Skilling Business in Tough Times

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The pressure on business to cut costs during the economic downturn has been intense, including strong pressure on employment and training budgets. With the impact of critical skills shortages still fresh, we sought to gain a deeper understanding of how business is approaching employment and skills investment during the downturn and to establish a benchmark for the years ahead.

A key finding of the report is that Australian companies appear to have understood the lessons of past recessions and are doing all they can to hold on to staff with a view to being well placed to take advantage of growth when it resumes. While training budgets have been reduced, with, for example, apprenticeship commencements cut by up to a third of companies, the overall performance in this area is in marked contrast to previous downturns. Training budgets have been trimmed rather than slashed and strategies have been employed across the board to retain staff, albeit with fewer hours.

Skills shortages continue to be a major strategic issue for business despite the downturn and its impact on employment, and industry remains alert to the problem. Employers continue to report that people working in the trades and as technicians are in short supply, although at less acute levels, while the reduction in apprenticeship intakes will contribute to skill shortages intensifying down the track.

The findings reinforce the timeliness of the recent Federal Government decision to provide additional incentives for businesses with the aim of employing more than 20,000 new apprentices. This is essential to addressing future skill shortages. However, the report suggests that it is highly likely more will need to be done in this critical area.

The survey also looked at skills more broadly. The results suggest that across the workforce the basic skills upon which the current workforce relies, and future skills development is based, are not up to scratch. Not enough of our people can read, write and work with numbers to the level required to operate effectively in our increasingly complex workplaces. We must do better to prepare young people entering the workforce and find better ways to help existing workers to overcome these skills gaps. Ai Group is doing a major research project to address this.

At the end of the last boom, companies consistently said that a skilled workforce was essential to lifting competitiveness. This judgement was prescient. As we emerge from the current downturn, the survey suggests that skill shortages will intensify and there will need to be a renewed focus on workforce development. Ai Group believes a focus on human capital development is essential to restoring our lagging productivity and underpinning our global competitiveness.

Deloitte is very pleased to be associated with this important survey. The results demonstrate the continued importance that businesses place on developing the skills and capabilities they require for sustainable growth. In spite of the fact that more than a quarter of the 500 companies surveyed have been severely affected by the economic downturn, most are anticipating a 4% reduction in training expenditure in 2009/10, whereas in previous downturns training budgets were far more severely impacted.

It is clear however that Australian businesses are concerned about how best to maximise the return on investment of their limited training budgets.

Prominent is the question “what critical skills do we need to grow as a nation” and understanding the capacity of the education system to provide well trained, ‘work ready’ talent with these required skills.

So what are these critical skills?

Deloitte’s own research, as well as this survey clearly identifies Australia’s dependence on skills in technology and environmental science as well as innovation and leadership capabilities.

In addition, strong literacy and numeracy skills amongst flexible, motivated pools of talent are needed if we are to deliver on our nation’s potential.

At an individual business level, the process of identifying the specific skills required starts with determining the skills needed to support the organisation’s strategic goals, and assessing which workforce segments and business activities will be critical in the creation of long term value.

Understanding how the current workforce aligns with the organisation’s future requirements is the next step, and this implies the need for accurate, complete and accessible information about the capabilities that exist today.

In a competitive talent market knowing the resources you already have at a detailed level saves time and money by enabling timely re-deployment or re-tooling as opposed to recruiting and on-boarding. The 35% of the companies surveyed that have a formal record of employee skills and capabilities are well positioned to maximise the value of their existing ‘human’ capital.

The winning organisations

What is common amongst the most successful organisations is a considered, granular approach to identifying, attracting and developing the necessary skills and deploying them in areas where they have the greatest impact. Ultimately, the winners that emerge from these volatile times will be the ones that understand the importance of investment in critical skills and act on it.

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Executive Summary
Executive summary

Despite tough economic conditions, companies are working hard to retain and build their workforce

Background

This report presents the results of the Australian Industry Group’s survey on business skilling intentions for 2009/10. The report has been prepared as part of our National CEO Survey series undertaken in conjunction with Deloitte Touche Tohmatsu.

Almost 500 CEOs in the manufacturing, construction and services sectors participated in the survey which was conducted in July 2009. Combined these companies had a turnover of around $11.8 billion and employed over 33,300 people.

Almost half of the companies in the survey (48.0%) were small companies employing up to 25 people. Medium sized companies employing between 26 and 100 people represented 28.5% of respondents and large companies employing more than 100 people made up 12.6% of total. (10.9% did not provide an indication of size.)

The manufacturing sector provided the highest number of participants (76.1% of all respondents) followed by services (13.4%) and construction at 8.5%.

Key Findings

Impact of downturn

Extent of impact of downturn on companies

More than a quarter of companies surveyed have been severely affected by the economic downturn.

Large companies were hardest hit with 37.3% very affected by the downturn. The impact has been most severe in the construction and manufacturing sectors.

Employment trends and strategies

One of the key features of the current downturn has been that net reductions in employment have been quite moderate relative to previous major downturns.

The main strategies adopted to minimise job losses have included reducing non-labour costs (44.8%), reducing working hours (39.6%), freezing salaries and bonuses (35.4%) and bringing forward leave (32.2%).

Amongst companies in the survey, the average decline in employment expected in 2009/10 is 3.8%. Across the sectors, the expected reductions in employment were 3.0% in manufacturing, 2.5% in construction and 4.0% in services.

Expected timing for improvement in business conditions

Companies were asked to identify when they expect business conditions to improve. A similar question asked in late May/early June indicated that around 40% of firms expected business conditions to improve by the end of this year.

In this survey undertaken in late July, the percentage of firms expecting an improvement by year’s end had risen to almost half (48.1%), pointing to stronger confidence in the business sector.

Skilling in the downturn

Impact of the downturn on training expenditure

Responses to the questionnaire suggest that concerns the economic downturn will lead firms to cut back training expenditure are well-founded.

On average, companies anticipate a 4.1% reduction in training expenditure in 2009/10. Small and medium-sized firms are forecasting the greatest spending cuts (an average 7.2% and 6.9% respectively). Large firms, by contrast, are forecasting a slight rise in training expenditure (0.5% on average).

Relatively even proportions of firms are forecasting an increase (37.0%); a decrease (33.5%) and no change (29.5%) in training expenditure in 2009/10. Amongst those firms forecasting a decline, 97.4% are forecasting a cut of more than 10%, while 87.2% anticipate a cut of more than 20% indicating that those companies that are cutting expenditure are cutting deeply.

Key strategies for meeting future skill needs

Retraining existing staff on the job is clearly the preferred strategy for meeting skill needs in 2009-10, with 65.7% of all respondents pursuing this option to secure the skills needs of their organization.

The recruitment of experienced employees (28.5%) and a reduction in staff turnover (21.3%) were the next most widely cited strategies.

How companies track workforce skills

A majority of Australian businesses keep some formal record of employee skills; 35.4% monitor workforce skills through the maintenance of a skills register; an equal proportion stay abreast of skills in their business through a mix of formal records and informal understanding; and 21.5% of firms rely solely on an informal understanding to keep track of employee skills, while only 7.7% keep no record of skill levels.

Incentives for an increase in training expenditure

Businesses were asked to identify the two measures that would most likely encourage them to maintain or increase their level of training expenditure.

Perhaps reflecting the cost pressures facing companies, an increase in incentives to train existing workers is the measure most likely to lead to a boost in training (21.5% of respondents) followed by an increase in the tax deductibility of training (18.3%). A greater government co-contribution to training also ranked highly at (17.8%).
Executive summary

Skills shortages: Now and in the Future

Occupations likely to experience skills shortages over the next year

Despite the economic conditions, skills shortages are anticipated across a range of occupations. The most prominent category identified was technicians and trades workers (28.1% of companies). The second largest area was engineers (15.3% of companies). Other areas reported included labourers and process workers (7.0%), managers (5.9%) and apprentices and trainees (5.9%).

Shortages in literacy, numeracy and information technology skills

A quarter of employers (25.1%) indicated a shortage of literacy skills, 22.5% of enterprises reported numeracy skills shortages and over a third of enterprises (34.7%) identified shortages in information technology skills.

While skills shortages were evident in each industry sector the highest levels of shortage across each of the three skill areas were experienced by the manufacturing sector.

Changes in apprentice levels and implications for future skills

Amongst companies employing apprentices, 36.8% expect to reduce apprentice numbers in 2009/10, 24.0% expect to increase and 38.8% anticipate no change.

Firms are forecasting a decline in both the number of total apprentices (by 5.9%) and in the number of new apprentices taken on (by 10.6%) in 2009/10 compared to the previous year.

This level of decline in the number of apprentices is consistent with previous recessions where in the first year of adjustment there was a 5.7% reduction (in 1983) and a 5.4% reduction (in 1992). At this stage it remains unclear whether this downturn in apprentice numbers will continue as occurred in the years following the last two recessions. The 1990s recession resulted in a fall in apprentice numbers of 25%.

Higher education

Important factors when recruiting graduates

Employers consider employability skills (33.1%) and a positive attitude (32.6%) to be the most important factors when they are recruiting graduates.

It is interesting to note that 19.2% prefer graduates with relevant work experience as this attribute is closely linked to the possession of employability skills reinforcing that for companies it is most important that graduates are ‘work ready’.

Satisfaction with skills of recent graduates

Companies consider only 22.6% of graduates have strong IT skills, 17.9% strong numeracy skills and 14.8% strong literacy skills. This is of particular concern as graduates represent the most highly skilled group in the workforce and more than three-quarters of them are judged as only satisfactory in these most basic of skills.

Priority for universities in terms of undergraduates

When asked to nominate what the main priority should be for universities, employers clearly favoured a focus on improving the employability skills of graduates with 39.7% nominating this priority area. The closely allied area of improving work experience opportunities was also highly ranked by employers (27.4%).

Green skills

Confidence in current green skills of business

Overall companies appear to be relatively confident that they possess the green skills needed to handle climate change. 64.0% of firms indicated that they are either very confident (11.9% of firms) or moderately confident (52.1% of firms) of having the necessary skills.

Occupations in which green skills need improvement

Those occupations with closest engagement with the production process and those involved in directing operations, managers, were identified as being most in need of green skills improvement.

24.9% of respondents identified labourers and process workers as needing green skills improvement along with 23.7% identifying managers and 17.9% identifying technicians and trades workers.

Technical areas in which green skills need to be improved

The key technical areas where the workforce’s green skills are perceived as in need of improvement are waste management (cited by 26.9% of firms); energy and/or water usage (20.9%); working better with current technologies (14.4%); improvement of business practices (13.4%); and new environmental technologies (10.1%).

Frequency of green skills training

53% of firms don’t know how often they will need to train staff to deal with climate change. In part, this may reflect that, to date, the implications of climate change remain uncertain.
Background and Study Details
Background and study details

The most comprehensive gauge of the impact of the global financial crisis on business skilling...

The context

- Australian businesses have faced a prolonged period of skills shortage over recent years which has limited capacity and inhibited growth.
- Companies have responded to this problem in a variety of ways most prominently by increasing their focus on upskilling their existing workforce rather than relying on new entrants and recruitment.
- The economic downturn was expected to have a significant impact on the training efforts of companies as this had been the experience of previous downturns.
- To understand the extent of the impact and how companies were responding the Australian Industry Group in conjunction with Deloitte Touche Tohmatsu undertook a comprehensive survey of CEOs on their skilling intentions for 2009/10.

Objectives

- The overall objective of this study is to gain an understanding of the impact of current global economic conditions on company demand for skilled labour and the capacity of companies to engage in workforce skills development.
- The study measures the extent of the impact at a broad level and also in terms of training budgets and approaches to training.
- It measures the extent of skills shortages and identifies the types of skills considered to be lacking.
- The study looks at the expectations companies have of university graduates and the implications for universities in setting priorities for future graduates.
- Finally, it explores the skills needed by companies to respond to climate change and considers these skills needs from both an occupational and a technical perspective.

The report

- The report outlines the findings for each of the 22 questions asked in the survey and presents these in 5 broad sections:
  - Impact of Downturn
  - Skilling in the Downturn
  - Skills Shortages: Now and in the Future
  - Higher Education
  - Green Skills.

- The survey was distributed to a random sample of companies from the manufacturing, construction and services sectors.
- The report has been designed so it can be read from start to finish, or the reader can focus on key themes of interest.
Respondents by sector and company size

The study includes a varied range of sectors and companies...

Chart 1: Survey respondents by size

This section of the report outlines the characteristics of respondents to the survey of business skilling intentions for 2009/10.

Companies by size

- The survey generated responses from around 500 companies with total employment of 33,347 employees and total annual turnover of $11.8 billion, across a number of sectors and firm size.
- In regards to company size, the largest proportion was from small-sized firms of up to 25 employees, representing 48.0% of respondents.
- Medium-sized firms of between 26 to 100 employees represented 28.5% of respondents, while large-sized firms (more than 100 employees) contributed 12.6%.
- 10.9% of respondents did not indicate the number of people employed.

Chart 2: Survey respondents by sector

Companies by sector

- Data was collected from 18 different sub-sectors across the manufacturing, services and construction industries and was aggregated into four individual categories.
- The manufacturing sector provided the highest number of participants (76.1% of all respondents) followed by services (13.4%) and construction at 8.5%. The very high proportion of manufacturing companies included in the survey respondents needs to be taken into account when drawing conclusions from this report.
- Just 2.0% of respondents did not indicate the sector to which they mainly belong.
Impact of Downturn
Introduction/Background

The economic downturn has affected most companies, but job losses have been largely contained...

Australia, like the rest of the world, has suffered from the impact of the recent economic downturn.

While the downturn began in Australia in early 2008 following the sharp increases in official interest rates, the financial crisis following the collapse of Lehman Brothers in the United States contributed to a sharp worsening of conditions.

Australia may have avoided a technical recession, but industry has been hard hit. In the 12 months to June 2009, manufacturing sales have fallen by 10.6%, construction by 8.0% and services by 1.6%.

In past major downturns such sales losses have led to significant reductions in employment numbers along with a reduction in total working hours and full-time employment. This time around the behaviour of industry appears to be different with companies seeking to hold onto employees in preparation for the next upturn.

This section examines the impact of the economic downturn on business, the strategies put into place to minimize job losses and business expectations of when growth will return.

The recovery may well be slow and growth more moderate than seen in the past, contributing to differences in how companies manage skills levels over the next few years.
Extent of impact of downturn on companies

Impact of economic downturn has been severe for many companies...

Overall finding
- The impact of the economic downturn has been severe for many companies, with 27.1% of firms indicating they have been very affected, and 35.6% moderately affected.
- A further 25.3% of companies had been slightly affected. Only 11.4% of companies stated that they had not been affected at all by the economic downturn.

Impact on business by size
- The severity of the impact of the economic downturn was largely related to size (based on companies very and moderately affected).
- Large companies, with 100 or more employees, were the hardest hit, with 37.5% very affected and 33.9% moderately affected, a total of 71.2% of firms.
- Medium sized firms had a smaller percentage very affected (18.9%) and a larger percentage moderately affected (43.9%).
- Small firms (employing less than 25 people) were least affected overall, but did record a high percentage of firms very affected (30.5%).

Impact on business by sector
- The impact of the economic downturn has been most severely felt in the construction and manufacturing sectors.
- Within each sector, 33.3% of construction companies, 28.2% of manufacturing companies and 18.0% of service companies were very affected by the economic downturn.
- Taking account of firms which have been very and moderately affected by the economic downturn, the total percentages were 66.7% in construction, 65.8% in manufacturing and 45.9% in services.
Employment trends and strategies

Companies have adopted a range of strategies to minimise job losses...

One of the key features of the current downturn has been that net reductions in employment have been quite moderate relative to previous major downturns. For example, in the 1991 recession, for the 12 months to May 1991, net job losses totaled 167,900 compared to only 11,600 in the 12 months to May 2009. Indeed, much of the increase in unemployment in the recent downturn has come from new entrants to the workforce. Many companies have adopted strategies to retain employees rather than cut employment.

Overall finding

- Amongst companies in the survey, the average decline in employment expected in 2009/10 is 3.8%. Across the sectors, the expected reductions in employment were 3.0% in manufacturing, 2.5% in construction and 4.0% in services.

- The main strategies adopted to minimise job losses have included reducing non-labour costs (44.8%), reducing working hours (39.6%), freezing salaries and bonuses (35.4%) and bringing forward leave (32.2%).

- Other strategies pursued by companies were to reduce executive remuneration and to encourage job sharing.

Employment strategies by size

- Across most strategies, firm size was critical, with a greater percentage of large firms likely to adopt each strategy compared to small and medium sized firms.

- For example, 63.8% of large firms had cut non-labour costs compared with 48.9% of medium and 37.6% of small firms.

Employment strategies by sector

- Main strategies adopted to minimise staff losses varied across sectors.

- In manufacturing, the preferred strategies were to lower non-labour costs (46.7%) and reduce working hours (43.0%).

- In construction, more emphasis was placed on bringing forward leave (44.7%) and freezing salaries (39.5%).

- Service companies indicated that they sought to lower non-labour costs (40.3%) and freeze salaries (27.4%). As well, a very large percentage of service companies (40.3%) indicated that they took no action, which is explained by the earlier finding that only a small percentage stated that they had been very affected by the economic downturn.
**Expected timing for improvement in business conditions**

*Business conditions are expected to improve by early 2010...*

Companies were asked to identify when they expect business conditions to improve. A similar question asked in late May/early June indicated that around 40% of firms expected business conditions to improve by the end of this year (see Ai Group/American Express, Looking Towards the Upturn, August 2009).

**Overall finding**

- In this survey undertaken in late July, the percentage of firms expecting an improvement by year’s end had risen to almost half (48.1%), pointing to stronger confidence in the business sector.
- A further 14.0% of companies expected the improvement in business conditions to be well advanced by March quarter 2010.
- Another 10.9% expected an improvement by the June quarter 2010, 5.3% by the September quarter 2010 and 4.3% by the December quarter 2010, with the remaining 17.5% being unsure of when business conditions would improve.

**Expectations of improved business conditions by size**

- Medium sized firms were the most optimistic in terms of expectations of improved business conditions, with 54.3% expecting an improvement by the end of the year. This compares with 44.1% for large firms and 45.4% for small firms.
- Small firms were more likely to be uncertain about the timing of an improvement, with 21.6% stating they don’t know compared with 10.2% for large firms and 14.0% for medium sized firms.

**Expectations of improved business conditions by sector**

- Companies in the services sector were the most optimistic about the timing of an improvement in business conditions. In total, 51.7% expected this to occur by the end of 2009, compared with only 36.8% of construction firms and 48.1% of manufacturers.
- Nearly half (44.7%) of construction companies expected the improvement to occur sometimes in 2010, compared to only one-third of construction and service companies.
- Between 15% and 19% of firms across the three sectors remained unsure as to when business conditions would improve.
Skilling in 2009/10
Introduction/Background

Reduced training budgets focused on upskilling existing workers...

The Australian Industry Group’s report *World Class Skills for World Class Industries* (2006) highlighted the importance of workforce skills to the competitiveness and responsiveness of Australian companies and to the productivity of their employees and the Australian workforce.

The report identified that many companies saw skills and workforce development as amongst their most important strategies to remain competitive. It concluded that enterprises would require skills at higher levels, that individuals would require broader skills and that they would need to be updated more often.

The report also found that Australian firms were increasingly looking to their existing workforce as a source of new skills. International studies, in particular by the Organisation for Economic Cooperation and Development, have reached similar conclusions.

Ai Group research identified that companies use a wide range of skilling strategies – informal coaching, in-house training, short courses, mentoring, formal training leading to formal qualifications – in their efforts to upskill their workers and that almost all companies engage in skilling activities.

These conclusions were drawn at the height of the economic boom after many years of skills shortages.

In this section of the survey report we consider the extent of the impact on training budgets of the global financial crisis as previous economic downturns had resulted in deep cuts being made to training expenditure. The survey also explored whether the downturn affected how companies went about securing the skills they needed (for example whether they moved away from working with their existing workforce to focusing for example on direct recruitment of skills).

This has been an area of ongoing concern. Ai Group research in 1997 found that recruitment was seen by over 70 per cent of companies surveyed as a key way to gain knowledge and skills. Our research report noted ‘…if companies continue to seek to recruit skills, rather than train for them, the basis of the development of future skills could be eroded.’

A further consideration when looking at upskilling the existing workforce is the maintenance of effective skills records that allow companies to readily assess their current skill needs and to make accurate decisions on workforce skilling options. This issue is also examined in the next section.

Finally this section looks at what measures would encourage companies to maintain, or increase, their training expenditure. A similar question asked of companies in 2005 identified that firstly companies would train more if training was more flexible and relevant, secondly if training was better customised and thirdly if there were more financial incentives.
Impact of the downturn on training expenditure

**Business spending on training is forecast to fall further in 2009/10…**

In January 2009, the Ai Group and Deloitte National CEO Survey *A tough year ahead* reported that significant cuts in training expenditure were anticipated in each of the manufacturing, services and construction sectors in 2009. Responses to the most recent questionnaire of Australian CEOs suggest that uncertainty over the economic outlook is likely to cause firms to make further cuts to training expenditure in the 2009-10 financial year.

**Overall finding**
- On average, companies are anticipating a 4.1% reduction in training expenditure in 2009/10. Small and medium-sized firms are forecasting the greatest spending cuts (an average 7.2% and 6.9% respectively). Large firms, by contrast, are forecasting a slight rise in training expenditure (0.5% on average).
- Chart 13 shows that a relatively even proportion of firms are forecasting an increase (37.0%); a decrease (33.5%) and no change (29.5%) in training expenditure in 2009/10.
- A large majority of the firms forecasting a decline in training expenditure in 2009/10 anticipate significant cuts.
- Amongst those firms forecasting a decline, 97.4% are forecasting a cut of more than 10%, while 87.2% anticipate a cut of more than 20%.

**Training expenditure by sector**
- Firms in the construction sector are forecasting the heaviest falls in training expenditure in 2009/10; an average decrease of 6.6%. A slightly more moderate average decline in training expenditure is expected in the manufacturing sector (5.4%).
- Reflecting a more optimistic view of the economic outlook, the average decline in training expenditure forecast for the services sector is considerably lower; a decrease of 2.2%. 

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**Chart 12: Forecast change in training expenditure in 2009/10 by size**

- Small
- Medium
- Large
- Total

**Expected % change**

**Chart 13: Forecast movement in training expenditure in 2009/10**

- Increase: 37.0%
- No change: 29.5%
- Decrease: 33.5%

**Chart 14: Forecast change in training expenditure in 2009/10 by sector**

- Manufacturing
- Services
- Construction
- Total

**Expected % change**
Key strategies for meeting future skill needs

Retraining existing staff is overwhelmingly the preferred strategy for meeting skill needs in 2009/10...

There are a number of actions firms might take to overcome skills shortages. The survey asked businesses to identify the strategies they intend to implement to help meet skill needs in 2009/10.

Overall finding

- Retraining existing staff on the job is clearly the preferred strategy for meeting skill needs in 2009-10, with 65.7% of all respondents identifying this action.
- This outcome is consistent with the findings in previous reports produced by Ai Group, including last year’s Skilling for Innovation and the 2006 World Class Skills for World Class Industries report. It reaffirms a strong preference amongst businesses to look inside their organisations in order to meet skilling requirements.
- The recruitment of experienced employees (28.5%) and a reduction in staff turnover (21.3%) were the next most widely cited strategies.
- Around one in every six businesses plan to meet skilling needs in 2009/10 by: employing people with basic technical skills and then training them to requirements (17.6%); introducing new technologies (14.8%); and employing more apprentices and trainees (14.6%).
- Only 5.4% of respondents indicated they plan to take no action to meet skill needs in 2009/10.

Strategies for skill needs by size

- Retraining existing staff on the job is the preferred action for meeting skill needs in 2009/10 across all size categories.
- Large firms are significantly more likely to be proponents of retraining existing staff (86.2%); recruiting experienced employees (43.1%); and reducing staff turnover (34.5%).
- By contrast, a higher proportion of small firms indicated they have no plans to take action to meet skill needs in 2009/10 (7.7%), compared with medium-sized (3.8%) and large firms (0.0%).

Strategies for skill needs by sector

- A slightly higher proportion of construction (68.4%) and manufacturing (66.4%) firms, compared with services firms (61.3%), intend to retrain existing staff to meet skill needs in 2009/10.
- In contrast, the services sector contains a greater proportion of businesses that plan to meet skilling requirements though the reduction of staff turnover (25.8%); the employment of people with basic technical skills and retraining (24.2%); and the introduction of new technologies (21.0%).
- Manufacturing firms (15.7%) are twice as likely as firms in the services (8.1%) and construction (7.9%) sectors to have plans to employ apprentices and trainees to meet skill needs in 2009/10.
How companies track workforce skills

Large firms are the most likely to keep track of workforce skills through formal records...

To effectively use and further develop the skills of their workforce companies need reliable information. The survey sought an understanding of the manner in which businesses keep track of the skills of their workforce.

Overall finding

- A majority of Australian businesses keep some formal record of employee skills.
- 35.4% of all respondents monitor the skills of their workforce through the maintenance of a skills register.
- An equal proportion stated they stay abreast of skills in their business through a mix of formal records and informal understanding.
- 21.5% of firms rely solely on an informal understanding to keep track of employee skills, while only 7.7% keep no record of skill levels.

Keeping track of workforce skills by size

- Large firms are much more likely to monitor workforce skills through the maintenance of a formal skills register (54.3%) or through a mix of formal records and informal understanding (42.4%), than medium-sized and small firms.
- By contrast, a higher proportion of small-sized firms stated they either rely solely on an informal understanding of employee skills (30.7%) or keep no records (11.0%).

Keeping track of workforce skills by sector

- While firms in the services sector are the most likely to maintain a skills register (41.0%) and construction firms are the most likely not to keep a record of employee skills (10.5%), there is only slight variation across sectors.
Incentives for an increase in training expenditure

Business is looking predominantly towards incentives to train existing workers...

Chart 21: Measures to underpin training expenditure

Businesses were asked to identify the two measures that would most likely encourage them to maintain or increase their level of training expenditure.

Overall finding

- According to survey responses, an increase in incentives to train existing workers is the measure most likely to lead to a boost in training expenditure (21.5% of respondents).
- An increase in the tax deductibility of training (18.3%); greater government co-contribution (17.8%); and an increase in financial incentives for apprentices and trainees (15.8%) are next most likely to encourage a lift in spending on training.
- Just fewer than one in ten respondents (8.4%) regard an improvement in funding support to ensure it better matches training with business needs as a key incentive.
- Reduced bureaucracy (4.6%); the availability of better quality training (3.8%); an improvement in the quality of training providers (3.5%); more relevant qualifications (2.1%); and the provision of independent advisory services (0.8%) are considered lower-order incentives for boosting training expenditure.

Chart 22: Measures to underpin training expenditure by size

Overall finding

- An increase in incentives to train existing workers would be the key catalyst for a rise in training expenditure for medium-sized (24.9%) and large firms (22.6%).
- For small firms, an increase in the tax deductibility of training (19.8%); increased incentives to train existing workers (19.4%); and greater government co-contribution (19.1%) are equally most likely to encourage an increase in training expenditure.
- An improvement in funding support to ensure training better matches with business needs is a significantly greater incentive for large firms (16.7%), compared with medium-sized and small companies (7.6% and 6.6% respectively).
- A greater proportion of small firms cited a reduction in bureaucracy (6.9%), compared with medium-sized (1.6%) and large firms (1.2%).

Chart 23: Measures to underpin training expenditure by sector

Overall finding

- There is some variation across sectors in regards to the perceived importance of incentives for training expenditure.
- An increase in the tax deductibility of training is the incentive most likely to encourage a rise in training expenditure in construction firms (25.6%), a considerably more important inducement than in manufacturing (18.5%) and services (13.2%).
- By contrast, increased incentives to train existing workers and greater government co-contribution are equally the most likely to encourage an increase in training expenditure in the services sector (23.7%).
- An increase in incentives to train existing workers is the most cited incentive amongst manufacturing firms (21.4%).
Skills Shortages: Now and in the Future
Introduction/Background

Skills and skills shortages have become a major business issue ...

Skills Shortages

Skills shortages have been a major inhibitor for industry for many years; as a prolonged period of strong growth resulted in levels of demand for skills which could not be met.

In previous Ai Group research, *World Class Skills for World Class Industries* (2006), employers identified the inability to secure skilled staff (74%) as the greatest single barrier to remaining competitive.

In a 2008 Ai Group survey 63% of employers reported skills shortages. The key areas of shortages were technicians and trades workers (66%), engineers (25%), apprentices and trainees (24%), other professionals (22%) and labourers and process workers (21%).

Many expected the global financial crisis to lessen the impact of skills shortages.

This section explores the impact of the economic contraction on skills shortages across the economy looking at occupations; literacy, numeracy and basic IT skills; and particularly at apprentice levels.

Literacy and Numeracy Skills

There has been considerable recent attention given to shortages of literacy and numeracy skills. The *Adult Language and Life Skills Survey* (2006) undertaken by the Australian Bureau of Statistics as part of an international study revealed significant literacy and numeracy problems within the Australian adult population.

Apprenticeships

Apprentice numbers decline during periods of economic downturn and this contributes to skills shortages when the economy picks up. This survey considered the extent of the reduction looking at both new commencements and the extent to which companies are having to reduce the numbers of their existing apprentices.
Occupations likely to experience skills shortages over the next year

Skills shortages expected to persist, especially for technicians and trades workers ...

**Overall finding**
- Skills shortages are anticipated for a range of occupations. The most prominent category identified was technicians and trades workers at 28.1% of companies. The second largest occupational area was engineers at 15.3% of companies. Other occupational areas reported included labourers and process workers (7.0%), managers (5.9%) and apprentices and trainees (5.9%).

**Occupational skills shortages by size**
- The largest individual reporting of skills shortages was medium sized enterprises in the technician and trades occupations at 31.9%. The figure was also high for large enterprises (28.8%) and small enterprises (26.5%) for this occupational grouping.
- Skills shortages for engineers were particularly high for larger enterprises (29.4%) but less prevalent for medium sized enterprises (17.5%) and small enterprises (7.8%).
- The next largest skill shortage occupation was managers at 15.4% in large enterprises. There was a reduced shortage of managers in medium enterprises (4.8%) and small enterprises (4.2%).
- There was a variation in skills shortages for labourers and process workers according to the enterprise size. 7.5% of medium enterprises and 7.3% of small enterprises anticipated shortages whereas only 1.9% of large enterprises expected shortages in this area.

**Occupational skills shortages by sector**
- The same two occupational areas of technician and trades and engineers feature as the most significant skills shortages for each industry sector of construction, services and manufacturing.
- Technician and trades areas have been identified as the largest skill shortage area (28.1%). The shortages are most pronounced in the construction sector (35.3%) and the manufacturing sector (28%) and less so in the services sector (23.1%).
- Surprisingly, in the engineering occupations the greatest shortages are in the services sector (24.5%) and the construction sector (22.6%) and less so in manufacturing (12.6%).
- In relation to managers there is also a fluctuating pattern. Construction has the greatest shortage (14.7%), while the services sector (8%) and the manufacturing sector (4.2%) have less.
- Apprentices and trainees provide a further variation. Manufacturing experience the highest level of shortage (7%), followed by the services sector (4.3%) whereas there are none in the construction sector.
Much of the success of workforce upskilling relies on the existence of well developed literacy, numeracy and basic information technology skills.

**Overall finding**

- Over a quarter of employers (25.1%) indicated a shortage of literacy skills.
- Overall 22.5% of enterprises reported numeracy skills shortages.
- Over a third of enterprises (34.7%) identified shortages in IT skills.

**Literacy, numeracy and IT skills shortages by firm size**

- Consistently, it was large enterprises that reported the greatest shortages of literacy, numeracy and IT skills.
- Almost half of large enterprises (47.4%) reported shortages in literacy and 28.1% of medium sized enterprises and 18.6% of small enterprises recorded this problem.
- Again it was the large enterprises that indicated the greatest shortage in numeracy (41.8%). Medium enterprises (26.7%) and small enterprises (16.6%) also experienced difficulty in this area.
- Half of the large enterprises reported shortages of IT skills. Medium sized enterprises were also significantly high with 40.5% while small enterprises reported 26.3%.

**Literacy, numeracy and IT skills by industry sector**

- These skills shortages were evident in each industry sector but the highest levels of shortage across each of the three skill areas were experienced by the manufacturing sector.
- The greatest shortage in literacy skills was experienced by the manufacturing sector (26.7%), with the construction sector (19.4%) and the services sector (19%) reporting slightly lower levels.
- Again the manufacturing sector experienced the greatest shortage in numeracy skills (24.4%) while construction sector (19.4%) and the services sector (14.3%) had slightly less.
- The manufacturing sector (35.4%) reported the highest level of IT skills shortage but the services sector (30.4%) and the construction sector (27%) were also high.
Changes in apprentice levels and implications for future skills

Apprentice numbers forecast to fall…

Chart 30: Business plans for apprentice numbers in 2009/10

- 36.8% expect to reduce apprentice numbers in 2009/10
- 24.4% expect to increase
- 38.8% anticipate no change

Overall Finding

- Amongst companies employing apprentices, 36.8% expect to reduce apprentice numbers in 2009/10, 24.0% expect to increase and 38.8% anticipate no change.
- Firms are forecasting a decline in both the number of total apprentices (by 5.9%) and in the number of new apprentices taken on (by 10.6%) in 2009/10 compared to the previous year.
- This level of decline in the number of apprentices is consistent with previous recessions where in the first year of adjustment there was a 5.7% reduction (in 1983) and a 5.4% reduction (in 1992). At this stage it remains unclear whether this downturn in apprentice numbers will continue as occurred in the years following the last two recessions. In the 1990s recession this resulted in a fall in apprentice numbers of 25%.
- The overall numbers for apprentices mask significant variations at the individual trade level and between States. The Australian Apprentices Taskforce found declines of up to 25% in some skilled trade apprenticeships and cites falls of over 19% in the construction, automotive and electrotechnology and telecommunications sectors.
- The distinction between the total number of apprentices and the number of apprentice commencements is important. Terminating existing apprentices increases the numbers of ‘out of trade’ apprentices who have not completed their trade training and who statistically do not go on to complete this training even when conditions improve. Reducing the numbers of new apprentices companies take on has a skills impact when the economy picks up as the ‘skills pipeline’ is not operating effectively. The third alternative is, of course, that the pressures companies face are such that they must do both.
- These results indicate that apprentice reductions are being more heavily felt by would-be apprentices, and less by existing apprentices.

Total apprentices by firm size

- Apprentice numbers in medium-sized enterprises are expected to fall by an average of 14.1%, and those in small enterprises are forecast to decrease by 17.9% over the period. Larger enterprises are forecasting a slight increase in apprentice numbers.

Total apprentices by industry sector

- The manufacturing sector expects total apprentice numbers to fall by 8.7% while the construction sector is forecasting a decline of 5.4%*. Total apprentice numbers were forecast to remain steady in the services sector.

Apprenticeship commencements by firm size

- Declines in apprenticeship commencements are forecast for small (8.5%) and medium-sized (11.6%) respondents while large firms are expecting an increase of 2.9%.

Apprenticeship commencements by industry sector

- There is a varied pattern for expected new apprenticeship commencements across industry sectors. The manufacturing sector is anticipating a significant reduction of 15.0%. No change in apprentice numbers is expected for the construction sector* or for the services sector.

* The small proportion of construction firms employing apprentices in the survey impacts on the veracity of these findings.
Higher Education
Introduction/Background

Employers put a priority on work readiness and expect universities to do the same...

Higher education is a major undertaking in this country. There are now 37 public universities, two private universities and 150 or so other providers of higher education, including some TAFEs and education is our third largest export earner.

As the Review of Australian Higher Education noted Australia is falling behind other countries in performance and investment in higher education. Developed and developing countries alike accept there are strong links between their productivity and the proportion of the population with high-level skills. These countries have concluded that they must invest not only to encourage a major increase in the numbers of the population with degree-level qualifications but also to improve the quality of graduates.

Within the OECD Australia is now 9th out of 30 in the proportion of our population aged 25 to 34 years with university qualifications, down from 7th a decade ago. Twenty nine per cent of our 25- to 34-year-olds have degree-level qualifications but in other OECD countries targets of up to 50 per cent have already been set.

This section explores what companies are looking for in their new graduate recruits and identifies those areas in which companies feel it is necessary for our higher education institutions to do more to prepare graduates to take their place in the workforce.

This section also considers company views on the quality of new graduates by asking CEOs to assign satisfaction ratings to a range of attributes we would typically expect to find in graduates.
Important factors when recruiting graduates

Graduates need to be able to hit the ground running...

14.5% of jobs in the companies surveyed require degree-level skills, with the proportion significantly higher in the services sector (23.4%), compared to in manufacturing (13.0%) and construction (11.8%).

Overall finding
- Employers consider employability skills (33.1%) and a positive attitude (32.6%) to be the most important factors when they are recruiting graduates.
- ‘Employability skills’ is a generic term which is generally held to encompass skills in communication, teamwork, problem solving, initiative and enterprise, planning and organizing, self-management, learning and technology.
- Only very small numbers of employers recruit primarily on results achieved in tertiary study (5.3%) and even fewer are concerned with which university was attended (0.7%).
- It is interesting to note that 19.2% prefer graduates with relevant work experience as this attribute is closely linked to the possession of employability skills reinforcing that for companies it is most important that graduates are ‘work ready’.
- The incorporation of work and the building of employability skills, often referred to as work integrated learning, is an increasing – and clearly welcomed - feature of many tertiary qualifications.

Most important factors when recruiting graduates by company size
- There is broad consistency of the priorities for graduate recruits across company size though it is evident that small companies place even greater emphasis on the graduate’s ability to make a contribution to the organization more quickly through the possession of employability skills and work experience (34.9% and 21.7%) than is the case for large firms (31.5% and 13.0%).
- Larger companies are three times as likely to prioritise the subject of the degree and the results achieved (15.2% and 9.8%) than small firms (4.3% and 3.4%).
- When making hiring decisions large companies give no priority to the university a graduate has attended.

Most important factors when recruiting graduates by sector
- Across the manufacturing, services and construction industries there is a consistent message about the importance of a positive attitude.
- Employability skills remain important, though relatively less so for construction firms which value relevant work experience more highly, particularly when compared to the services sector.
- Construction firms are also significantly more concerned about the subjects studied (15.2%) than employers in the manufacturing (6.3%) and services (8.5%) sectors.
Satisfaction with skills of recent graduates

Basic skills need more work; graduates are only just making the grade...

Overall Findings
- Employers are at least satisfied that the graduates they have recently employed have the basic information technology, numeracy and literacy skills they need with reported satisfaction levels across these three areas at 86.0%, 87.8% and 85.7%.
- The number of companies who have found their graduates to hold less than satisfactory levels of these basic skills is small; IT 7.0%, numeracy 7.1% and literacy 9.2%.
- But at the other end of the scale companies consider only 22.6% of graduates have strong IT skills, 17.9% strong numeracy skills and 14.8% strong literacy skills. This result would be concerning across the general workforce, but is of particular concern as graduates represent the most highly skilled group in the workforce and more than three-quarters of them are judged as only satisfactory in these most basic of skills.
- As seen in the previous section, employers place a priority on graduates demonstrating a positive attitude to work, but only 15.7% of employers are more than satisfied that their graduates possess this attitude.
- Only 10% of employers report high levels of satisfaction in the skills of graduates in the areas of self management, problem solving and teamworking.
- The lowest levels of satisfaction are reportedly in the areas of business and customer awareness (48.2%) and relevant work experience (54.6%).
- Relatively high levels of dissatisfaction are reported by employers in the areas of self management (27.6%), problem solving (23.8%) and teamworking (39%).
Priority for universities in terms of undergraduates

Universities, in partnership with industry, need to do more to prepare graduates for work...

Chart 37: Priorities for universities for undergraduates

- Improve their employability
- Work with employers to provide more work placements
- Raise the quality of graduates
- Improve quality of teaching
- Increase numbers studying maths & science
- Other
- Increase numbers of graduates

Chart 38: Priorities for universities for undergraduates by company size

- Improve their employability
- Work with employers to provide more work placements
- Raise the quality of graduates
- Improve quality of teaching
- Increase numbers studying maths & science
- Other
- Increase numbers of graduates

Chart 39: Priorities for universities for undergraduates by industry sector

- Improve their employability
- Work with employers to provide more work placements
- Raise the quality of graduates
- Improve quality of teaching
- Increase numbers studying maths & science
- Other
- Increase numbers of graduates

Overall finding
- When asked to nominate what the main priority should be for universities, employers clearly favoured a focus on improving the employability skills of graduates with 39.7% nominating this priority area.
- The closely allied area of improving work experience opportunities was also highly ranked by employers (27.4%).
- These findings are consistent across this research – employers want graduates who are work ready and they consider that more can and should be done by tertiary institutes, often in partnership with industry through work placement, to achieve this.
- Only a very small number of employers (1.2%) are of the view that it is necessary to increase the number of graduates. This is an interesting finding as research shows that the skill profile of the Australian economy is changing and that tertiary level jobs are being created more quickly than graduates are entering the workforce. That employers are not looking to new graduates to meet this need suggests that they will be looking to upskill their existing workforce.

Priorities for universities by company size
- Priorities for universities are largely consistent across companies of all sizes, reinforcing the importance across the economy of new staff members being able to make an immediate contribution to their new firm.
- While raising graduate quality levels is more of an issue for large firms, than for small firms, it is pleasing to note that only a small proportion of companies think graduate quality is an issue.

Priorities for universities by industry sector
- When considered by industry sector again there is broad consistency across the economy that employability skills are of prime importance.
- Construction firms are more concerned with raising quality than the manufacturing and services sectors. This sector has also prioritised the need to increase the numbers of undergraduates studying maths and science which is in line with their skill profile.
Green Skills
Introduction/Background

Green skills needs are expected to be significant but future directions are not yet clear...

The Australian Industry Group is very active both in providing input into the development of government climate policy and in advising members on regulatory developments and steps that can be taken in measurement and management of their carbon footprints.

The July 2009 Ai Group/KPMG Gearing Up survey of around 400 businesses in the manufacturing, construction and services sectors gauged where business is up to in the process of adapting to emerging carbon constraints; how well they are prepared for the introduction of a national emissions trading scheme; and the extent of regulatory burdens in this area.

The survey found that many businesses have begun to take active steps to measure and manage their carbon footprints. Businesses also have strong plans to take these initial steps further over the coming few years.

These new calls on business will place strong demands on companies as they seek to build the skills of their personnel to carry out these new and evolving tasks.

There are many reports suggesting very large numbers of ‘green jobs’ will be required as we move to a carbon constrained economy, but there remains limited detail under the headline figures about these jobs.

Green jobs can be defined as work that contributes substantially to preserving or restoring environmental quality. This includes jobs that help to protect ecosystems and biodiversity; reduce energy, materials, and water consumption through high-efficiency strategies; decarbonise the economy; and minimize or altogether avoid generation of all forms of waste and pollution.

This section of the report seeks to add more detail to our understanding of the green skill needs of the Australian economy. It explores the levels of confidence companies have that their workforces possess the skills needed to respond to the demands of climate change and considers which skills, by occupation and technical area, need to be developed and the frequency with which that development should be undertaken.
Companies were asked to nominate how confident they are that their business has the green skills to be able to effectively respond to climate change.

**Overall finding**

- Overall companies appear to be relatively confident that they possess the green skills to handle climate change. 64.0% of firms indicated that they are either very confident, 11.9% of firms, or moderately confident, 52.1% of firms, of having the necessary skills.

- 17.2% of respondents firms indicated that they are not confident about having the necessary green skills. Possibly indicating a lack of understanding of the climate issues facing them, 18.8% of firms don’t know whether they have the required green skills.

**Confidence in green skills availability by size**

- There appears to be limited difference in terms of firms’ confidence in their green skill capabilities across firm sizes.

- Medium sized firms are modestly more confident than are their large and small counterparts. 69.8% of medium sized firms are either very confident, 11.1% of firms, or moderately confident, 58.7%, of the availability of green skills.

- This compares with 63.2% of large firms which are very confident, 12.3% of firms, or moderately confident, 50.9% and 63.3% of small firms which are very confident, 12.6%, or moderately confident, 50.7%.

- A greater proportion of small firms, 22.7%, don’t know whether or not they have the necessary green skills, compared to 11.9% of medium and 12.3% of large firms.

**Confidence in green skills availability by sector**

- The manufacturing sector appears to be least confident of the availability of green skills to deal with climate change, though not by a large margin.

- 62.0% of manufacturers, are very confident, 11.7%, or moderately confident, 50.3% of their green skills availability. This compares with 71.1% of services firms, which are very confident, 16.9%, or moderately confident, 54.2%. 67.6% of construction firms are very confident, 5.4%, or moderately confident, 62.2%.

- More construction firms 27.0% don’t know whether or not they have the necessary green skills compared to 18.8% of manufacturers and 15.3% of services companies.
Occupations in which green skills need improvement

Occupations closest to production most in need of improved green skills...

CEOs were asked to identify the two key occupations in need of green skills improvement in their business.

Overall finding

- Those occupations with closest engagement with the production process, labourers and process workers and technicians and trade workers, and those involved in directing operations, managers, were identified as being most in need of green skills improvement.

- 24.9% of respondents identified labourers and process workers as needing green skills improvement along with 23.7% identifying managers and 17.9% identifying technicians and trades workers.

- A number of occupations were identified by a lower number of firms: engineers, by 10.7% of respondents, clerical and administrative staff, by 9.9% and apprentices and trainees, by 7.7%.

Occupations in need of green skills improvement by size

- There is little strong difference in the occupations identified by respondents across firm sizes, with labourers and process workers; managers; technicians and trades workers predominant in all size classes.

- There are some modest differences in emphasis across firm size however.

- As firm size increases labourers and process workers tend to be less heavily identified, with 27.0% of small firms; 24.1% of medium firms; and 18.6% of large firms indicating that this occupation needs green skills improvement.

- Engineers are more heavily identified as needing skills upgrades as firm size increases. 16.3% of large firms identify this need compared to 12.7% of medium sized firms and 7.9% of small firms.

Occupations in need of green skills improvement by sector

- There is little strong difference across sectors in terms of identified needs for green skills improvements in specific occupations, though there are some modest differences.

- The perceived need for skill improvement among labourers and process workers varies modestly across sectors, with 17.4% of services firms, 21.4% of construction firms, and 27.1% of manufacturers identifying the need.

- Views about managers needs to improve their green skills also varied slightly across sectors. 28.6% of construction firms saw a need to boost green skills, while 24.6% of services and 23.4% of manufacturing firms saw a need.

- The services sector saw a lesser need for technicians and trades workers to boost their green skills with 14.5% of respondents seeing the need compared with 19.0% of both manufacturers and construction firms.
Technical areas in which green skills need to be improved

Waste management and energy and water usage are key technical areas for improvement...

CEOs were asked which two technical areas of their operations needed some improvement in their workforce’s green skills.

**Overall finding**

- The key technical areas where the workforce’s green skills are perceived as in need of improvement are waste management (cited by 26.9% of firms); energy and/or water usage (20.9%); working better with current technologies (14.4%); improvement of business practices (13.4%); and new environmental technologies (10.1%).

**Technical areas needing improved green skills by size**

- There are few clear differences across firm sizes in terms of the technical areas perceived to need green skills improvement in the workforce. There are, however, some mild variations.

  - Medium sized firms see improvement in the workforce’s green skills relating to energy and/or water usage as a slightly lower priority with 17.1% of respondents identifying the need, compared to 23.1% and 24.7% of small and large firms respectively.

  - A larger proportion of small firms, 16.4%, see improving the workforce’s capacity to work better with current technologies as a priority need. This compares with 10.9% and 12.4% of medium and large firms respectively.

**Technical areas needing improved green skills by sector**

- There are some interesting variations across sectors in terms of the technical areas perceived to need green skills improvement in the workforce.

  - The identification of improved workforce green skills in terms of energy and/or water usage varies moderately. 21.7% of manufacturing firms cited this need compared with 19.5% and 14.3% of services and manufacturing firms respectively.

  - Manufacturing firms also cite waste management, 28.3% of companies, more than services and construction firms, 20.7% and 23.8% respectively.

  - Enhancing the workforces’ green skills in improving business processes is cited more commonly by services firms, 19.5% of firms, than manufacturing and construction firms, 12.4% and 11.9% of firms respectively.

  - Improving skills in monitoring and auditing are clearly perceived as important by construction firms, 16.7% of companies identified this need. This compares with only 6.6% and 3.7% of manufacturing and services firms respectively.
Frequency of green skills training

Over half of firms don’t know how often their employees will need training to deal with the challenges of climate change...

CEOs were asked how frequently their employees will need training to cope with the challenges of climate change.

Overall finding

- 53% of firms don’t know how often they will need to train staff to deal with climate change. In part, this may reflect that, to date, the implications of climate change remain uncertain.

- Of those firms which do know how often they will need to train staff, 13% believe they will do it continuously; 6% believe it will be every six months and; 21% of firms believe they will have to train staff once a year.

Expected frequency of climate change training by size

- The relatively large share of small and medium sized firms, 54.1% and 52.5% respectively, indicating that they don’t know the expected frequency of climate change related training, may reflect that this size of firm is less able to ascertain the implications of climate change for their own operations.

- Large firms, of whom, a still significant, 35.7% of firms indicated a ‘don’t know’ answer, are probably more likely to have the resources to allow this kind of analysis.

- Interestingly, larger firms also indicated a lower expected frequency of training, with 37.5% of firms indicating expected training frequency of either annually or biennially compared with 29.1% and 25.8% of medium and small sized firms.

Expected frequency of climate change training by sector

- Construction firms are moderately less likely to know how frequently climate change related training will be required, 57.1% of firms indicating a ‘don’t know’ response compared to 52.0% and 47.5% of manufacturing and services firms respectively.

- Construction firms are more likely to favour continuous climate change related training, with 22.9% of firms indicating this training frequency compared to 15.3% and 12.1% of services and manufacturing firms respectively.
# National CEO Survey

**Australian Industry Group and Deloitte**

## Australian Industry Group

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<tr>
<th>AI GROUP METROPOLITAN OFFICES</th>
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