *See comments on specialisations*
N = *National shortage*
D = *Recruitment difficulties*
S = *State-wide shortage*
M = *Shortage in Metropolitan areas*

Metal Fitter:

VIC: shortage especially for cnc/cad/cam; pneumatics; hydraulics; grinding; centre lathe turning; continuous process; TIG, MIG, OXY welding; sheetmetal machining; and reading drawings.

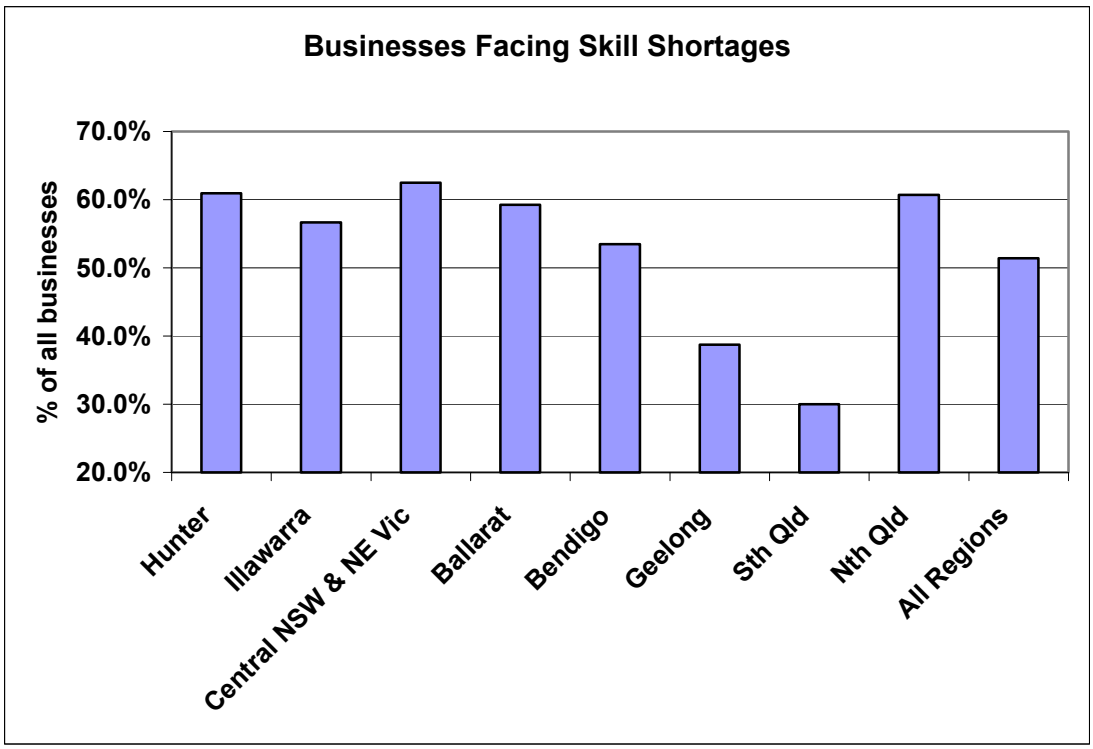
WA: shortages are particularly for diesel and mobile plant mechanics.

Metal Machinist:

NSW: shortage for specialisations in lathe and milling, grinding, boring and honing. VIC: shortage especially for cnc/cad/cam, reading drawings and working to fine tolerances, as well as sound experience in machining, milling, grinding and toolmaking.

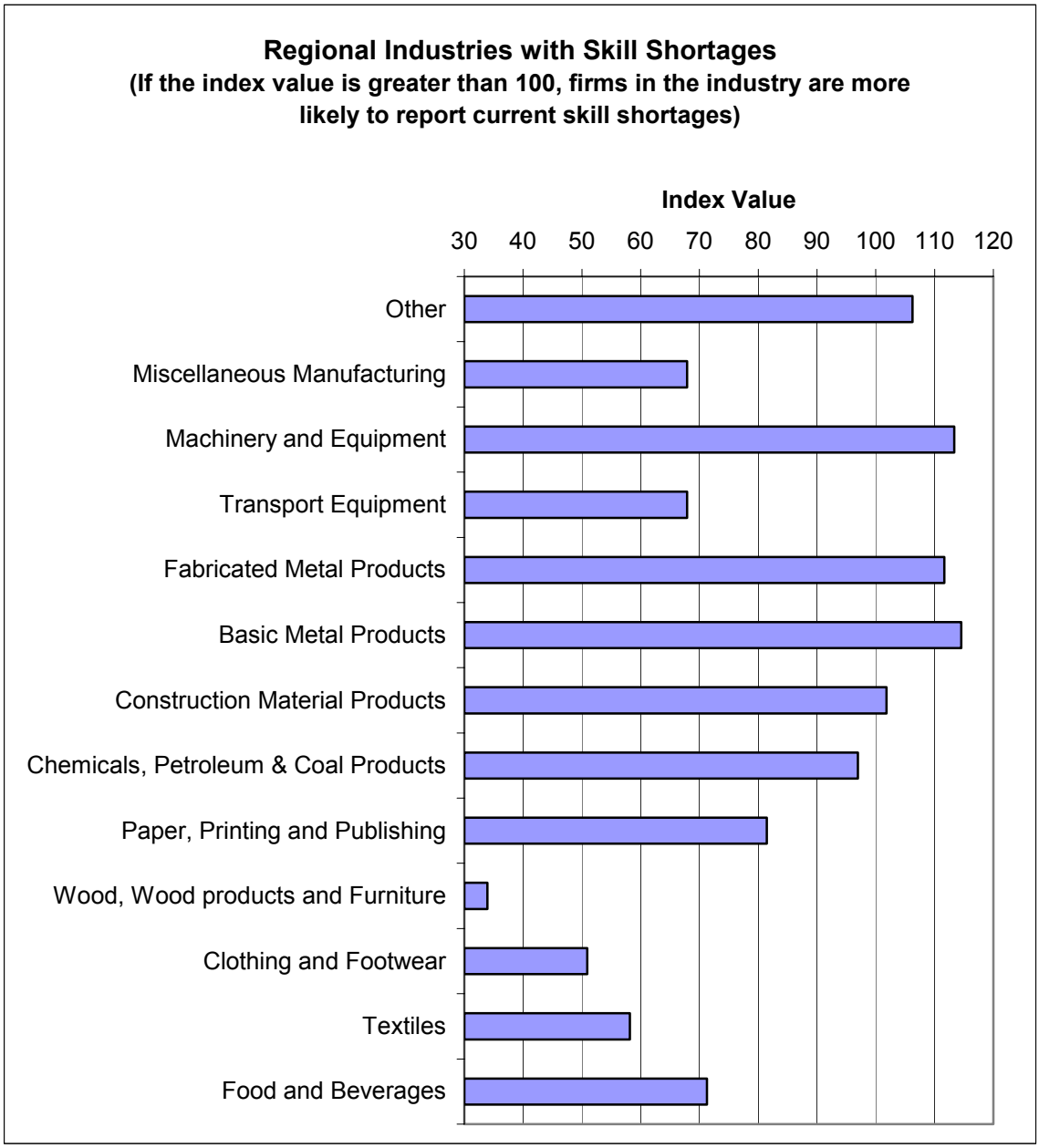
Regional Skill Shortages

The pattern between the regions is far from even as shown in the chart below. Regions in Queensland show the clearest disparity with the regions with the highest and the lowest percentage of businesses facing skill shortages coming from the Sunshine State.



Regional businesses of all sizes appear equally likely to face skill shortages with no clear relationship emerging between the size of businesses facing skill shortages and the sample as a whole.

While skill shortages are common to businesses manufacturers regardless of their size, skill shortages are much more evident in particular industries. This is borne out in the chart below.[1]



The chart indicates that businesses in the Basic Metal Products, Machinery and Equipment, Fabricated Metal Products and, to a lesser extent, "Other" and Construction Material Products sectors are more heavily represented among firms reporting current skill shortages than in the sample as a whole. These are identified as the high skill shortage industries.

**Source – Australian Industry Group Regional Report 2003*

The skill shortage index used in the chart records the degree to which the percentage of industry members reporting skill shortages deviates from their representation in the total sample. If the index number is 100 the proportion of industry members experiencing a skill shortage is equal to the proportion of businesses of that industry in the total sample. If the industry index number is 50 (120), its members are 50% less (20% more) likely to report skill shortages relative to their representation in the sample as a whole.

Changing Needs of Industry

The skills sets of the workforce are also changing significantly. These skills sets are comprised of a mix of cognitive abilities, technical competencies and behavioural capabilities.

More than ever, skill sets are crossing the tradition industrial boundaries between technical, information technology, business and marketing.

The increased use of technology and the impact of globalisation have changed the nature of skills required for work. Generic skills are becoming critical to companies. Enterprises are focusing on adaptation, cost reduction, increase productivity and improvements in quality through new technology and work practices. Increasingly, these workplace changes are underpinned by sophisticated generic skills and understandings.

As a result of these developments, many Australian enterprises have re-organised their business practices. Restructuring has often resulted in the wider use of casual and part time employees and has seen major growth in the labour hire industry. There is a danger, however, those employees in these categories will miss out on vocational education and training, which is provided to permanent staff. Their exclusion from structured skill formation activities would be both costly and wasteful.

Two most recent reports from industry, namely the AiGroup Training to Compete and the BCA Employability Skills for Australian Industry highlight the importance which industry places on generic and interpersonal skills in its employees.

The challenge is to deliver the cognitive aptitudes and employability skills to the potential employees of enterprises and to stimulate the next generation of research leaders and enterprise owners.

In addition, Australia's ageing population is a major factor in planning skills development in the future. The need to up skill and retrain existing employees will need to be considered against the demands for VET spending on entry level programmes. The expectation that employees will change career directions far more then they have done in the past and should adopt a culture of life-long-learning is another challenge, which must be met.

The Ai Group and EEASA believes that Commonwealth, State and Local governments should provide employment and training opportunities for people of all ages rather than short-term traineeships and apprenticeships for young people.

A truly 'industry-led' system would have as its primary objective, one, which supports the future skill supply for industry. In doing so, it would give priority to the education and training for exiting employees and for new entrants. Current funding arrangements are biased towards new entrants and this issue must be addressed if skill shortages are resolved.

The stakeholders in education and training must also be prepared for the fluctuations resulting from operating in a global market/environment.

For industry, it is imperative that significant focus be given to the school system if the current issues such as skill shortages and image problems are to be addressed.

Ai Group and EEASA supports and industry led vocational education and education and training sector based on relevant industry skill requirements, incorporating underpinning skills for the future acquisition of skill to achieve a balance of enterprise and transferable skill sets.

Emerging Skills

Vocational skills and knowledge development must recognise the structural changes and differing work patterns, which are emerging and should not be confined to the current labour market requirements. There needs to be a system that prepares young people for work through the implementation of learning programs that recognise and provide underpinning skills and knowledge required for the world of work. At the same time, the system must not lose sight of the need to improve the skill levels of those already in the workforce.

Educators need to recognise the constantly changing skill requirements of industry. What may be relevant to an enterprise's skill needs today may have no bearing on that same enterprise's skill needs in five years time.

Industry and governments need to recognise the importance of continuing to reform education and training to ensure the skill needs on industry are accommodated in an effective and efficient manner.

The Ai Group's report "*Training to Compete"* was a catalyst for the development of the National Industry Skills Initiative which has involved industry and Government working together in targeted industry sectors to address skill shortages. Industry leaders have taken ownership of the issue. They have formed working groups to identify priorities and strategies to overcome shortages and have overseen the implementation of their plans.

In the engineering sector, this has resulted in the development of a wide range of career information including the ZOOM interactive CD and associated products, which were distributed to all secondary schools in Australia.

Industry has continued to drive the actions recommended in the reports published by the various working groups.

It is clear however, that all parties need to work together on this problem. Major issues still need to be resolved. Some examples are:

- How to train existing workers in emerging technologies when skill sets may not be available within existing teacher resources.

- What foundation skills are required for existing workers to embrace new technology skill sets

- How can we train when we cannot adequately describe the emerging jobs associated with these new skill set

Emerging technology skill sets require a combination of skills that are difficult to access in the required combinations within existing Training Packages

Industry Advisory Arrangements and Training Packages/Programs

Industry advice to Government needs to be strategic. It should also incorporate quality advice on the actual skill needs of industry at the enterprise, regional, State and national levels, in the short and medium term. Advice needs to recognise and reflect the changing nature of work practices as a consequence of technology advances that are global.

A key requirement for industry advice to Government includes:

Increased sophistication in labour market forecasting to more accurately reflect demand and to enable a proactive approach to resolving skill shortages.

The Commonwealth, in conjunction with the States, should develop a national labour market forecasting system. The Commonwealth could delegate this responsibility to the Australian National Training Authority.

Industry advice should encompass all levels of vocational education in training, from school through to higher education.

Funding emphasis should be directed toward skill formation, i.e. an emphasis on the skill requirements of industry, at entry level and for existing workers.

Industry advisory structures should not be based around outdated award structures and trade union membership eligibility rules, but should reflect changing industry occupational needs. There are significant shifts in the way work is organised and the knowledge and skill requirements of the modern workplace.

The Commonwealth and States should review their policy frameworks and infrastructure to ensure industry advice is accommodated from a variety of sources and across all education and training sectors.

There should be an efficient and effective method of advising Government of industry's training requirements. The reviews of Commonwealth and State advisory arrangements should be harmonised to ensure a consistent approach, which does not duplicate effort. State and territory legislature should be amended to ensure that advisory arrangements are maintained and reflect the requirements therein.

Advisory structures should reflect the needs of a representative cross-section of industry, involving credible industry representatives. Appropriate resources need to be available for this function to ensure advisory processes are interactive and dynamic.

The current ITAB structure and public VET provider system does not facilitate the development of a cross industry education and training framework.

AiGroup and EEASA supports the ANTA review of industry advisory arrangements, however the details of skill council structures and how cross industry training package access will be facilitated remains unclear.

Duplication of activities should be avoided and the effort between the Commonwealth and State advisory arrangements should be complimentary and supportive. Strategic State training plans should inform the National training plan through the use of common methodologies and agreed common jurisdictions.

Training Packages and Support Materials:

Training package development, maintenance and production should remain the responsibility of the Commonwealth and be adequately funded as a specialist activity. Training packages, training programs and funding need to accommodate the shifts in skill formation from traditional occupational requirements to skill mixes across several traditional occupational areas. It is disappointing to note the limited inclusion of customisation policy within training packages aimed at addressing this issue.

The Training Package approval process requires review to ensure the following outcomes:

- Shorter timelines from development to approval;

- Increased flexibility in changing content;
- Increased capacity for customisation;
- The development of a generic framework that covers a range of related training packages;
- States must facilitate the approval and implementation of nationally developed training packages;
- Outmoded work structures must be revised to avoid demarcation issues.

The focus of Training Packages should shift from being overwhelmingly technical to a balance of technical and transferable generic skills. For example, all training packages should reflect a generic base of employability skills and broad technical skills, such as ICT, business, etc. with technical streams that lead to a qualification.

New manufacturing often requires skill sets that are a combination of several traditional industry sectors. Training Packages, programs and funding need to accommodate the shifts in skill formation.

A move to a more generic approach is required to accommodate changing work practices. In particular, cognitive and behavioural skills at all levels of work should be recognised and catered for within the training system.

It should be possible to customise training packages by transferring/importing competency standards from one package to another.

Labour Market Forecasting

Labour market forecasting requires increased sophistication to more accurately reflect demand and to enable a proactive approach to resolving skill shortages.

The current system of data collection is deficient in the following ways:

- Official data (DEWR) is occupational based, it makes no mention of skills or skill sets and it covers only selected occupations i.e.; Trade, Professional and ICT

- The explanatory notes are brief and lacking in detail and rarely include reference to generic and employability skills

- Does not appear to be well co-coordinated with other agencies

- Lacks credibility and validity. It appears to be based on job advertisements and some follow up and contacts with employer associations etc. It does not acknowledge that many vacancies are not advertised and are filled by other means especially in specialist occupations and in regional areas

- Advertised job vacancies often do not accurately describe the occupation let alone the skills required.

Issues arising from ASCO groupings:

- ASCO codes only describe occupations and are outdated. The current ten year cycle of review is unable to keep pace not only with emerging skill sets and skill needs in established industry areas, but with the skill requirements of emerging industries

- Limited recognition of post trade skills and higher level skills which industry requires

- Within the current occupational descriptions there is a need to better reflect work specialisation

The education and training sector in Australia requires a national labour market forecasting system that adequately predicts industry needs now and into the future, particularly in emerging industry sectors. Where the needs of emerging sectors can be identified the education and training system often has difficulty accommodating these needs. This appears to be primarily a problem of resource allocation and appropriately trained learning facilitators.

Incentives and Resourcing

We need to ensure that the system of Government incentives can accommodate future changes, is geared to resolving skill shortages and does not inadvertently provide barriers to skill formation through inappropriately targeted incentives and funding allocations. The wide range of different incentives between States and the Commonwealth needs to be addressed, as does the issue of funding for existing workers. In addition, it may be timely for Governments to consider alternate methods of rewarding employers who undertake structured skills formation with their workforce. The taxation system may be a more attractive vehicle for some employers rather than straight cash incentives.

The Ai Group and EEASA welcomes a number of changes to the payment of Commonwealth Government incentives which have been introduced or are due to be introduced. In particular, the emphasis on completion is a positive step as is the measure to delay initial payments until 3 months after commencement.

It is important, however, that the incentive system does not place undue emphasis on lower level training. It should be balanced to the extent that it allows for some focus on high level, high skill training. In that respect, there may be room for employer incentives to be refined and better targeted to areas of identified skill shortages.

VET Providers-TAFE and Private Providers

AiGroup and EEASA support the implementation of User Choice and the opening up of VET to private providers but only in an environment of a strong public provision.

More than 90% of trade and post trade training in manufacturing is provide by TAFE and it is unlikely that private providers will expand their provision in what is a relatively more costly industry sector than other areas of industry.

What is of major concern is the reduction in provision in TAFE of traditional trade and post trade training in manufacturing. In one State the provision has reduced by over 40%.

AiGroup and EEASA believes that the efficiencies that were required through the second ANTA Agreement (1998 to 2000) requiring States and Territories to achieve "growth through efficiencies" required TAFE Institutes to produce greater quantities of training with little or no growth in funding in real terms. Strategies adopted to achieve this outcome appeared to include ceasing delivery of more expensive courses, increasing delivery of less expensive courses and reducing services to regional and remote areas. All strategies, which work against, increased training provision in manufacturing.

The ceasing of delivery of more expensive courses has probably contributed to the severe skill shortages across all middle and higher-level occupations in manufacturing. It is generally the middle and higher skill level courses that require higher levels of resources. In addition TAFE Institutes are still largely reactive to training demand and do not actively contribute to strategic skill formation needs by working with industry to generate increased training places and where some Institutes are proactive in this respect the funding arrangements and activity reporting arrangements do not facilitate this approach.

Partnerships

In regional areas of Australia the capacity to train in leading edge skills is determined by the availability of appropriately trained learning facilitators and relevant physical resources. Usually these resources are in short supply, however they can be accessed if there is a commitment by industry, the community, schools and tertiary educational organisations to partner and share resources. Although this partnership issue is not new there are few examples where true partnering exists. AiGroup and EEASA do not support scarce resources being used to duplicate training infrastructure where creative partnering can provide the necessary training opportunities. This is particularly the case where schools seek to duplicate 'workshops' that are available through TAFE and are often underutilised.
The potential to involve local councils in a coordinating role should be investigated. Local councils may be able to be the 'catalyst' in any regional partnering arrangements.

Licensing

In general licensing is a State responsibility and consequently there is no nationally consistent approach. This is particularly the case with electrical licensing. AiGroup and EEASA have long been critical of electrical licensing agencies in their incapacity to provide for a nationally consistent approach to licensing. Working with the National Uniform Electrical Licensing Committee over a number of years has failed to provide a truly nationally consistent approach and in addition there is a overwhelming reluctance by regulatory authorities to recognise the outcomes of training programs for the purposes of issuing a license by insisting on a separate (capstone) exam prior to licenses being provided.

While AiGroup and EEASA recognise the work being undertaken by ANTA to develop strategies to provide a nationally consistent licensing system, unless the State regulators accept the importance of such a system in facilitating cross border training and movement of workers and the importance of these in resolving regional skill shortages then little will change.

Skill Formation in Schools

The Australian Industry Group considers the increasing profile that vocational education and training is receiving in schools, as a positive and important contribution to the skill formation needs of Australian industry. However, it is important for education systems to continue to develop their consultative and participative relationships with industry to ensure that school based vocational education and training is relevant to industry needs now and into the future. This relevance encompasses enterprises immediate skill needs and also the strategic skill formation needs of industry in general. The manufacturing sector suffers from a poor image with young people and school advisers; consequently participation rates in vocational programs in manufacturing are significantly lower than in the service sectors.

It is difficult to provide one view of what industry needs or expects from VET in Schools. Australian industry ranges from important but declining numbers of enterprises utilising traditional and stable skills through to complex organisations that are continually re-inventing their skill needs through the use of emerging technologies and work practices.

It is however generally accepted that young people leaving school should have a mix of job specific, generic and underpinning employment related skills. There is a growing view within industry that the generic component of VET in schools should provide underpinning skills and knowledge for lifelong learning in an ever-changing work environment.

Recent feedback from Ai Group members on their views on VET in schools provided a mix of responses in relation to levels of satisfaction with students undertaking VET in schools programs. Highlighted areas of inconsistency included literacy, numeracy and communication skills. Employers indicated that young people who have successfully completed vocational programs have developed initial work skills, combined with a basic knowledge of industry. In some instances employer dissatisfaction with the mathematical capability of students, is felt to be a reflection of the decreasing quality of the applicant pool being experienced in the manufacturing sector.

The complexity of the education system and the large number of different agencies or individuals involved in negotiating access to the workplace for students still continue to be raised as issues by employers

There needs to be more options for VET in Schools programs outside of training packages and the Australian Qualifications Framework. There should be provision for learning and assessment against agreed employability skills that can also articulate into the Australian Qualifications Framework, provide for a tertiary ranking where appropriate, and/or an entry point to employment.

ANTA training funds should only be provided to schools that can demonstrate a significant commitment to integrating VET in schools into mainstream schooling.

The allocation of resources to VET in schools should reflect to a greater extent the needs of industry as identified through better labour market forecasting. This will ensure that scarce resources are allocated to industry forecasted skill needs in a strategic way.

Educators need to recognise the constantly changing skill requirements of industry. What may be relevant to an enterprises skill needs today may have no bearing on that same enterprises skill needs in five years time. There is no point in providing learning opportunities to young people if the outcomes of these learning opportunities are not relevant to the workplace by the time the young person makes the transition from school to work.

From an industry perspective, the apparent ease by which some schools gain registration for delivery of vocational qualifications and competencies is concerning. The practice of State Training Authorities delegating authority to Education departments undermines the confidence of industry in the vocational outcomes being achieved by young people. It is necessary to convince industry that schools seeking registration are subject to the same level of quality and rigor as other VET providers.

Registration procedures for schools should be the responsibility of the State Training Authority and not delegated to other agencies.

Teacher Training

There have been questions raised by employers as to whether teachers of VET in schools are sufficiently well trained to deliver VET to an industry standard.

It is important to incorporate some industry experience into teacher training for those teachers who may be expected to deliver VET courses. However, this may not always occur. Teachers with a smaller class or student allocation may be directed to deliver VET and as a consequence may not have been prepared through their teacher training for industry specific vocational programs.

Industry would expect that those teachers who deliver VET in Schools are given the appropriate professional development and relevant industry experience before and during the time they are required to teach VET courses.

Another alternative may be to include some exposure to the VET in schools for all teachers so that all teachers are aware that there is an alternative to the mainstream academic courses for school students.

Education and Training Pathways

Pre Apprenticeship

The Ai Group has found that many of its members in the manufacturing sector support the concept of pre-apprenticeship training particularly for young people. This is widely seen as an effective way of preparing people for work in both a technical and personal sense. Clearly it is important to provide a range of options for people seeking to enter apprenticeships and increased funding for pre-apprenticeship training would assist in establishing another pathway to skill formation.

Flexible Pathways

Young people do not see manufacturing as an attractive option for work and career. Without exception all of the AiGroup skill shortage projects highlight the negative image of manufacturing with young people and their parents and more importantly with career counselors. In addition to changing the image of manufacturing to demonstrate the opportunities it provides. There is a need to provide more flexible education and training pathways to work in manufacturing. Some of these pathways may need to be outside of the AQF framework as specified by the training packages. There needs to be a range of pathways that lead to trade and technician outcomes that meet the needs of today's young people through a mix of school based VET combined with relevant work practice that provides articulation into training package qualifications and tertiary ranking without the requirement to be in a contract of training.

Job Network

It appears that under the funding arrangements and performance indicators for Job Network agencies, the issue of addressing skill shortages is not a high priority. In other words, funding is attached to the placement of jobseekers and not to the demand side of the equation.

Job Network agencies are commercial businesses and understandably focus on activities and outcomes, which generate the maximum income.

The Ai Group is concerned that funding Job Network agencies is not conducive to them taking a proactive role in overcoming skill shortages.

Those agencies, which deal with long term unemployed clients, received additional funding to purchase special assistance for those clients in order to enhance their employability. This assistance may include such things as job specific training, literacy and numeracy courses and help with personal issues such as self-confidence and esteem.

Where Job Network agencies are aware of local demand for specific skills or occupations, they may purchase training for their clients in those occupations. Examples could include such jobs as production welders, forklift drivers and the like. However, Job Network agencies appear to be reactive rather than proactive in addressing skill needs in their local area.

The Job Network does not appear to have a formal role in the provision of labour market intelligence. Although vacancies must be listed on the National Vacancy Database, the competitive nature of the Network can result in agencies either being slow to notify vacancies or restricting access to vacancies with the aim of filling them with their own clients. This is an inefficient method of selecting the best person for the job or identifying the most suitable client to undertake training.

Attachment 1 Plan	Aerospace Engineering Skills

Attachment 2 Engineering Skills Shortages

Attachment 3 Emerging Technologies Working Group Report & Action Plan

Attachment 4 Action Plan — Engineering Industry Skills

Attachment 5	Engineering Industry Task Force – Progress Report 2002