Submission to the Senate Foreign Affairs, Defence and Trade References Committee

Inquiry into naval shipbuilding in Australia

Queensland Government

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QUEENSLAND – SHIPBUILDING

Background

Queensland has a proud history of shipbuilding with a number of vessels of varying sizes being constructed for either the Royal Australian Navy (RAN) or the Australian National Line (ANL) at either the Walker Shipyard in Maryborough or at the Evans Deakin Shipyard in Brisbane. However both of these shipyards ceased producing large vessels in the 1960's.

Queensland continued to conduct shipbuilding, with a number of smaller shipyards manufacturing smaller commercial vessels (trawlers, ferries, barges) and recreational pleasure craft (small through to large luxury yachts and motor cruisers). Cairns-based NQEA manufactured the highly successful Fremantle Class patrol Boat and the Hydrographic Survey Ships.

Queensland retains significant infrastructure suitable for large scale ship construction – such as the proposed Amphibious vessels for the Royal Australian Navy. The State also hosts world class steel fabrication capabilities, underpinned by competitive business cost frameworks and nation-leading skills initiatives.

Naval Shipbuilding Program

The Defence Capability Plan outlines the intention to undertake major construction programs for the Royal Australian Navy. The Commonwealth Government is planning to deliver two of these projects over the next 10-15 years, with key decisions being made in 2005/06. The tenders are for three Air Warfare Destroyers and two Amphibious Support Ships. The total value of the projects is estimated at \$8 billion.

The Air Warfare Destroyer tender closed on 22 December 2004 and on 31st May 2005, ASC AWD Shipbuilder Pty Ltd was announced as the successful tenderer, ahead of Tenix Defence and Northrop Grumman Ship Systems.

The Queensland Government has been actively engaged with the Australian Submarine Corporation since June 2004, providing supporting information regarding Queensland module fabrication capabilities. Both ASC Shipbuilding and the Department of Defence have indicated that up to 70% of the module fabrication could be done outside South Australia.

Defence called for Requests for Quotation (RFQ) for the 2 Amphibious vessels, which closed on 15th March 2005. Prospective shipbuilders were required to include significant detail about their proposed supply chains, infrastructure requirements and the level of State Government support. The final Request for Tender will be released in April 2006 with the successful bid team announced in the latter part of 2006 or early in 2007.

Defence has short-listed possible vessel designs to two types of Landing Helicopter Dock (LHD) - Armaris (French) and Navantia (Spanish). Bid teams will have to choose a design and offer a competitive tender for an Australian build. Bids are expected from the following teams:

- ADI/Forgacs Using the Armaris (French) LHQ design and based on consolidating the vessels in Brisbane and final fitout in Sydney
- Tenix Defence Using the Navantia (Spanish) design and probably based on consolidating the vessels in Western Australia

Queensland's Naval Shipbuilding Capability

The Amphibious Ship tender has yet to be awarded, and given the size of the vessels (21,000 to 28,000 tonnes depending upon the successful design), will present challenges to Australian's heavy fabrication industry. Queensland industry has significant experience in heavy fabrication, especially modular construction, and is well placed to meet the challenges posed by such construction methods.

The Queensland Government recognises that the prospects of these large Amphibious vessels being built in Australia are enhanced by a competitive industry base, capable of alleviating defence fears of schedule and cost escalations. The Queensland Government has developed key deliverables designed to support the two naval shipbuilding programs (Air Warfare Destroyer and Amphibious vessel).

The Cairncross dry-dock at Morningside on the Brisbane River is amongst the largest in the Southern Hemisphere. It is large enough to facilitate assembly of either the Armaris or Navantia design LHD. The site requires minimal upgrade to support the project given the symbiotic relationship between the dry-dock and the fabrication facility (common user facility) immediately down river.

The Queensland Government is finalising detail for a common user facility on the Brisbane River, in conjunction with Viking Industries. This site will provide the necessary infrastructure to enable the complete assembly of modules for both naval shipbuilding projects with excellent facilities adjacent to an existing roll-on/roll-off wharf. The site will support the fabrication of modules up to 500 tonnes which can then be transported 6km up river to the Cairncross dry-dock or to another shipyard in Australia. The facility will readily support the fabrication of modules for the Air Warfare Destroyer build program.

Each Amphibious vessel will require approximately 12,000 tonnes of fabricated steel over the four to five year build program. South East Queensland heavy industry has the capacity to produce approximately 20,000 tonnes of fabricated steel products per annum. This is combined with the ability to handle 10,000 tonnes per annum of plate cutting and preparation, ample to participate in both projects. Industry has the requisite sandblasting and painting capacity with large dedicated facilities.

Queensland also has ready access to the required skill base of qualified tradespeople need to participate in the naval shipbuilding projects. The three year, \$1 Billion SmartVET program contains a number of initiatives designed to enhance the skill levels required such as industry training partnerships, cadetships, accelerated apprenticeships and a specific manufacturing industry initiative. This is being delivered as a part of the Queensland Government's endorsed Manufacturing Strategy – "Making Queensland's Future".

The recently released *Queensland Skills Plan* outlines 24 key State Government commitments to recruit and retain a highly skilled, robust workforce that will meet current and future demands of industry and the economy. Three new centres of excellence will be established to ensure leading edge skills development in critical industries.

In addition, the new Trade and Technician Skills Institute will lead state-wide product development and delivery for automotive, building and construction, manufacturing and engineering, and electrical/electronics studies. By 2010, an extra 17 000 trade training places and an additional 14 000 high level training places will be available. In total, additional recurrent funding of \$373 million will be available, with a further \$250 million in new funding for capital works. The Queensland Government has developed a unique program marketed to current students, teachers and parents which will raise the profile of the manufacturing industry as a career of choice. The initiative is aimed at improving the image of the industry and attracting more school leavers to take up careers in manufacturing particularly in key manufacturing trades.

It is important to note that Queensland, with a population growth rate of nearly twice the national average, maintains an unemployment rate of less than 5%. These figures attest to the State's ability to attract and retain productive skilled workers.

Summary

The upcoming Naval Shipbuilding programs will be a significant test for Australia's steel fabrication and shipbuilding capability. Whilst the Federal Government has clearly indicated its intent to retain the majority of contracted work within Australia, this is by no means a certainty. The key issues that will impact upon the successful retention of the full shipbuilding program within Australia will include demonstrated capability to meet schedule, quality and competitive cost requirements.

Queensland's module fabrication capabilities are considered highly competitive for the current naval shipbuilding program. The State's heavy industry has the capacity and track record to cope with an increased share of the steel fabrication activity. The continued developments targeting the common user infrastructure, engineering capabilities and skilled trades will further strengthen the case for retaining this work within Australia.

Enclosures:

- 1. Queensland Government Naval Shipbuilding Case Submission (Brief)
- 2. Queensland Government Naval Shipbuilding Skills Submission

QUEENSLAND NAVAL SHIPBUILDING CASE SUBMISSION (BRIEF)

Background

The Commonwealth Government is planning to deliver two major naval shipbuilding projects over the next 10-15 years, with key decisions being made in 2005/06. The tenders are for three Air Warfare Destroyers and two Amphibious Support Ships. The total value of the projects is estimated at \$8 billion.

The Air Warfare Destroyer (AWD) tender closed on 22 December 2004. On 31st May 2005, ASC Shipbuilding Pty Ltd was announced as the successful tenderer, ahead of Tenix Defence and Northrop Grumman Ship Systems. Both ASC Shipbuilding and the Department of Defence have indicated that up to 70% of the module fabrication could be done outside South Australia.

Defence called for Requests for Quotation (RFQ) for the 2 Amphibious vessels, which closed on 15th March 2005. Defence has short-listed possible vessel designs to two types of Landing Helicopter Dock (LHD) - Armaris (French) and Navantia (Spanish).

Bids are expected from the following teams:

- ADI/Forgacs Using the Armaris (French) LHQ design and based on consolidating the vessels in Brisbane and final fitout in Sydney
- Tenix Defence Using the Navantia (Spanish) design and probably based on consolidating the vessels in Western Australia

The recent announcement regarding the Air Warfare Destroyer contract indicates that the Federal Government is comfortable with Australian industry's ability to deliver the project on schedule and budget. However, DMO is clearly concerned about the schedule and cost of the Amphibious Vessel program; and any issues arising out of the concurrency of the two build programs.

Air Warfare Destroyer

The successful tenderer, ASC AWD Shipbuilder Pty Ltd, has shown a keen interest in Queensland industry to undertake subcontract work for the Air Warfare Destroyer (AWD) modules (up to 250 tonne each). Queensland engineering firms have the potential to complete contracts for the construction of these modules, to then be transported to South Australia.

As stated earlier, both ASC Shipbuilding and the Department of Defence have indicated that up to 70% of the module fabrication could be done outside South Australia. ASC Shipbuilding indicates that up to 19 modules per vessel (10 aft, 9 forward) may be sub-contracted; 57 modules in total for the three Air Warfare Destroyer vessels.

Amphibious Vessels

The Amphibious Deployment and Sustainment Program office within DMO called for Requests for Quotation (RFQ) which closed on 15th March 2005. Defence Materiel Organisation is concerned about the schedule risk and cost of the Amphibious Vessel program, with one alternative strategy being an overseas build of the two shell vessels, which would then be transported to Australia for final fitout.

If the Government commits to retaining the full build program within Australia, the Amphibious vessel project will present a major challenge for companies wanting to participate in the construction and delivery of these vessels. One of the biggest challenges will be the ability of companies to provide the skilled workforce required to ensure that the project meets the delivery schedule in a competitive manner.

Queensland companies have a wealth of experience in the fields required for this project but as individual companies may find it difficult to satisfy the commercial contractual obligations, capacity and infrastructure requirements, and have the number of skilled personnel on hand when the project begins. An integrated solution to this is proposed.

Queensland industry will take a "team approach" and using the synergies, experience and reserve capacity of suitably identified companies, form an integrated alliance for the construction and/or fit out of the various modules. This approach will provide the flexibility, capacity and skill base required by the bid winner to deliver a world-class outcome at a competitive price using Queensland industry.

The information in this submission is based upon:

- Analysis of Queensland industry capabilities including capability site visits throughout the entire State in early 2005
- Relevant data provided by the lead shipbuilding bid proponents, including RFQ and shipbuilding strategy feedback
- Analysis of other relevant issues including infrastructure options, skills and training

Infrastructure

Queensland has existing infrastructure which, in conjunction with a highly adaptive and capable industry base, ensure that the State can enhance the competitiveness of the Naval Shipbuilding program.

Cairncross Dry-dock Facility

Situated on the Brisbane River and with excellent access to the local workforce, existing steel fabrication sites and transportation nodes, is the impressive Cairncross Dry-dock facility. The dock is amongst the largest in the Southern Hemisphere and can cater for either the Navantia or Armaris design LHD vessels.

In order to cater for the full consolidation of a the Amphibious ships, the anticipated additional requirements for Cairncross to supply this project are:

- Prepare the Cairncross facility for the receipt and handling of ship modules by water access (minimal development required)
- Develop further undercover area with crane facilities adjacent to the dry-dock facility to allow minor manufacturing and module fit out
- Cranes to handle modules for assembly in the dry-dock.

Cairncross is also highly suited to the assembly of super-blocks, such as the entire forward or aft section of a large vessel. These can then be towed to another yard within Australia for final consolidation, as was the case for the Armaris design vessels built for the French Navy. Alternatively, Cairncross could be the final consolidation site.



Figure 1 - Cairncross Drydock Aerial



Figure 2- 3D Concept -Cairncross Drydock

Common User Facility

The Queensland Government is investigating jointly planning the development of a Common User Facility (CUF) on the Brisbane River, with leaseholder Viking Industries. This facility will provide the necessary infrastructure for the complete assembly of large ship modules, within 6 km of the Cairncross dry-dock. It is also suitable for fabrication of modules for the AWD that would then be transported to South Australia. The planned infrastructure developments for the CUF are:

Heavy lift barge access to Brisbane River for up to 1000 tonne modules

- Hard stand lay down area for up to 1000 tonne modular assemblies
- Undercover facilities with suitable overhead crane capacity
- Electrical services, water reticulation, communication services and drainage collection
- Suitable project management facilities



Figure 3 - BMIP Hemmant (CUF Site)



Figure 4 - Oblique photo BMIP (CUF)

Capacity Requirements

With regard to the Amphibious vessel program, the total mass of steel per ship to be delivered over 18 - 24 months is approximately 12,000 tonnes. It is anticipated that fabrication would not commence until late 2007 at the earliest. Queensland's plans for infrastructure developments will be in place well in advance of this start date.

Brisbane-based engineering firms who have a combined capacity for producing over 20,000 tonnes of fabricated plate and structural steel per annum. There is also significant capacity in plate cutting and preparation, with the ability to handle approximately 10,000 tonnes per year.

Queensland's firms have sandblasting and painting capacity with large dedicated facilities. Final sandblasting and painting may be required at either Cairncross and/or the Common User Facility. Modules up to approximately 100 tonnes and having a load dimension of 30 m x 3 m x 5 m can be delivered to the Common User Facility and Cairncross for final modular block assembly.

Skill Base

Queensland suppliers employ a highly skilled workforce and have the ability to attract additional skilled labour as has been shown in previous years. Based on a two shift operation the combined boilermakers/welders can be increased significantly for the contract duration. Additional skilled resources can be utilised at the existing facilities of the key steel fabrication firms.

The other disciplines required during construction, assembly and final fit out would be supplied through a small number of sub-contractors in the Brisbane area especially in the mechanical, electrical, ventilation and ducting fields.

The recently released *Queensland Skills Plan* contains 24 actions to transform and modernise the vocational and education training (VET) system including improving the way our TAFE institutes deliver training and fostering more cohesive partnerships with training providers, industry, communities and unions. The new Trade and Technician Skills Institute will lead state-wide product development and delivery for automotive, building and construction, manufacturing and engineering, and electrical/electronics studies.

The Queensland Government has developed a far reaching and unique program that is marketed to students, teachers and parents in order to improve the image of manufacturing and attract more school leavers to careers in manufacturing, particularly trades.

It is important to note that Queensland, with a population growth rate of nearly twice the national average, maintains an unemployment rate of less than 5%. These figures attest to the State's ability to attract and retain productive skilled workers.

Summary

The upcoming Naval Shipbuilding programs will be a significant test for Australia's steel fabrication and shipbuilding capability. Whilst the Federal Government has clearly indicated its intent to retain the majority of contracted work within Australia, this is by no means a certainty. The key issues that will impact upon the successful retention of the full shipbuilding program within Australia will include demonstrated capability to meet schedule, quality and competitive cost requirements.

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QUEENSLAND GOVERNMENT NAVAL SHIPBUILDING SKILLS SUBMISSION

Introduction

The Defence Capability Plan outlines the intention to undertake major construction programs for the Royal Australian Navy. The Commonwealth Government is planning to deliver two of these projects over the next 10-15 years, with key decisions being made in 2005/06. The tenders are for three Air Warfare Destroyers and two Amphibious Support Ships. The total value of the projects is estimated at \$8 billion.

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Workforce Skills

At peak activity, concurrent activity on the two vessel types would potentially involve more than 3,500 staff nationally. Defence is particularly sensitive to schedule slippage as shown in this June 2004 speech by the CEO of the Defence Materiel Organisation, Dr Stephen Gumley:

The DMO, as with the rest of Defence, is currently undergoing a freeze on civilian staff, and that will continue for the foreseeable future. Industry, on the other hand, is currently experiencing a skill shortage in critical areas, and from my recent observations in the private sector that will also continue for the foreseeable future. We should have been pushing the start button three or four years ago.

So we both need to look at how we can deliver an increased work-rate using existing resource levels. I can only see three ways of doing this and if anyone has any other ideas I'd be very pleased to hear them.

The three ways that I've identified is first of all upskilling our key people. The second is working smarter, which doesn't mean working harder or longer. And third means trusting each other by working together in a mature, ethical and honest way.

In a more recent interview, Dr Gumley stated:

"We are emphasising schedule, because schedule is 80% of the driver of cost and many of the carrots and sticks are going to be tied to milestones - people have to deliver on time. The other thing is that you could put as many contracting incentives or disincentives in as you like, but if the companies have not got the skills to do the job there is going to be failure.

So tender evaluation in the future is going to have a very high emphasis on two things - skill plans and past performance, but not just in like projects - past performance across all of the DMO work. I'm interested in performance right across the DMO portfolio rather than some narrow section."

Defence Skills initiative

Skilling Australia's Defence Industry Program is a policy initiative announced by the Government in 2004 to address a significant shortfall in the quantity and quality of skills available to defence industry to ensure that the Australian Defence Force has the capabilities it needs to defend Australia and its national interests.

The government proposes to inject up to 0.5% (around \$200 million over ten years or \$20 million each year on average) of the money spent on major defence capital equipment projects, to generate additional skilled positions, up-skill existing employees and improve the quality and quantity of skills training in defence industry in order to deliver the capability required by the ADF.

Delivering and maintaining major defence equipment requires a range of skills and qualifications. It is estimated that around 3,000 to 5,000 additional engineers, specialist technicians, key trades people and project managers will be required by defence industry over the next decade to provide the skills necessary to build and maintain Australia's major defence platforms. Defence and defence industry alike have an interest in, and responsibility for, developing these skills. The funding available for the program will not meet the full requirement for growth and industry will need to make an additional investment to grow the industry skill base to the required level.

White Paper – Queensland Skills Plan

Smart Queensland; Smart State Strategy 2005-2015 was released by the Queensland Government in April 2005. A key element of the strategy is a training and higher education system that will create new skills for new jobs. The economy relies on a skilled and flexible workforce that can respond to the needs of business and industry both now and in the future.

The Department of Employment and Training recently released the *Queensland Skills Plan* – which outlines a number of proposals for the Queensland vocational education and training (VET) sector aimed at securing the skills needed to underpin the state's economic growth over the coming years. It builds on the SmartVET strategy that commenced in 2004. SmartVET involves investment of more than \$1 billion over three years to meet the skills needs of industries that are critical to Queensland's economy.

The *Queensland Skills Plan* is the most significant package of reforms to the way Queenslanders access skilling opportunities in more than 40 years. It delivers on the Queensland Government's commitment to create one of the most flexible, modern and innovative education and training systems in Australia.

Community responses to the discussion paper on the future of vocational education and training in this state show Queenslanders are proud of the system which has produced highly qualified tradespeople working in world-class industries.

Technological change, globalisation, an ageing population and low unemployment rates have led to dramatic changes in Queensland's labour market, causing skills shortages across a number of key industry areas including the traditional trades and paraprofessional occupations.

The *Queensland Skills Plan* contains 24 actions to transform and modernise the vocational and education training (VET) system including improving the way our TAFE institutes deliver training and fostering more cohesive partnerships with training providers, industry, communities and unions.

Three new centres of excellence will be established to ensure leading edge skills development in critical industries. In addition, the new Trade and Technician Skills Institute will lead state-wide product development and delivery for automotive, building and construction, manufacturing and engineering, and electrical/electronics studies.

By 2010, an extra 17 000 trade training places and an additional 14 000 high level training places will be available each year. The competency-based training system will be fullyimplemented so that our best and brightest apprentices can complete their training earlier.

SmartVET strategy

Queensland is steadily building a reputation as a state with the vision and determination to become a world centre of excellence in the fields of science, technology and innovation. This reputation is enhanced by the Government's commitment to assist new and emerging industries in their need for qualified staff, as well as traditional industries seeking to upgrade the skills base of their workforce in order to remain globally competitive.

The Department of Employment and Training's SmartVET strategy represents a major financial commitment to the alignment of training opportunities for the current and future workforce. It recognises the growing need for higher-skilled staff in a number of key industries, ranging from aviation, biotechnology and information technology to machinery and equipment manufacturing, creative and rural industries.

SmartVET is a three-year strategy that is investing more than \$1 billion of government funding in providing killed workers for these industries. SmartVET will create some 180,000 training places – and significantly increase access by Queenslanders to their world class vocational education and training system.

The strategy provides for flexible and responsive training that encourages accelerated skill development. It supports workers seeking to upgrade their skills, particularly in industries affected by technological change.

The SmartVET initiatives include:

- Skilling Solutions Queensland (\$10.8 million) providing Queenslanders with access to personalized advice and support in gaining the skills needed by key industries.
- Skills Formation Strategies (\$0.9 million)
- Recognition of Prior Learning (\$1.5 million) One thousand Queenslanders working in key industries will have the opportunity to take the fast lane to new qualifications.
- User Choice (\$219.4 million) Queensland's apprenticeship and traineeship system directly supplies skilled workers to Queensland's labour market. The importance of this program is being recognized with a \$35 million dollar increase over the life of the strategy.
- Industry Training Partnerships (\$7.5 million) The Government and employers will join forces, each contributing 50 per cent of the training costs required to re-skill and upgrade qualifications of existing workers in new and emerging industries and priority industries suffering skills shortages.
- Accelerated Apprenticeships (\$9 million) The Department will work with key unions and industries to develop new accelerated apprenticeship training models.

Further detailed information on the SmartVET strategy can be found at

http://www.trainandemploy.qld.gov.au/resources/corporate/pdf/SmartVET.pdf

Skills Formation Strategies

In spite of the growing level of expenditure on education and training by all levels of industry, community and government, severe skills shortages remain an issue in many industries, or are predicted to emerge/worsen based on known future industry developments or change. Furthermore, in an environment where the unemployment rate

is below 5%, and where the ageing of the workforce will be increasingly important in coming years, addressing skills shortages is likely to be an ongoing challenge.

As a consequence the Queensland Department of Employment and Training (DET) is promoting skills formation strategies as the future analysis and planning platform for government and private sector investment in skilling.

Skills formation strategies provide a process whereby industry, community and government stakeholders collaborate to analyse the reasons for skills shortages, then develop strategies to address identified issues. DET already provides a range of generic solutions to skills shortages; but the skills formation strategy process enables tailored industry/community solutions.

Work to date demonstrates that, very often, the reasons for shortages are not related to the supply of training; rather they relate to workforce management issues, workplace organisation, job design, industry image, industrial relations, geographic remoteness etc. Sometimes, the existing culture and norms in an industry sector no longer support the viability of the industry. Some radical re-thinking about skills formation, utilisation and retention may be required.

As the lead agency for vocational education and training in Queensland, DET is currently working with sixteen skills formation strategies across a range of priority industries, regions and communities. These strategies focus on a process of change within industry1; a change that fosters industry to own, and be responsible for, its skills acquisition, development and retention - with government support. The process also fosters close cross agency collaboration.

| Aged Care (including Enrolled Nursing) | Child Care | | | | |
|--|--------------------------------------|--|--|--|--|
| Construction | Creative Industries (Film and TV) | | | | |
| Electrotechnology – Electronics | Hospitality | | | | |
| Lockyer Valley | Marine – Boatbuilding Gold Coast | | | | |
| Marine Tourism – Cairns | Marine Tourism – Mackay, Whitsunday, | | | | |
| | Bowen | | | | |
| Mining – Central Queensland Coal | Mining – North Qld Metalliferous | | | | |
| Tourism (Mackay, Bundaberg, Visitor | Townsville Regions – Construction, | | | | |
| Information Centres) | Manufacturing, Engineering | | | | |
| Normanton | Pharmaceuticals and Nutraceuticals | | | | |
| Wastern Deurse | Mino | | | | |
| western Downs | vvine | | | | |

The current projects are:

Table 1 – SFS Sectors

Planning and analysis, using the process of skills formation strategies, have the potential to underpin industry development by working together to integrate business, work and skills policy and to plan joint investment in skilling in a holistic and supportive way. An analytical approach to future industry and employment growth, integrating skilling and workforce solutions with research and development will provide a much more sophisticated and effective support to industry and communities.

¹ Where the term 'industry' is used, read 'industry, region, and community'.

Current Status

Skills formation strategies are being implemented incrementally and are at varying stages. The speed at which they progress is dependent on the capacity or maturity of the industry to network, collaborate, share and make decisions at an industry level, and on the nature and extent of the issues that need to be addressed.

Skills formation strategies align with and support Queensland's industry and community 'ecosystems' – a term that implies a need to change and accommodate external and internal pressures throughout the cluster of enterprises, supply chains, and relevant institutions, in order to thrive.

The notion of industry 'ecosystems' is gaining significant ground. Nationally, ANTA is funding several projects, but these are much narrower than the Queensland approach. The European Union has also expressed an interest in the work being undertaken in Queensland.

Under the *Queensland Skills Plan* a further 23 Skills Formation Strategies will be funded, including a number related to manufacturing, engineering, marine transport and logistics.

Expected Outcomes

Skills formation strategies are a change process. As a consequence, outcomes are behavioural in nature and are reliant on the maturity of the industry; they will be realised in different timeframes and at varying levels of sophistication.

Short to medium term outcomes include:

- General understanding by industry of the complexity of the skills shortage issue
- Demonstration of a shared responsibility for skilling
- Identification of and implementation of solutions to skills shortage issues
- Development of open dialogue and commitment between relevant government agencies, regulatory authorities and industry to address the broader issues impacting on work and skills policy
- Identification and implementation of some immediate strategies directly related to training that may assist some critical issues in the short term
- Improved responsiveness from TAFE and the Agricultural Colleges to the needs of/changing needs of industries and communities

Long term outcomes include:

- A sustainable mechanism for industry to continue to address skills formation within the broader context of workforce management and business strategy
- An agreed approach to future negotiations around government expenditure on vocational education and training
- Expansion of networks to facilitate pathways through schools, higher education, professional development, vocational education and training, informal learning and training
- Expansion of industry commitment to skilling including industry ownership of future skills formation strategies
- Inter-firm collaboration

- Changes to VET policy and practices that currently have negative impacts on skills formation
- The adoption of skills formation strategies as the accepted analysis and planning platform, for private and public investment in training.

Characteristics

A skills formation strategy is a process which has the following characteristics:

- Developed to either
 - o support an industry, regional or community development plan, or
 - become a component of a workforce management plan particularly if working with a service sector
- developed and owned by industry in partnership with government
- tailored to the specific needs, structures, advocacy agencies, regulatory agencies, other social partners and the culture of each industry
- identifies all the skills necessary to sustain the sector irrespective of funding i.e. entry level requirements, career development requirements and pathways, professional development needs and opportunities, higher education training requirements
- identifies skilling in all areas of the industry and its supply chains, not just the core business of the industry
- articulates training considered appropriate for different industries, regions, levels of training, qualifications, pathways and types of training i.e professional development, formal training etc
- challenges traditional VET policies, strategies etc
- not necessarily a document, but a process of change that achieves milestones in behaviour and expectations

Outcomes to date

General

- Interest has been generated nationally and internationally with the projects and their findings. Queensland is leading the way in terms of breadth of coverage for developing the concept, moving across supply chains and industry related institutions/bodies i.e. unions, VET providers, universities, industry associations.
- Other government agencies such as Tourism Queensland have taken up the challenge of skills development/ skills formation strategies for their relevant sectors and expressed keen interest in working with the Department of Employment and Training in the next 3 years.
- Industries are voluntarily approaching the Department of Employment and Training for shared support to develop skilling through the notion of skills formation strategies.
- Significant understanding and acceptance by firms about the impact workplace issues have on the impact of training.
- Willingness in many industries to view skilling in a holistic context, rather than siloed training opportunities offered through qualifications.
- Skills formation strategies which started in 2003 are beginning to show identifiable outcomes both in business, workforce management and training solutions.

Specific skilling outcomes evidenced include:

- Stronger links between industry and schools providing greater career information to students and teachers, higher levels of industry support for work experience places in some cases contextualising curriculum to support additional understanding of relevance to industry
- Greater interest in exploring skilling solutions such as internships, scholarships, cadetships etc
- Formalised training arrangements with providers around new product and delivery
- Expansion of employer funded accredited training for employees.
- Long term planning for engagement of trainees and apprentices
- Development of formal links with registered training providers to deliver international qualifications
- Greater involvement by the industry in tailoring product relevant to their industry
- Introduction of induction training
- Linkages across the education sector to deal with skilling holistically
- Exploration of fast tracked apprenticeships for trades
- Development of specific recognition of prior learning processes and tools for recognition of the skills of long term existing workers to increase capacity of industries
- Exploration of specialised delivery across industry

Manufacturing Careers and Schools Contact Program

The Queensland Government, in collaboration with other stakeholders, is implementing an integrated Manufacturing Careers Initiative to promote manufacturing careers and pathways to address the current negative perceptions of the manufacturing industry and careers, held by both young people and their influencers.

The Key objectives of the program are:

- To raise awareness and change attitudes about careers in manufacturing.
- Increase support for manufacturing careers, which can offer a range of opportunities between trade, technical and managerial positions.
- Create linkages between education institutions and industry to promote manufacturing careers and address local skills needs.
- Inform Year 10-12 students about career pathways, partnerships and training opportunities.

The Department of State Development and Innovation, in conjunction with the Department of Employment and Training and the Department of Education and The Arts, is leading this whole-of-government and industry approach and will apply the following practical application to the program's delivery:

- Target schools across the state over a three year period.
- Opportunity for local State Development and Innovation Centres to play a pivotal role in presenting and delivering the program in regions.
- A Multi-Media Presentation is being developed to cover career and education pathways and employment opportunities right across Queensland's dynamic

manufacturing industry. As well as delivering the multimedia presentation, the program format can include a guest speaker involvement (both business owners and trainees, to share success stories, experiences and field questions) and opportunities for schools to undertake industry site visits. Students will hear first hand about exciting jobs and further career prospects and be exposed to reality of modern manufacturing.

 The program will support schools hosting information sessions especially designed for the influencers of students e.g. parents and guardians, teachers and career counsellors.

The Queensland Government will facilitate the program across the state and work closely with existing stakeholders, such as the Education Training Reforms for the Future (ETRF) Regional Co-ordinators, Schools/Industry Links Scheme Co-ordinators and Industry Human Resources Personnel.

Building on outcomes of the series of Local Futures Forums held during 2004 and early 2005, AMSD has led the establishment of the 8 regional industry/school partnerships, with at least 4 more planned over the last half of 2005. These partnerships are vital to close the knowledge gap that exists between industry and schools on manufacturing careers opportunities and for both parties to better understand their respective environments.

Manufacturing Apprenticeship and Traineeship figures

Figures released on 1st June 2005 by the National Centre for Vocational Eduction Research show a record December quarter level of apprentices and trainees in training in Queensland.

Employment, Training and Industrial Relations Minister Tom Barton said the figures as at the end of December 2004 showed an estimated 69,900 apprentices and trainees in training across the state.

"This is an increase of 2800 on a year earlier and is 21,300, or 43.8 per cent, higher than the numbers in training in the year 2000," he said.

"The number of apprentices and trainees in Queensland increased over the past year at the same time there has been a fall of 11,200 across Australia.

"That's a real achievement for Queensland because it shows that as our economy is growing, our training effort is also growing," Mr Barton said.

The figures show that almost half the apprentices and trainees in Queensland are undertaking trades related training, with 46.7 per cent engaged in trades and related categories, compared with 39.2 per cent nationally.

"The construction, metal and engineering, automotive and hospitality industries are some of the top industries attracting apprentices and trainees," Mr Barton said.

"That's good news for Queensland because these are some of the industries where we need to further develop our skills base to ensure we can continue to grow the state's economy."

Mr Barton said the growth in training over the last few years was now delivering more qualified trades people than ever into the workforce.

"In the December quarter we saw 7900 people complete their apprenticeship or traineeship with nationally recognised qualifications that employers demand - that is the highest level of completions ever recorded," he said.

Queensland continued to maintain its national lead in school-based apprenticeships and traineeships.

"In the quarter, 10.5 per cent of people beginning their apprenticeship or traineeship were school-based, compared to 5.2 per cent nationally," Mr Barton said.

"These young people are taking a vital step in establishing their careers, gaining valuable work experience and training, while completing their formal schooling.

(Copy of 2005 Press Release)

| Engineering Machinery and Equipment (Apprentices) 2001 - 200 | 5 |
|--|---|
|--|---|

| Aeroskills | | | | | |
|--|-----------------------------|-----------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| Mechanical Avionics Structures Trainees | 30/06/2001 67 12 5 | 30/06/2002 82 17 7 10 | 30/06/2003 94 31 9 27 | 30/06/2004 113 42 15 32 | 31/03/2005 127 52 20 26 |
| Automotive Manufacturing | | | | | 04/00/0005 |
| Apprentices Trainees | 30/06/2001 26 | 30/06/2002 61 1 | 30/06/2003 105 4 | 30/06/2004 129 7 | 31/03/2005 128 9 |
| Boat Building | 20/00/0004 | 20/00/0000 | 20/00/0000 | 20/00/0004 | 24/02/2005 |
| Boat Building Marine Mechanics | 30/06/2001 161 28 | 30/06/2002 215 47 | 30/06/2003 249 70 | 30/06/2004 312 89 | 31/03/2005 345 108 |
| Engineering Fabrication | | | | | |
| Sheetmetal | 30/06/2001 264 | 30/06/2002 339 | 30/06/2003 440 | 30/06/2004 545 | 31/03/2005 578 |
| Blacksmith Boilermaking Fabrication Fabrication Heavy Total | 1532 | 1484 | 5 1221 189 1415 | 4 1530 62 1596 | 5 1709 59 1773 |
| Moulding Patternmaking | 13 8 | 25 12 | 31 15 | 50 14 | 56 35 |
| Total Fabrication | 1817 | 1860 | 1901 | 2205 | 2442 |

Engineering Mechanical

| Mechanical | | 30/06/2001 905 | 30/06/2002 547 | 30/06/2003 82 | 30/06/2004 9 | 31/03/2005 14 |
|---|-------|-------------------|-------------------|------------------|-----------------|------------------|
| Diesel Mechanic | | 461 | 665 | 857 | 942 | 1032 |
| Fitting Fitting & Turning Fitting, Turning & Mach | ining | 148 468 | 194 711 | 264 940 1 | 299 1097 | 348 1158 |
| Machining | | 15 | 16 | 21 | 25 | 24 |
| Refigeration & Conditioning | Air | 311 | 432 | 545 | 569 | 573 |
| Toolmaking | | 16 | 20 | 26 | 33 | 29 |
| Jewellery | | 73 | 74 | 78 | 68 | 67 |
| Locksmithing | | 69 | 73 | 78 | 77 | 72 |

Engineering Machinery and Equipment (Apprentices) 2001 - 2005.. Continued

| Watchmaking | 30/06/2001 13 | 30/06/2002 13 | 30/06/2003 14 | 30/06/2004 8 | 31/03/2005 6 |
|---------------------------------------|-------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| Total Engineering Mechanical | 2479 | 2745 | 2906 | 3127 | 3323 |
| Farriery | 30/06/2001 10 | 30/06/2002 9 | 30/06/2003 6 | 30/06/2004 8 | 31/03/2005 7 |
| Higher Engineering Trade | 328 | 311 | 257 | 186 | 156 |
| Engineering (Cert IV) | 118 | 66 | 19 | 9 | 17 |
| Electrical/Electronics | 314 | 334 | 379 | 411 | 429 |
| Engineering Total Apprentices | 5365 | 5754 | 6026 | 6646 | 7154 |
| Engineering (Production) Traineeships | | | | 00/00/000 A | 04/00/0005 |
| Cert II | 30/06/2001 605 58 | 30/06/2002 651 90 | 30/06/2003 586 220 | 30/06/2004 440 249 | 31/03/2005 325 279 |
| Cert II Cert III | 30/06/2001 605 58 | 30/06/2002 651 90 | 30/06/2003 586 220 | 30/06/2004 440 249 | 31/03/200 325 279 |

Engineering Machinery & Equipment Apprenticeships and Traineeships - In Training (Year Comparison)













