

Auditor-General of Queensland

Report to Parliament No. 7 for 2007

Addressing Skills Shortages in Queensland



Queensland

Prepared under Part 6

Division 3 of the

Financial Administration and Audit Act 1977

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Auditor-General of Queensland

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The Honourable M F Reynolds MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

Dear Mr Speaker

This report is prepared under Part 6 Division 3 of the *Financial Administration and Audit Act 1977*, and is on the results of a performance management systems audit of addressing skills shortages in Queensland. This report is the seventh in the series of Auditor-General's Reports to Parliament for 2007.

In accordance with s.105 of the Act, would you please arrange for the report to be tabled in the Legislative Assembly.

Yours sincerely



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Auditor-General



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Section 1

Executive summary

1.1 Audit overview

The shortage of appropriately skilled labour across Queensland and Australia has emerged as a significant issue for government and the wider community. Queensland has the tightest labour market it has seen in 30 years and industries and businesses across the state are experiencing major skills shortages.¹

The term *skills shortage* relates to the supply of and demand for labour in the labour market. Skills shortages occur when the demand for workers in a specific occupation exceeds the supply of qualified workers who are available and willing to work under current industry conditions.²

Having an appropriately skilled workforce is essential to Queensland's economic growth. Skills shortages not only impact on the Queensland Government's ability to achieve its economic and social objectives, but also on businesses and industries in Queensland.

This performance management systems audit assessed whether selected departments have suitable frameworks and systems in place to identify and address existing and emerging skills shortages in Queensland.

Although skills shortages are a major concern requiring action by many areas of government, the three departments selected for this audit have key roles in implementing the *Queensland Skills Plan* (QSP),³ namely:

- Department of Education, Training and the Arts (DETA)
- Department of Employment and Industrial Relations (DEIR)
- Department of Tourism, Regional Development and Industry (DTRDI) (formerly the Department of State Development).

Further details on the QSP are outlined in Table 4.1 in Section 4.3.

1.2 Audit opinion

The Queensland Government has taken considerable steps to address the skills shortages across the state. The QSP, announced in March 2006, aims to better match the supply of skills with industry needs and economic demands. It provides over \$1b in funding for new skills initiatives over the next four years. The three departments subject to audit have a key role to play in implementing the QSP and I noted a degree of interdependency and coordination between them. However, there was no evidence of formalised coordination beyond this initiative and across the wider Queensland public sector. In addition, there are no whole-of-government systems in place to address skills shortage across Queensland.

Addressing skills shortages is not just about training. The four recognised streams for addressing skills shortages are:

- expanding skills supply through training programs
- expanding the potential labour pool through interstate and overseas immigration programs
- increasing the workforce participation of people who face significant barriers to obtaining and retaining employment
- improving recruitment and retention.

¹ *Queensland's proposed responses to the challenges of skills for jobs and growth – A green paper*, Department of Employment and Training, 2005, p3.

² *Skills shortages: Concepts, Measurement and Implications*, Centre for the Economics of Education and Training, Monash University, 2003, p1.

³ *Queensland Skills Plan*, Department of Employment and Training, 2006 can be found at http://www.trainandemploy.qld.gov.au/resources/corporate/pdf/pol_qldskillsplan_0306.pdf

The focus of the QSP is mainly on training, especially vocational education and training (VET). Around a third of people employed in the trades in Queensland are not fully qualified.⁴ A significant number of apprentices are leaving their apprenticeships for higher paid positions in the workforce before completing their qualifications. I support the continued efforts to increase the completion rate of VET qualifications through effective implementation of the QSP.

I noted that despite increases in the number of people enrolling in tertiary education⁵, indications are that this growth remains insufficient to secure a sustainable skills base for Queensland.

While I found no specific policy in place to address shortages in professional occupations (e.g. doctors, engineers, accountants), I recognise that qualifications gained through universities are largely a responsibility of the Commonwealth Government. Audit could not be provided with any documented evidence of formal consultation protocols between the Queensland and Commonwealth Governments on addressing professional skills shortages.

Programs in place to expand the labour pool include the Skilling Queenslanders for Work initiative and the Commonwealth General Skilled Migration Program. Improving the recruitment and retention of workers relies heavily on employers. The strategies used to recruit and retain workers are wide-ranging, including family-friendly workplace practices, development opportunities and improving workplace conditions.

Identifying skills shortages requires access to relevant and reliable data. State departments use data from the Australian Bureau of Statistics (ABS) and the Commonwealth Department of Employment and Workplace Relations to identify skills shortages. While the available data provides some understanding of skills shortages at the state level, I note there are significant limitations in both data sources such as small sample sizes and the inability to identify localised or specialised skills shortages. This impacts on DETA's ability to produce reliable future skills shortages' forecasts. I recognise that increasing sample sizes to improve the relevance and reliability of labour force data has cost and currency implications which cannot be easily resolved without significant investment across both levels of government.

I also identified potential improvements to the governance and reporting frameworks at two of the departments audited, and a greater need to measure and monitor the efficiency and effectiveness of the QSP's initiatives and underlying programs.

Identifying skills shortages

DETA is responsible for identifying skills shortages in Queensland. I found the department has suitable systems and processes in place to identify current skills shortages, including the ability to identify skills shortages by occupation group at the state level and trends over time. DETA is also able to identify industry, employer and community needs relating to workforce skills and key factors contributing to skills shortages.

It is widely acknowledged that accurate forecasting for future skills shortages is complex and requires specific information. DETA uses data from the ABS *Census of Population and Housing* and the monthly *Labour Force Survey* which is regarded as the main source of labour force statistics. However, as the *Labour Force Survey* is based on a small sample of around 20,000 people Australia-wide, this impacts on the reliability of the conclusions that can be drawn from the statistics. DETA's forecasting ability is therefore restricted to limited indicative short-term future forecasts.

The lack of accurate data also limits the supply and demand analysis for individual occupation groups at the state level. Regional demand and supply analysis can only be done for groups of occupations (e.g. general practice medical services), rather than individual occupations (e.g. specialist medical services).

Understanding the factors contributing to skills shortages is necessary for developing strategies to address those shortages. While DETA is able to identify factors contributing to skills shortages, analysis of trade and associate professional skills shortages was last conducted two years ago and analysis for professionals was performed for the first time in December 2006 .

Addressing skills shortages

Overall I found the departments have suitable frameworks and systems in place to address skills shortages. DETA is responsible for implementing the QSP which includes 28 Skills Formation Strategies and the Skilling Queenslanders for Work initiative. Ten of the Skills Formation Strategies are managed jointly with DTRDI, while various private and public entities implement the remainder. DEIR is responsible for managing the Skilling Queenslanders for Work initiative.

⁴ Queensland's proposed responses to the challenges of skills for jobs and growth – A green paper, Department of Employment and Training, 2005, p12.

⁵ Sustainable Queensland Volume 1, Committee for Economic Development of Australia (CEDA), 2007, p44.

DETA is currently developing an evaluation strategy for the QSP to assess its impact on achieving its objectives.

DETA has set up a QSP Steering Committee responsible for oversight of the QSP at a whole-of-government level. At the departmental level, both DETA and DEIR have units responsible for managing the initiatives and underlying programs under the QSP.

The ten Skills Formation Strategies jointly managed by DETA and DTRDI are governed under an agreement and guiding principles. Reporting on these strategies occurs through the DETA reporting framework.

At DTRDI, reporting to senior management on skills shortages is not formalised and there is limited information sharing between the units.

1.3 Summary of recommendations

RECOMMENDATIONS

It is recommended that:

- 1. DETA takes a lead role across the public sector in enhancing coordination of responses to address skills shortages**
- 2. DETA and DTRDI develop and implement a state specific strategy for addressing skills shortages in professional occupations in consultation with major stakeholders such as the Commonwealth, universities and relevant industry groups.**

It is recommended that DETA:

- 3. further explores suitable research methodologies to assist in the identification of future skills shortages**
- 4. conducts regular analysis on the factors contributing to skills shortages for all occupational areas including professionals, associate professionals and trades**
- 5. ensures more information sharing between the relevant units responsible for identifying skills shortages and formalises reporting on skills shortages from these units to the relevant senior officer/s to ensure consistent understanding of skills shortages across the Department.**

It is recommended that DEIR:

- 6. evaluates the Skilling Queenslanders for Work initiative and its underlying programs on a regular basis.**

It is recommended that DTRDI:

- 7. in consultation with DETA, reviews and enhances the governance arrangements which oversee the industry-specific initiatives and develops a performance reporting framework to measure the efficiency and effectiveness of the initiatives for reporting to senior management.**
- 8. in conjunction with DETA, better matches the scope of the industry-specific initiatives to the two-year timeframe funded to develop industry-specific plans to address the skills shortages in Queensland**
- 9. as part of an ongoing evaluation of the Skills Formation Strategies Program and in conjunction with DETA, undertakes evaluations of the individual industry initiatives, once they have been passed to the relevant industry.**

Section 2

Audit focus

2.1 Reasons for the audit

Having an appropriately skilled workforce to fill job vacancies is essential to Queensland's economic and social prosperity. The existence of a skills shortage negatively impacts on the Queensland Government's ability to achieve its economic and social objectives. It also impacts on businesses and industries in Queensland.

Queensland currently has the tightest labour market it has seen in 30 years. While Queensland's economy is diversifying into new areas, industries across the state are experiencing major skills shortages.⁶

Given the present labour market conditions, it is important the Government takes an active role in identifying, planning for and addressing skills shortages. The nature and extent of skills shortages in Queensland calls for solutions across many policy areas, including economic, employment and vocational education and training policy.

Audit noted the Queensland Government is implementing the *Queensland Skills Plan (QSP)* to address the skills shortages across the State. This plan aims to better match the supply of skilled labour to industry's needs and the economy's demands.

2.2 Context of skills shortages

2.2.1 Defining skills shortages

The term *skills shortage* is defined in terms of the supply of and demand for labour in the labour market.⁷ Skills shortages occur when the demand for workers in a specific occupation exceeds the supply of those who are qualified, available and willing to work under current industry conditions.⁸ Put simply, a skills shortage is when the supply of workers is not sufficient to meet the demand at current rates of pay.⁹

There are various elements to a skills shortage:

- Level 1 shortage – There are few people who have the essential technical skills who are not already using them and there is a long training time to develop the skills.
- Level 2 shortage – There are few people who have the essential technical skills who are not already using them but there is a short training time to develop the skills.
- Skills mismatch – There are sufficient people who have the essential technical skills who are not already using them, but they are not willing to apply for the job vacancies under current wages and conditions.
- Quality gap – There are sufficient people with the essential technical skills who are not already using them and who are willing to apply for the job vacancies, but they lack some qualities that employers consider are important.

⁶ *Queensland's proposed responses to the challenges of skills for jobs and growth – A green paper*, Department of Employment and Training (DET), 2005, p3.

⁷ *What is a skill shortage?*, Report for the National Centre for Vocational Education Research (NCVER), NCVER, 2007, p12.

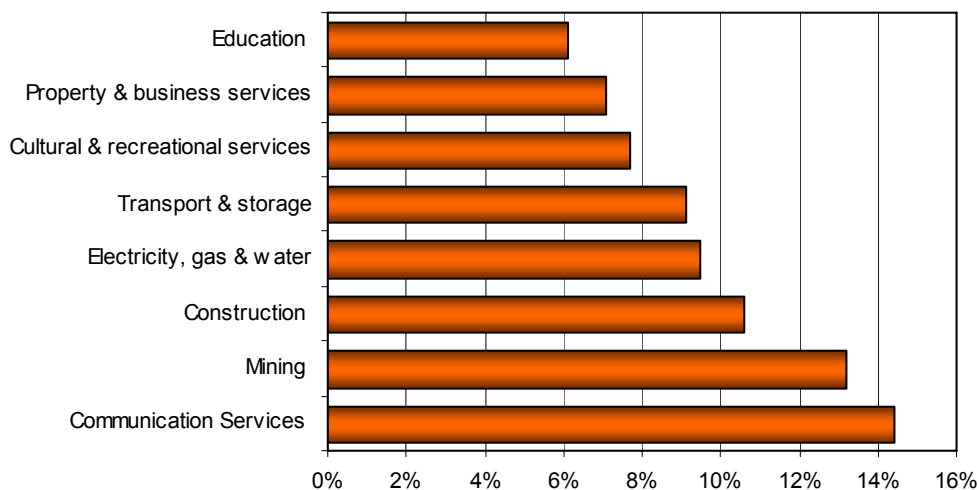
⁸ *Skills shortages: Concepts, Measurement and Implications*, Centre for the Economics of Education and Training, Monash University, 2003, p1.

⁹ *What is a skill shortage?*, Report for the National Centre for Vocational Education Research (NCVER), NCVER, 2007, p7.

2.2.2 Nature of skills shortages in Queensland

Government research points to the existence of a skills shortage in Queensland.¹⁰ Since 2002, Queensland has experienced unprecedented annual growth in several industries. These industries are outlined in Figure 2.1 below:

Figure 2.1 — Percentage growth in Queensland industries



Source: *Skills for Jobs and Growth – A Queensland Government Research Paper*, Department of Employment and Training, 2005, p3.

Fast growing occupations in Queensland include professionals, associate professionals and trades.¹¹ Table 2.1 below outlines the growth in these occupations:

Table 2.1 — Employment by Occupation in Queensland

Occupation	Composition of Queensland Workforce in 2004	Annual Growth between 2002-2004
Professionals	17%	7%
Associate Professionals	12%	4%
Trades people and related workers	14%	6%
Other	57%	n/a
Total	100%	n/a

Source: *Skills for Jobs and Growth – A Queensland Government Research Paper* 2005, p41.

The Commonwealth *Department of Employment and Workplace Relations Vacancy Report* in September 2007 identified a total of 31,375 job vacancies in Queensland, the highest in Australia (30%).¹²

The four occupational groups with the largest number of job vacancies in Queensland were:

- labourers, factory and machine workers (7,288 job vacancies), the highest in Australia and comprising 37% of all such vacancies across Australia
- food, hospitality and tourism (4,286 job vacancies), the highest in Australia and accounting for 36% of all such vacancies across Australia
- accounting, finance and management (2,668 job vacancies), the third highest in Australia and accounting for 21% of all such vacancies across Australia
- sales assistants and storepersons (2,587 job vacancies), the highest in Australia and accounting for 33% of all such vacancies across Australia.¹³

¹⁰ *Skills for Jobs and Growth – A Queensland Government Research Paper*, Department of Employment and Training (DET), 2005, p3.

¹¹ *Skills for Jobs and Growth – A Queensland Government Research Paper*, Department of Employment and Training (DET), 2005, p41.

¹² *Vacancy Report*, Department of Employment and Workplace Relations (DEWR), September 2007 can be found at http://www.workplace.gov.au/NR/rdonlyres/5A45902D-C6B7-42BE-9EC9-94426563B2EE/0/VR_September2007.pdf

¹³ *Vacancy Report*, Department of Employment and Workplace Relations (DEWR), September 2007 can be found at http://www.workplace.gov.au/NR/rdonlyres/5A45902D-C6B7-42BE-9EC9-94426563B2EE/0/VR_September2007.pdf

Together, the total number of job vacancies in these four occupational categories was 16,829 which is over half of all job vacancies in Queensland.

Queensland Government research points to skills shortages in Queensland in the occupations provided in Table 4.2 in Section 4.5.

2.2.3 Causes of skills shortages

The causes of skills shortages are many and complex and vary markedly across industries and jurisdictions. Audit considers that identifying the causes of skills shortages is a necessary step before determining how to respond to the issue.

Queensland's current skills shortages are the result of significant changes in employment and the nature of work over the last decade stemming from:

- the development of a globalised economic system
- the diversification of Queensland's industry base
- very strong population growth.¹⁴

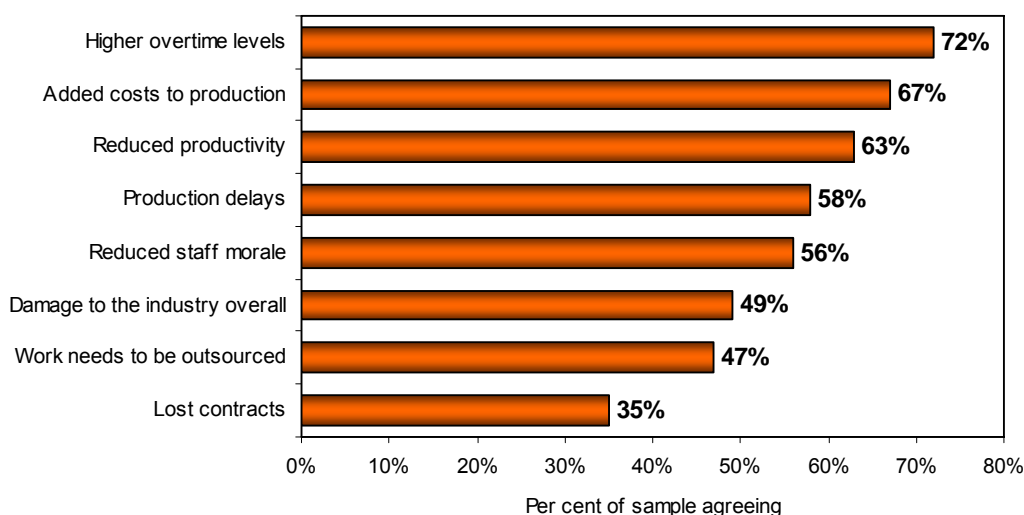
The critical structural changes affecting the supply of skilled labour have been the:

- sudden and dramatic change in demand for workers in occupations that require specialised and new skills
- very strong growth in professional and associate professional employment which has outpaced the take-up of training for these sectors of the labour market
- inability of the education and training systems to provide an adequate response to these changes
- significant shortfall in the number of Queensland workers who have been qualified through the vocational education and training (VET) sector
- trend towards early retirement and high rates of part-time employment
- ageing of the population.¹⁵

2.2.4 Impact of skills shortages

Skill shortages have a range of impacts on Australian and Queensland employers as shown in Figure 2.2.

Figure 2.2 — Impact of skills shortages on Australian and Queensland employers, 2005



Source: World Class Skills for World Class Industries, Australian Industry Group, 2006, p.52.

¹⁴ Skills for Jobs and Growth – A Queensland Government Research Paper, Department of Employment and Training (DET), 2005, p.15.

¹⁵ Skills for Jobs and Growth – A Queensland Government Research Paper, Department of Employment and Training (DET), 2005.

This figure shows that the greatest impact of the skills shortages on employers is higher overtime levels followed by added cost to production and reduced productivity. Also, more than half of employers are dealing with reduced staff morale and over a third of employers are losing contracts or additional business opportunities due to skills shortages.

2.3 Audit objective

The objective of this performance management systems audit (PMSA) was to determine whether the selected departments have suitable frameworks and appropriate systems in place to identify and address the skills shortages facing industries and businesses in Queensland.

2.4 Audit scope

2.4.1 Departments subject to audit

The PMSA on 'Addressing skills shortages in Queensland', selected the following departments:

- Department of Education, Training and the Arts (DETA)
- Department of Employment and Industrial Relations (DEIR)
- Department of Tourism, Regional Development and Industry (DTRDI) (formerly the Department of State Development).

All three departments play a significant role in addressing skills shortages in Queensland industries and businesses.

2.4.2 Time period covered by the audit

The fieldwork for this audit was conducted from July to September 2007. The time period covered by this audit relates to the administrative arrangements in place at the time of the audit to address the skills shortages in Queensland. Audit also noted important developments in the area of existing and emerging skills shortages in the state and where such developments have impacted upon departmental systems, processes and practices.

2.4.3 Restrictions in audit scope

The audit scope does not extend to an examination of:

- construction and composition of DETA's forecasting model for future skills shortages and its underlying assumptions
- quality of education and training programs delivered by the public and private sectors
- skills shortages in the Queensland public service
- Commonwealth Government policy and programs on workforce skills requirements in Queensland
- complaints handling and the nature of those complaints made against training providers.

Section 3

Audit findings and recommendations

This Section sets the scene on current whole-of-government initiatives and outlines the audit findings on actions being undertaken by the selected departments and resulting recommendations.

3.1 Whole-of-government initiatives

3.1.1 Queensland Skills Plan

In 2006, the Queensland Government commenced implementation of the *Queensland Skills Plan* (QSP) to address skills shortages across the State. This Plan outlines a policy framework designed to better match the supply of skilled labour to industry's needs and the economy's demands and sets out a range of actions the Government will take to implement these policies. These actions aim to provide for better skills forecasting and planning, a more responsive training system and improved workforce management strategies. Figure 3.1 below outlines the four key elements of the QSP. Elements of Actions number 8 and 21 were reviewed during the course of the audit. Further details about the other action items are included in Section 4.3.



Vocational education and training system

Vocational education and training (VET) is the main training path for the trades profession. A key policy focus of the Queensland Government is on renewing and increasing the state's supply of educated and skilled people through the VET system. It provides individuals with the skills required to enter the workforce for the first time, to re-enter the workforce, to retrain for a new job and to upgrade from an existing job. The VET sector operates within a national framework with each State's policy emphasising different aspects of the system and each State managing particular VET initiatives.

Tertiary system

Most people who work in professional occupations are educated through the tertiary system. Audit found no specific policy framework in place within the departments audited to address shortages in professional occupations, e.g. doctors, engineers and accountants. Audit notes that qualifications acquired through universities are largely a responsibility of the Commonwealth Government. However, audit recognises the importance of the interaction between the tertiary and VET education systems in facilitating recognition of prior learning and acquiring additional educational qualifications.

Audit could not be provided with any documented evidence of formal consultation protocols between the Queensland and Commonwealth Governments on addressing professional skills shortages.

Communication and coordination between public sector entities

Audit noted some degree of communication between the three departments audited. DETA is responsible for coordinating the implementation and monitoring of the QSP. DTRDI and DEIR are responsible for implementing various initiatives under the QSP and are required to report regularly on the progress of the initiatives they are responsible for to the QSP Steering Committee. This Committee was formally endorsed in February 2007 and is chaired by the Director-General of DETA. The role of the Committee is to oversee the overall monitoring, review, evaluation and progress reporting of the initiatives and programs under the QSP.

While these three departments communicate via the required reporting process to the QSP Steering Committee, audit could not find any documented evidence of coordination across the wider Queensland public sector to address skills shortages. Departments are managing skills initiatives independently despite obvious inter-relationships and commonalities across some of the skills initiatives. Whole-of-government systems and processes are not in place to address skills shortages across Queensland.

The lack of coordination and communication between departments increases the risk of inefficiency. This can result in duplication of work, misalignment of departmental strategies, inefficiencies in resource usage, and government objectives not being met on time.

3.1.2 CEO Committee - A Progressive and Productive Economy

A CEO Committee – *A Progressive and Productive Economy* (the CEO Committee) was established in March 2007. As part of its work to improve productivity, the CEO Committee is focusing on addressing impediments to labour productivity, including skills shortages. Building on a mechanism to develop a whole-of-government understanding of specific shortages and their causes, the CEO Committee aims to coordinate decision making and policy responses across the Queensland public sector and address those skills shortages that impede economic development in Queensland.

Audit understands that the CEO Committee is preparing a whole-of-government response to skills shortages.

3.1.3 Conclusion

The Queensland Government through DETA is implementing the QSP which outlines a policy framework designed to better match the supply of skills to the labour needs of industry and demands of the economy. It sets out a range of actions the government will take to implement these policies. There is however no specific policy framework in place to address shortages in professional occupations.

While there is evidence of coordination and collaboration between the three departments audited in implementing the QSP, coordination and collaboration across the Queensland public sector to address the skills shortages is not evident. In practice, departments are managing skills initiatives independently despite obvious inter-relationships or commonalities across some of the skills initiatives.

Greater involvement and coordination between public sector entities would assist departments to more efficiently and effectively respond to skills shortages at the whole-of-government level.

RECOMMENDATIONS

It is recommended that:

- 1. DETA takes a lead role across the public sector in enhancing coordination of responses to address skills shortages**
- 2. DETA and DTRDI develop and implement a state specific strategy for addressing skills shortages in professional occupations in consultation with major stakeholders such as the Commonwealth, universities and relevant industry groups.**

3.2 Departmental overview

3.2.1 Department of Education, Training and the Arts

The purpose of DETA is to engage Queenslanders in lifelong education and training and to build a strong arts and cultural sector. The Department has a major role in developing training programs and initiatives to address skills issues and is responsible for implementing the QSP.

The QSP is a four-year \$1b plan which aims to better match the supply of skills with industry needs and economic demands. Details of the QSP are outlined in Figure 3.1 in Section 3.1.1 and Table 4.1 in Section 4.3.

The Queensland Government has allocated \$118m for DETA to continue implementing the QSP in 2007-08.¹⁶

3.2.2 Department of Employment and Industrial Relations

The role of DEIR is to lead policy development and deliver services that ensure safe, fair and productive work environments which contribute to the social and economic wellbeing of Queenslanders. The Department aims to increase labour market participation in Queensland, with a focus on disadvantaged groups.

DEIR is responsible for implementing the Skilling Queenslanders for Work initiative under the QSP. The Skilling Queenslanders for Work initiative aims to maximise the skilled workforce by making funding available to organisations to run employment and training projects for disadvantaged jobseekers. In 2007-08, \$81.75m has been allocated to provide skilling and employment opportunities for approximately 17,000 Queenslanders.¹⁷

3.2.3 Department of Tourism, Regional Development and Industry

DTRDI is the Government's main economic development agency and has a key role in broadening and strengthening Queensland's economic performance and accelerating opportunities for growth. A long term focus of the department is on increasing the productivity of the business sector and supporting those industries that compete in the global economy. DTRDI also provides services to develop emerging industries.

With respect to addressing skills shortages in Queensland, the Department in conjunction with DETA manages the implementation of a number of Skills Formation Strategies, which form part of the QSP. Skills Formation Strategies help align skills supply, workforce development and business strategy through the collaborative action of industry, government and other relevant stakeholders.

¹⁶ Queensland State Budget 2007-08 MPS, Minister for Education and Training, p6.

¹⁷ Queensland State Budget 2007-08 MPS, Minister for State Development, Employment and Industrial Relations, p2-2.

3.3 Identifying skills shortages

DETA is the lead department responsible for identifying skills shortages in Queensland. The audit examined the relevance and reliability of data used in the analysis and forecasting as well as systems that identify factors contributing to skills shortages. The audit did not examine the construction and composition of DETA's forecasting model for future skills shortages and its underlying assumptions.

3.3.1 Relevant and reliable data to identify skills shortages

DETA has a number of systems in place to identify current skills shortages by occupation at the state level. These systems include Smart Job Info, Smart Area Info and analysis conducted by the Department's Labour Market Research Unit.

DETA obtains skills supply data from a number of sources including TAFE, public funded private training providers and the National Centre for Vocational Education Research. Supply data is analysed at the individual occupation level in order to match with skills demand data.

The Smart Job Info and Smart Area Info systems support skills demand data. The main source of this demand data is the Australian Bureau of Statistics (ABS) monthly *Labour Force Survey* which is based on a small sample, approximately 20,000 people Australia-wide. Small population survey samples result in high standard errors which leads to quality issues with the demand data. To reduce these errors, DETA uses a four quarter rolling average to smooth out the results.

Audit was advised that due to high standard errors, little or no confidence can be placed in year-to-year movements in employment numbers where fewer than 3,500 persons are employed within an occupation in Queensland. This precludes detailed analysis of the majority of occupations in Queensland e.g. economists, toolmakers and electronic instruments tradespersons. In an attempt to mitigate the errors, DETA aggregates the data, which has the effect of reducing the value of data in terms of performing a demand analysis.

Audit understands that last year the Commonwealth Department of Employment and Workplace Relations (DEWR) asked ABS to look into the mechanics of building a more complex survey. ABS estimated it would cost \$5m to quantify skills shortages and the result would not be available for three years. Audit was advised that there are currently no plans in place to proceed with this.

The Smart Job Info and Smart Area Info systems support demand data for 340 occupations. Audit found detailed supply and demand analysis for individual occupations is only possible at the state level and not at the regional level. Queensland is divided into six regions for the purpose of skills demand analysis. At the regional level, skills demand data for individual occupations is available through Smart Area Info, however supply data is not available. This means demand and supply analysis at the regional level can only be done for groups of occupations (e.g. general practice medical services) rather than individual occupations (e.g. specialist medical services).

Better practice case study 1

Department of Education, Training and the Arts: Smart Job Info

DETA has developed a system called Smart Job Info which aims to assist jobseekers to make informed employment and training decisions by providing them with access to greater job market information. For example, a person can find out the skills demand and trends of an occupation that are of interest to him/her. The system is implemented across Queensland and can be accessed by attending Skilling Solutions Queensland customer service centres.

Smart Job Info utilises a range of data sources to identify skills shortages including ABS census data, ABS labour force survey data, employee survey data, DEWR skill vacancy survey data and Monash employment projections.

Key elements of Smart Job Info:

- Data is available on 340 occupations for selection in the occupational search
- Three reports can be generated for each occupation including:
 - Job Snapshot – provides an overview of the selected occupation
 - Job Trends Brief – shows how features of the occupation have changed over time
 - Regional Snapshot – provides a geographical overview of the occupation.

Why is this a better practice example?

Smart Job Info assists jobseekers to secure employment by providing more information on occupations in the job market including Queensland specific skills demand data. DETA anticipates this will lead to a better match between supply and demand in the job market, between jobseekers or those seeking training and employers wanting to fill vacancies. Smart Job Info also helps people to assess their suitability for a particular occupation, providing reports with information and graphs that are clear and easy to understand.

3.3.2 Projections on skills shortages

Although DETA is able to provide limited short-term forecasts on skills shortages, audit noted that long-term forecasting on future skills shortages is not possible due to a lack of reliable data.

Consistent with research undertaken by audit, DETA advised that:

- detailed projections on skills shortages are not reliable
- estimating labour demand is affected by the lack of robust data sources
- forecasting is complex and there is no simple reliable measure for skills shortages. It is increasingly difficult to predict the skills that will be in highest demand even one or two years into the future. The pressure to quantify skills shortages has occasionally led to unrealistic projections being made.

While DETA uses the Monash and the United States' Bureau of Labour Statistics models where possible, the lack of robust data limits its ability to accurately project future skills shortages. As a result, this restricts DETA's ability to plan strategically to meet future skills demand. Audit noted that the Department conducts limited short-term forecasting (approximately three years) in an attempt to match the provision of training to areas of high demand. This short-term trend prediction is based on current and past demands.

Audit considers it is important for DETA to further explore suitable research methodologies to assist its identification of future skills shortages. Reliable long-term forecasts would enable the Department to better plan strategically and make the training provision more demand responsive.

RECOMMENDATION

3. **It is recommended that DETA further explores suitable research methodologies to assist in the identification of future skills shortages.**

3.3.3 Identify industry, employer and community needs relating to workforce skills

Audit found that DETA has mechanisms in place to identify industry, employer and community needs relating to workforce skills.

These mechanisms include the Skills Formation Strategies and the Industry Shares Model.

Skills Formation Strategies provide a framework for the Department and other government stakeholders to engage with industries, employers and communities to identify, analyse and address the reasons for skills shortages. The Department currently oversees 28 Skills Formation Strategies and provides \$240,000 investment over two years for each of the strategies. The strategies are demand driven, sometimes as a result of proposals from industries. At the commencement of each strategy, a skills audit is conducted to identify the causes and skill needs of that industry.

The purpose of the Industry Shares Model is to direct more of DETA's training investment to the high demand Industry Training Groups (ITG). To assess the demand for each ITG, the model uses assessment criteria that are based on needs of the industries, employers and areas of skills shortages. This means DETA will invest more training effort into industry/occupational areas with higher skills demand.

There are other industry engagement mechanisms that DETA has implemented. These include Centres of Excellence, Industry Skills Alliances and Industry-Government Skilling Partnerships.

3.3.4 Identify factors contributing to skills shortages

Audit found that DETA has suitable systems and processes in place to identify factors contributing to skills shortages. These include:

- Skills Formation Strategies which facilitate collaboration between the government and industries to identify the factors contributing to skills shortages
- labour market research.

The Department's Labour Market Research Unit is able to identify factors contributing to skills shortages. However, audit noted that monitoring of the factors contributing to skills shortages has not been regularly conducted. In relation to identifying and monitoring of factors contributing to:

- professional skills shortages - this was conducted for the first time in December 2006
- trade and associate professional skills shortages - the last time this was conducted was two years ago for *Queensland's proposed responses to the challenges of skills for jobs and growth – A green paper*.

DETA advised that they intend to conduct annual analysis on factors contributing to skills shortages in all occupational areas including professionals, associate professionals and trades. Audit considers such regular analysis would assist the Department in having more up to date information on the factors contributing to skills shortages and to better address these shortages according to the current needs in the state.

RECOMMENDATION

- 4. It is recommended that DETA conducts regular analysis on the factors contributing to skills shortages for all occupational areas including professionals, associate professionals and trades.**

3.4 Addressing skills shortages

All three departments audited, DETA, DEIR and DTRDI have some role in addressing skills shortages in Queensland. This Section outlines the framework and systems each of these departments has in place to address skills shortages as well as improvement opportunities identified for each department.

3.4.1 Department of Education, Training and the Arts

Queensland Skills Plan

DETA has a reliable evidence based strategy to understand and respond to skills shortages. The Department's main initiative in addressing skills shortages is the QSP. The QSP was developed based on research and analysis as documented in *Skills for Jobs and Growth – A Queensland Government Research Paper*¹⁸ and *Queensland's proposed responses to the challenges of skills for jobs and growth – A green paper*.¹⁹

Governance arrangements and performance framework for addressing skills shortages

DETA has a performance framework in place to monitor and report on the progress of the QSP. This includes the oversight role performed by the QSP Steering Committee which was formally endorsed in February 2007.

The QSP Steering Committee's role is to:

- oversee the overall monitoring, review, evaluation and progress reporting of QSP initiatives, strategies and programs
- monitor progress of achievements planned for each quarter
- drive further development and implementation of the reforms and provide a forum for engagement of key stakeholders.

The Department also has a QSP coordination unit responsible for monitoring progress under the QSP. The unit organises the monthly QSP Steering Committee meetings and manages the reporting processes to the Committee.

Apart from monthly reporting to the QSP Steering Committee, other regular reporting on the progress of QSP includes:

- six monthly reporting to the Cabinet Budget Review Committee
- external reporting to the public through the quarterly *Queensland Skills Plan Progress Report*.

Audit noted that the Department is in the process of developing an evaluation strategy for the QSP to assess its impact.

DETA also has processes in place to monitor the 28 Skills Formation Strategies, which is one of the 24 action plans under the QSP. Monitoring mechanisms include:

- bi-monthly reports which outline issues for each of the strategies
- six monthly reports on training outcomes and workforce development
- the Department's skills formation team holds meetings with individual project officers responsible for each strategy and the host organisation of the industry/strategy on a monthly basis.

The Labour Market Research Unit and the Training Information Systems Unit are responsible for identifying skills shortages. While the General Manager, VET Policy Development oversees these two units, audit could not be provided with documented evidence of regular formal reporting from these units to this position. Also, there is limited information sharing between these two units.

Audit considers there needs to be more information sharing between the relevant units as well as regular formal reporting on skills shortages from these units to the General Manager, VET Policy Development. This would assist in ensuring a consistent understanding of skills shortages across the Department.

¹⁸ *Skills for Jobs and Growth – A Queensland Government Research Paper*, Department of Employment and Training (DET), 2005.

¹⁹ *Queensland's proposed responses to the challenges of skills for jobs and growth – A green paper*, Department of Employment and Training (DET), 2005.

Translating current skills needs into training programs

DETA has suitable systems and processes in place to translate current skills needs into training programs. DETA uses information from the Industry Shares Model, industry advice and regional reports and translates this into training.

DETA began using the Industry Shares Model in 2007 to ensure training funds are genuinely targeted to improving employment opportunities and priority industry sectors including areas of skills shortages. The Industry Share Model uses five assessment criteria based on the needs of the industries, employers and areas of skills shortages. The result of analysis from the model informs DETA as to whether there is an over or under supply of training investment in a particular ITG. This then results in increasing or decreasing the training investment for that ITG.

RECOMMENDATION

- 5. It is recommended that DETA ensures more information sharing between the relevant units responsible for identifying skills shortages and formalises reporting on skills shortages from these units to the relevant senior officer/s to ensure consistent understanding of skills shortages across the Department.**

3.4.2 Department of Employment and Industrial Relations

Skilling Queenslanders for Work initiative

DEIR is responsible for managing the Skilling Queenslanders for Work initiative under the QSP which commenced in 2006.

The Skilling Queenslanders for Work initiative helps address emerging skills shortages by assisting unemployed people, particularly disadvantaged job seekers, into the workforce. The Queensland Government has allocated \$81.75m to the initiative in 2007-08.²⁰

In relation to evaluating the effectiveness of this initiative and its underlying programs, audit noted no evaluation has been performed yet as the initiative is still at an early stage. DEIR however advised that they plan to conduct an overall evaluation of the initiative in the future. The Department also advised that they intend to conduct an evaluation every three years on the more significant programs within the initiative.

Governance arrangements and performance framework for addressing skills shortages

Audit found that DEIR has in place suitable governance arrangements for the Skilling Queenslanders for Work initiative. This includes having in place units that are responsible for the initiative:

- The South East Queensland Delivery Unit and Regional Queensland Delivery Unit together with seven regional offices are responsible for the delivery of the programs.
- The Policy Communication & Support Unit, Employment and Indigenous Initiatives, is responsible for monitoring and reporting on the progress of the programs.

The Department's General Manager, Employment and Indigenous Initiatives, oversees the Skilling Queenslanders for Work initiative and underlying programs. At the whole-of-government level, the QSP Steering Committee oversees the progress of the initiative.

Audit reviewed two programs (Get Set for Work and First Start) under the Skilling Queenslanders for Work initiative to determine whether DEIR has monitoring mechanisms and a performance framework to support these programs.

Audit found that DEIR has suitable systems and processes in place to monitor the Get Set for Work and First Start programs, including:

- regular reporting from the funded organisation/program provider to DEIR on participant information as part of the contractual obligations with DEIR
- engaging the Treasury Department's Office of Economic and Statistical Research to conduct quarterly surveys on all of the participants who have completed the program. The survey results are reported annually in the Ministerial Portfolio Statement (MPS).

²⁰ Queensland State Budget 2007-08 MPS, Minister for State Development, Employment and Industrial Relations, p2-2.

Audit found there is an adequate performance framework in place for the Get Set for Work and First Start programs. Key performance indicators (KPIs) have been established for both these programs. These KPIs are reported in both the MPS and internal quarterly reports to senior management. Progress on these programs is also reported to Cabinet on a six monthly basis through the QSP Steering Committee.

RECOMMENDATION

6. It is recommended that DEIR evaluates the Skilling Queenslanders for Work initiative and its underlying programs on a regular basis.

3.4.3 Department of Tourism, Regional Development and Industry

Skills Formation Strategies

DTRDI has a framework in place for addressing skills shortages in Queensland. The framework, which is developed by DETA, is industry-specific and takes the form of Skills Formation Strategies.

DTRDI also has systems and processes in place to develop industry-specific plans to address skills shortages in Queensland. In developing these industry-specific plans, the Department works closely with key industry stakeholders to identify skills and training requirements and potential sources of labour, and supports the industry to take a leadership role in addressing how that industry can best meet its workforce requirements.

Audit found that DTRDI is currently managing ten industry-specific Skills Formation Strategies directed towards addressing the present skills shortages in Queensland. These strategies are at various stages of implementation. Audit also found that a key outcome of each strategy is the establishment of a steering committee to develop and implement an industry-specific plan to meet the industry's workforce requirements.

Better practice case study 2

Department of Tourism, Regional Development and Industry: Framework for the Pharmaceuticals and Nutraceuticals Skills Formation Strategy

Skills Formation Strategies aim to attract, develop and retain a highly skilled workforce, forming part of the Queensland Government's four-year \$1b QSP. These strategies have a timeframe of two years and are developed and implemented with facilitation of a project officer who is appointed for the duration of the strategy. The Pharmaceuticals and Nutraceuticals Skills Formation Strategy is one of ten Skills Formation Strategies implemented by DETA and DTRDI. The framework established for this strategy consists of the Queensland Pharmaceuticals and Nutraceuticals Industry Forum (QPNIF) which is an industry-led action group driving research and strategies to address the skill needs of the Queensland pharmaceuticals and nutraceuticals industry.

Steps for the framework:

- initiating the skills formation strategy
- bringing stakeholders together through the industry forum
- setting industry forum objectives
- taking action through facilitation of initiatives
- implementing innovative workforce development solutions.

The QPNIF brings industry stakeholders together with representatives from universities to large industry associations. Serving as a plan for a skilled workforce, the forum includes development of comprehensive objectives to complement its activities to skill, attract, retain and develop the best possible workforce for the industry. Such objectives include assisting development of effective collaboration mechanisms, developing curricula in consultation with industry to enhance job readiness and to meet emerging industry requirements, and maximising benefit from the Commonwealth and other Queensland Government initiatives.

The next step is to establish actions for realising the forum's objectives, with initiatives facilitated in the areas of skilling, attracting, retaining and utilising. Examples of these include seeking opportunities for cadetships and fellowships, profiling the industry and its career opportunities, working with the industry to identify future skills needs early, and identifying opportunities for job redesign and job restructuring.

Following on from this, relevant industry workforce development initiatives are implemented in conjunction with key stakeholders, examples of which include promoting the industry and career options, changing industry culture and establishing industry-academic partnerships.

Why is this a better practice example?

The framework for the Pharmaceuticals and Nutraceuticals Skills Formation Strategy represents better practice because it allows the pharmaceuticals and nutraceuticals industry to continue developing and implementing strategies to address their skilling needs while also addressing other workforce issues. The framework also allows industry to take ownership of their skilling, attraction and retention needs after the strategy has been transitioned.

Audit identified improvement opportunities in relation to the industry-specific plans being developed by DTRDI in collaboration with key industry stakeholders. Firstly, the scope of at least four of the strategies is too broad to develop effective industry-specific plans due to the varying needs of numerous sub-sectors within those industries. Secondly, the strategies do not specifically address the immediate needs of those industries. However, the immediate needs of those industries are in part being met through a migration program administered by DTRDI, which is designed to attract individuals with skills that are unable to be filled by the local labour market under the Commonwealth General Skilled Migration Program. Finally, the two-year period taken to develop an industry-specific plan may result in the final plan not being as relevant by the end of that period, particularly given the ongoing changes in the Queensland labour market and economy.

Governance arrangements and performance framework for addressing skills shortages

Audit found improvement opportunities in relation to DTRDI's governance structures to address industry-specific skills shortages in Queensland. Audit noted that the Department does not have an integrated governance structure in place to oversee the management and progress of the ten industry-specific initiatives nor a performance framework to measure the efficiency and effectiveness of these initiatives. There are also no formal monitoring processes in place for two of the initiatives where the industry-specific plan is now being managed by the industry sector. Appropriate governance structures are necessary to effectively manage and monitor the ten industry-specific initiatives. The absence of an integrated governance structure may contribute to deliverables being overlooked or inefficiencies associated with the duplication of effort.

DETA has recently undertaken an evaluation of the State-wide Skills Formation Strategy (SFS) Program. However, there was no documented evidence of evaluations having been conducted to assess whether the implementation of the industry-specific initiatives are meeting the industry's workforce requirements. A post project evaluation is essential to identify and apply learnings to strengthen the current deliverables and facilitate continuous improvement in planning for future initiatives.

RECOMMENDATIONS

It is recommended that DTRDI:

- 7. in consultation with DETA, reviews and enhances the governance arrangements which oversee the industry-specific initiatives and develops a performance reporting framework to measure the efficiency and effectiveness of the initiatives for reporting to senior management**
- 8. in conjunction with DETA, better matches the scope of the industry-specific initiatives to the two-year timeframe funded to develop industry-specific plans to address the skills shortages in Queensland**
- 9. as part of an ongoing evaluation of the Skills Formation Strategies Program and in conjunction with DETA, undertakes evaluations of the individual industry initiatives, once they have been passed to the relevant industry.**

3.5 Departmental responses

3.5.1 Department of Education, Training and the Arts

Director-General's response

In a response dated 1 November 2007 the Director-General stated:

Recommendation 1

"This recommendation clearly reasserts that DETA has the lead role in enhancing coordination of responses to skills shortages.

The CEO Committee for a Productive and Progressive Economy has established an inter-departmental Labour Market Advisory Committee to lead the coordination of information and research on skill shortages and through the PPE Committee, provide advice to government. The Steering Committee will be chaired by DETA and will be supported by the department's Labour Market Research Unit. A research agenda, to be developed through the Labour Market Advisory Committee, will focus research resources on a greater understanding of the formation and transition of skills through the economy and on impediments to labour market adjustment. Agencies represented on the committee are: DETA, DEIR, DTRDI, Office of the Public Service Commissioner, Premier and Cabinet, Queensland Treasury, Queensland Health, Main Roads, Natural Resources, Mines and Energy and Primary Industries. The inaugural meeting of the Labour Market Advisory Committee will be in November 2007."

Recommendation 2

"Through the CEO Committee for a Productive and Progressive Economy DETA is leading the development of a strategy to alleviate skill shortages in the professions. This will build on and complement the QSP action relation to refocussing training planning and funding onto higher level qualifications, introducing new high level vocational graduate certificates and diplomas, and encouraging links with university qualifications (Action 24).

It is expected that DETA will be in a position to provide advice to government, through the PPE Committee, on this matter in early 2008."

Recommendation 3

"... This activity would occur under the auspices of the Labour Market Advisory Committee."

Recommendation 4

"DETA will lead this activity through the newly established inter-departmental Labour Market Advisory Committee."

Recommendation 5

"Measures to address this recommendation include the following:

- *Relevant business units in DETA will be collaboratively involved in the identification and analysis of skill shortages; and*
- *The outputs of the newly established inter-departmental Labour Market Advisory Committee, including information on skill shortages will be periodically tabled at the Department's Executive Management Group meeting and disseminated to senior executives of the relevant DETA business units."*

Recommendation 7

"DETA has recently reviewed the performance framework for all Skills Formation Strategies based on the recommendations of an external consultant's report and is in the process of finalising this framework which will be rolled out to all project managers, including those located in DTRDI.

The opportunity here is for a clearer understanding between the two agencies of the governance framework that DETA has in place as the lead agency for the Skills Formation Strategies (as articulated in the agreement between the two agencies) and how reporting frameworks within DTRDI can be enhanced to supplement this framework.

Evaluations of Skills Formation Strategies would also form part of ongoing reporting and evaluation processes as part of the overall Queensland Skills Plan implementation and evaluation."

3.5.2 Department of Employment and Industrial Relations

Director-General's response

In a response dated 1 November 2007, the Director-General stated:

Recommendation 6

"... It should be noted that skills shortages are not just about professional and trade shortages. A shortage of people is also a key issue and a declining labour supply growth and an ageing population are contributing to this overall supply issue. DEIR has worked with Queensland Treasury and DETA on labour supply research, eg. ageing.

Under section 3.4.2, it is stated that an evaluation of the Skilling Queenslanders for Work initiative has not occurred due to its early stage of implementation. It should be noted that its predecessor, the Breaking the Unemployment Cycle, has been reviewed in intervals since its inception in 1998. Systemic and strategic changes were made to adjust to labour market needs and program outcomes. This will also occur for the Skilling Queenslanders for Work initiative."

3.5.3 Department of Tourism, Regional Development and Industry

Director-General's response

In a response dated 1 November 2007, the Director-General stated:

Recommendation 2

"Your report refers to the Progressive and Productive Economy CEO Committee which I co-chair. As you are aware, that Committee is working across Government to develop integrated responses to minimise the impact of skills and labour shortages on Queensland's productivity and economic growth. Consistent with your recommendation, this work will include strategies to address professional skill shortages in consultation with industry, university and other relevant stakeholders. As part of the work progressing through the CEO Committee, Migration and Skilled Recruitment Queensland (MSRQ), within DTRDI, has been working effectively on professionals skills attraction and recruitment initiatives. The Department will seek to build on this program of work through its contribution to a whole-of-Government professional skills strategy."

Recommendation 7

"The Department has a strong governance and management system via the sectoral strategies and in effect a cross agency reporting mechanism on Skills Formation Strategies (SFS) into DETA. DETA as the program manager and lead agency with responsibilities under the Queensland Skills Plan for SFS, requires performance reporting quarterly.

Given the whole-of-Government focus on skills, DTRDI recognises there would be benefit from a further report to senior management on the effectiveness and efficiency of all SFS as well as other skill's initiatives being implemented within this Department. Mechanisms will be established to enable a whole of Department report on skill's activities."

Recommendation 8

"DETA has lead responsibility for this initiative and the broad program development and management. DETA's recent evaluation of the State-wide SFS program will subsequently make recommendations to refine the SFS program.

DETA will therefore lead the implementation of this recommendation and DTRDI will contribute and respond to recommendations where appropriate."

Recommendation 9

"DETA has confirmed its status as the lead agency for skills issues and therefore responsible for ongoing evaluation activity. While DTRDI has conducted evaluations of the SFS that are currently being implemented, DETA will develop ongoing evaluation mechanisms with industry.

DTRDI will therefore contribute and respond to recommendations to ensure responses to skills issues link effectively into broader industry development and productivity initiatives under the responsibility of this agency."

3.5.4 Treasury Department

Under Treasurer's response

In a response dated 6 November 2007, the Under Treasurer stated:

"I agree with your comment that having an appropriately skilled workforce is essential to Queensland's economic growth and note your recommendations regarding improvements which could be made to ensure better co-ordination across Government, better supply and demand analysis (through the collection of better data) and regular evaluation of current programs.

Similar issues have recently been identified by the Progressive and Productive Economy CEO Committee. Solutions to these issues are yet to be considered in detail by Cabinet, although a Steering Committee has been formed to facilitate co-ordination, information and decision-making in relation to skill shortages on a whole-of-Government basis. New work units are also being proposed to develop an approach for identifying skill shortage occupations (including professional occupations), skill supply issues and prospective areas which support Queensland's economic development.

Given the size of the Government's investment in the Queensland Skills Plan, it is important the objectives of the Plan are achieved. Your audit has highlighted areas of risk for the Government, but I am confident that most of your recommendations will be addressed either by the work of the CEO Committee, or through the regular consideration by Cabinet of the effectiveness of the Skills Plan."

Section 4

Appendix

4.1 PMSA approach

The legislative basis for this audit is section 80 of the *Financial Administration and Audit Act 1977* (FA&A Act). A performance management systems audit (PMSA) is an independent examination of whether an entity or part of an entity's activities have performance management systems in place to enable management to assess whether its objectives are being achieved economically, efficiently and effectively. While a PMSA will not review or comment on Government policy, it may extend to include a focus on the entity's performance measures, and whether in the Auditor-General's opinion, the performance measures are relevant, purposeful and fairly represent the entity's performance.

The intent of a PMSA is to provide independent assurance to the Parliament, and to act as a catalyst for adding value to the quality of public administration by assisting entities in the discharge of their governance obligations. A PMSA has a focus on ascertaining whether the systems and controls used by management to monitor and measure performance, assist the entity in meeting its stewardship responsibilities.

The statutory office of the Auditor-General, as the external auditor for the Parliament, is established pursuant to the FA&A Act. The Auditor-General is independent and is not subject to direction by any person. Although the Auditor-General takes note of an entity's perspective, the scope of a public sector audit is at the sole discretion of the Auditor-General. The FA&A Act prescribes that the Auditor-General may conduct an audit in the way the Auditor-General considers appropriate.

The Queensland Auditor-General's *Guidelines for the Conduct of Audits of Performance Management Systems* are available at www.qao.qld.gov.au.

4.2 Audit methodology and criteria

4.2.1 Audit methodology

The following audit methodology was adopted:

- examination of key documents developed by selected departments
- interviews with key public sector stakeholders involved in identifying, planning for and addressing the workforce skills requirements for Queensland industries and businesses
- examination of the type of data collected and the quality of that data in relation to existing and emerging skills shortages in Queensland
- preparation of a report to Parliament on the findings and resulting recommendations of the audit.

4.2.2 Audit criteria

To determine whether suitable frameworks and systems are in place at the selected departments, this audit was conducted in two phases.

Phase one

Phase one of the audit involved determining the coverage and scope of the audit. In conducting this phase, the following information was sought from DETA, DEIR and DTRDI on the skills shortages being experienced by Queensland industries and businesses:

- current drivers for the present skills shortages in Queensland
- roles and responsibilities of the major players responsible for managing the skills shortages in Queensland
- the policies, strategies, initiatives and programs currently in place for addressing the skills shortages in Queensland.

Phase two

Based on the data gathered from phase one, phase two involved reviewing the framework and systems in place by DETA, DEIR and DTRDI in the following areas:

- the systems in place to identify existing and emerging skills shortages in Queensland
- whether an appropriate framework is in place to address existing and emerging skills shortages in Queensland.

4.3 Queensland Skills Plan - list of action plans

Table 4.1 — Queensland Skills Plan – list of action plans

Key Elements	Action Plan
<i>A training system that works for Queensland</i>	<ol style="list-style-type: none"> 1. Growing the Queensland VET sector 2. Reforming the Queensland TAFE system 3. Restructuring TAFE across Queensland and creating new specialised institutes 4. Nominating TAFE lead institutes for key industries 5. Improving coordination of TAFE's product development 6. Supporting TAFE Queensland staff 7. Investing in TAFE infrastructure and ICT
<i>Training that works for industries and employers</i>	<ol style="list-style-type: none"> 8. Giving industry ownership of skills development through new customised skills strategies 9. Supporting skills development for small business 10. Age proofing our workplaces through the new Experience Pays Awareness Strategy
<i>Training that works for the trades</i>	<ol style="list-style-type: none"> 11. Dealing with the demand for skilled tradespeople 12. Reinventing the trades through new occupational pathways 13. Attracting more people into apprenticeships 14. Providing improved support to apprentices during their training 15. Making apprenticeships work better for apprentices and employers 16. Introducing up-front training options 17. Subsidising workplace trainer and assessor training for tradespeople 18. Reviewing the role of group training organisations
<i>Training that works for individuals</i>	<ol style="list-style-type: none"> 19. Customising training to meet the needs of our workforce 20. Preparing young people for work 21. Maximising our workforce through the Skilling Queenslanders for Work initiative 22. Introducing Skilling Solutions Queensland services throughout the State. 23. Embedding employability skills in training programs 24. Delivering training for the highest skilled jobs

4.4 Chronology of Queensland Skills Plan initiatives

Year	QSP initiatives to be implemented
2005	<p>Skilling Solutions Queensland was introduced in March 2005.</p> <p>The Mining Industry Skills Centre was established in June 2005 as a centre of excellence.</p> <p>A review of the apprentice training wage was commissioned.</p> <p>A review of the role of group training organisations was commissioned</p>
2006	<p>Young people enrolling at TAFE institutes full-time are given access to concession arrangements.</p> <p>In reforming the Queensland TAFE system, the commercial governance model was to be determined in 2006.</p> <p>Automotive, building and construction, manufacturing and engineering, and electrical/electronics training delivered at particular TAFE's will be progressively transferred to The Trade and Technician Skills Institute's Brisbane South and Brisbane North campuses.</p> <p>The apprentice hotline became available from 1 July 2006.</p> <p>Network providers who specialise in assisting individuals to gain employment will actively interact with employers to encourage apprenticeship uptakes. This service has been available to new and existing apprentices since July 2006.</p> <p>Over the next three years, 23 new Skills Formation Strategies will be developed. Further strategies have also been proposed.</p> <p>New models for industry engagement will be established between June 2006 and June 2008.</p> <p>Technology cadetships were piloted in 2006, with 40 cadetships offered during the pilot program.</p> <p>Ten new sites for Skilling Solutions Queensland are to be established from 2006-07.</p>
2007	<p>Three new centres of excellence in energy, manufacturing and engineering, and building and construction were established.</p> <p>The Experience Pays Awareness Strategy is to be implemented over three years and is currently being implemented in Queensland.</p> <p>The Skilling Queenslanders for Work initiative (which replaces Breaking the Unemployment Cycle) is currently being implemented.</p>
2008-2009	<p>The Southbank Institute of Technology is due for completion in 2008-09.</p>
2010	<p>17,000 extra trades training places will be available in each year by 2010.</p> <p>14,000 extra Certificate IV and above training places will be available in each year by 2010.</p>

Source: Queensland Skills Plan, 2006

4.5 Queensland State skills shortage list

Table 4.2 — Queensland State skill shortage list 2004

Occupation classification	Occupation in shortage (a)	Qualifying notes
CHILD CARE	Child care coordinator (N) Child care worker (N)	
ENGINEERS	Civil engineer (N)	Shortages are particularly evident for Civil Engineers experienced in water, roads and structural engineering
ACCOUNTANTS	Accountants (N)	Shortages are especially for accountants with experience in audit and taxation
HEALTH PROFESSIONALS	Enrolled nurse (N) Registered nurse (N) Registered midwife (N) Mental health nurse (N) Dentist (N) Pharmacist (N) Occupational therapist (N) Physiotherapist (N) Speech pathologist (N) Diagnostic radiographer (N) Radiation therapist (N) Nuclear medicine technologist (N) Sonographer (N) Audiologist	Shortages for experienced occupational therapists are particularly prominent for specialisations such as mental health services and aged care. Shortages for physiotherapists are more apparent in specialisations such as gerontology and for locum work.
LEGAL PROFESSIONALS	Lawyer	Shortages are most pronounced for lawyers experienced in the area of property, mining and town planning.
ENGINEERING TRADES	Metal fitter (N) Metal machinist (N) Toolmaker (N) Metal fabricator (N) Welder (N) Sheetmetal worker (N)	Metal fitters who have the skills to work underground on mining equipment and who have high-level skills in parts replacement for heavy earthmoving equipment are in particular shortage. Metal machinists who have high-level CNC machine operating skills are in particularly strong demand. Sheetmetal worker shortages are particularly evident in the manufacture of aluminium hull boats, switchboards and stainless steel fittings.
VEHICLE TRADES	Motor mechanic (N) Auto electrician (N) Panel beater (N) Vehicle painter (N)	
ELECTRICAL/ELECTRONICS	Electrician (N) Refrigeration and airconditioning mechanic (N) Electrical powerline trades (N) Electronic instrument trades (N)	Electrician shortages are particularly acute for electrical appliance servicing and industrial electricians
CONSTRUCTION TRADES	Carpenter and joiner (N) Bricklayer (N) Plumber (N)	Carpenter: shortage is particularly for carpenters specialising in building staircases and balustrading. Plumber: Mechanical services plumbers are particularly hard to recruit.
FOOD TRADES	Chef (N) Cook (N) Pastrycook (N)	
PRINTING TRADES	Graphic pre-press trades Printing machinist Binder and finisher	
OTHER TRADES	Hairdresser Furniture upholsterer	

(a) includes occupations that are classified by the Department of Employment and Workplace Relations as being in shortage state-wide in Queensland. It does not include any skills shortages that are only being experienced in the metropolitan area or in particular regional areas. It does not include occupations where recruitment difficulties are being experienced by employers, where employers are unable to attract and recruit sufficient employees though there may be an adequate supply of skilled workers.

(N) signified that the occupation is also on the official national skills shortage list.

Source: Department of Employment and Workplace Relations 2004, National and State Skills Shortage Lists 2004, Canberra.

4.6 References

4.6.1 Publications

There is a wealth of literature and resources on workforce skills. The primary references sourced during the research undertaken for this audit are detailed below.

Audit Report No. 55 2004-05 Performance Audit Workforce Planning

Australian National Audit Office, 2005

Australian and New Zealand Standard Industrial Classification (ANZSIC)

Australian Bureau of Statistics (ABS), 2006

Defining Generic Skills

National Centre for Vocational Education Research (NCVER), 2003

Forecasting Labour and Skills Shortages: How Can Projections Better Inform Labour Migration Policies?

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Centre of Policy Studies Monash University, 1996

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Australian Bureau of Statistics (ABS), 2007

National Industry Skills Report

Department of Education, Science and Training (DEST), 2006

Nature and causes of skill shortages

Department of Education, Science and Training (DEST), 2002

Queensland Skills Plan

Queensland Government Department of Employment and Training, 2006

Queensland's proposed responses to the challenges of skills for jobs and growth – A green paper

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Shah, C. & Burke, G., Centre for the Economics of Education and Training, Monash University, 2003

Smart Queensland Smart State Strategy 2005-15

Queensland Government, 2005

Sustainable Queensland Volume 1

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Vacancy Report - September 2007

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Victorian Auditor-General's Office, 2006

Vocational Education and Training – Performance Audit Report

ACT Auditor-General's Office, 2006

What is a skill shortage?

Richardson, S., National Centre for Vocational Education Research (NCVER), 2007

World Class Skills for World Class Industries

Australian Industry Group, 2006

4.6.2 Websites

www.abs.gov.au	Australian Bureau of Statistics
www.deir.qld.gov.au	Department of Employment and Industrial Relations
www.dest.gov.au	Department of Education, Science and Training
www.deta.qld.gov.au	Department of Education, Training and the Arts
www.ncver.edu.au	National Centre for Vocational Education Research (NCVER)
www.oesr.qld.gov.au	Queensland Treasury Department Office of Economic and Statistical Research
www.opsc.qld.gov.au	The Office of the Public Service Commissioner
www.parliament.qld.gov.au	Queensland Parliament
www.premiers.qld.gov.au	Department of the Premier and Cabinet
www.qao.qld.gov.au	Queensland Audit Office
www.sd.qld.gov.au	Department of Tourism, Regional Development and Industry (formerly the Department of State Development)
www.treasury.qld.gov.au	Queensland Treasury
www.workplace.gov.au	Labour Market Information Portal

4.6.3 Acronyms

ABS	Australian Bureau of Statistics
CEO	Chief executive officer
DEIR	Department of Employment and Industrial Relations
DETA	Department of Education, Training and the Arts
DEWR	Department of Employment and Workplace Relations (Commonwealth)
DTRDI	Department of Tourism, Regional Development and Industry
FA&A Act	<i>Financial Administration and Audit Act 1977</i>
ICT	Information and Communications Technology
ITG	Industry Training Group
KPIs	Key performance indicators
MPS	Ministerial Portfolio Statement
OPSC	Office of the Public Service Commissioner
PMSA	Performance management systems audit
QAO	Queensland Audit Office
QSP	<i>Queensland Skills Plan</i>
TAFE	Technical and Further Education
VET	Vocational education and training

4.6.4 Glossary

Disadvantaged	Those people who face significant barriers to employment as defined by DEIR. This includes people living in rural and remote areas; low skilled workers who are vulnerable in the workforce, people who are employed 20 hours per week or less and are unable to secure a full-time job because they lack the necessary skills; the long-term unemployed; parents and carers; young people; ex-offenders; people with a disability; Aboriginal and Torres Strait Islander peoples; Australian South Sea Islanders; mature-aged job seekers; and people from culturally and linguistically diverse communities, which includes refugees and recently arrived migrants.
Economy	Obtaining the appropriate quality and quantity of goods and services at the appropriate times and at the best price.
Effectiveness	Extent to which outputs/programs are actually accomplishing what they were intended to do.
Efficiency	Achieving the best possible productive use of goods, people and money.
Outcome	The impact of a service on a client or community.
Portfolio	The collective departments and Government functions under the control of a Queensland Cabinet Minister.
<i>Queensland Skills Plan</i>	Outlines a policy framework designed to better match the supply of skills to the labour needs of industry and demands of the economy. It sets out a range of actions the Queensland Government will take to implement these policies.
Skilling Solutions Queensland	A new Queensland Government training and employment service that provides people with up-to-date information on local employment opportunities, career pathways and training options.
Skills Formation Strategies	A DETA initiative under the <i>Queensland Skills Plan</i> which provides a framework for industries and communities to work with each other, the Queensland Government and other relevant stakeholders to analyse and address the factors contributing to skills shortages.
Skills Shortage	When the supply of workers is not sufficient to meet the demand at current rates of pay.
Vocational Education and Training (VET)	Post-compulsory education and training, excluding degree and higher level programs delivered by higher education institutions. VET provides people with occupational or work-related knowledge and skills and is usually competency based.
Whole-of-government	Queensland public service agencies working together across portfolio boundaries to achieve shared goals and responses to State-wide issues.

Section 5

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Glenn Poole
Auditor-General

Section 6

Publications

6.1 Publications

Publication	Date released
Annual Report 2007	October 2007
INFORM	
Issue 5 for 2007	October 2007
Issue 4 for 2007	August 2007
Issue 3 for 2007	June 2007
Issue 2 for 2007	April 2007
Issue 1 for 2007	February 2007
Guidelines	
Better Practice Guide — Risk Management	October 2007
Checklist for Organisational Change — Managing MOG Changes	September 2006
Checklist — Preparation of Financial Statements	August 2006
Better Practice Guide — Output Performance Measurement and Reporting	February 2006
Other	
Auditor-General of Queensland Auditing Standards	April 2007
Performance Management Systems Audits — An Overview	January 2006

6.2 Auditor-General's Reports to Parliament 2007

Report No.	Subject	Date tabled in the Legislative Assembly
1	Report to Parliament No. 1 for 2007 Results of Local Government Audits for 2005-06	19 April 2007
2	Report to Parliament No. 2 for 2007 Results of Performance Management Systems Audits of Management of Funding to Non-Government Organisations	22 May 2007
3	Report to Parliament No. 3 for 2007 Results of Aboriginal Shire Council and Torres Strait Island Council Audits for 2005-06	26 June 2007
4	Report to Parliament No. 4 for 2007 Are departmental performance measures relevant, appropriate and a fair representation of performance achievements?	7 August 2007
5	Report to Parliament No. 5 for 2007 Results of Audits as at 31 May 2007	9 August 2007
6	Report to Parliament No. 6 for 2007 Beyond Agency Risk	26 September 2007
7	Report to Parliament No. 7 for 2007 Addressing Skills Shortages in Queensland	November 2007

Queensland Audit Office publications are available at www.qao.qld.gov.au or by phone on (07) 3405 1100