

A photograph showing several students sitting at a long desk in a classroom or study area. They are focused on their work, with laptops and papers open in front of them. A green mug is visible on the left side of the desk.

TRANSITIONING QUEENSLAND'S WORKFORCE:
**DEVELOPING THE
SKILLS NEEDED
TO POWER OUR
FUTURE ECONOMY**



CONTENTS

EXECUTIVE SUMMARY	1
QUEENSLAND LOOKING FORWARD	4
STATE OF PLAY	6
PRIORITY 1: Setting strong foundations to develop 21st century skills	10
PRIORITY 2: The right structures for career development and mentoring	14
PRIORITY 3: Leveraging the workforce through lifelong learning	18
PRIORITY 4: Leveraging STEM skills to drive the digital workforce	22
PRIORITY 5: Building regional capacity for entrepreneurship	26
PRIORITY 6: Industry engagement to drive sustainable growth	29
SUMMARY OF RECOMMENDATIONS	34

EXECUTIVE SUMMARY

Queensland's labour market will be fundamentally reshaped by technological advances and a number of economic challenges over the next two decades. There is a very real risk of being left behind both nationally and internationally if we do not embrace progressive reforms in education and training to better prepare ourselves.

Queensland already faces a number of unique workforce challenges compared to our state counterparts. Aside from Tasmania, Queensland has the lowest proportion of 15-75 year olds with bachelor degrees or above. Central and North Queensland were hit particularly hard as a result of the mining downturn, and the youth unemployment rate of 33% in Outback Queensland is the highest in the nation.

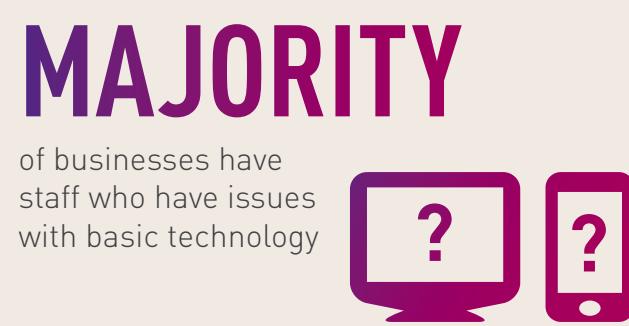
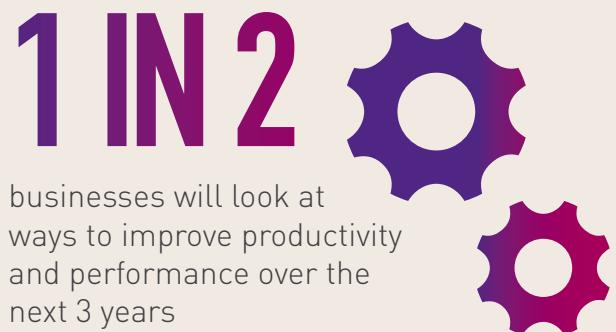
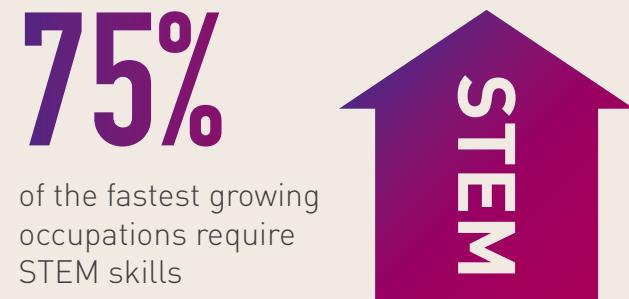
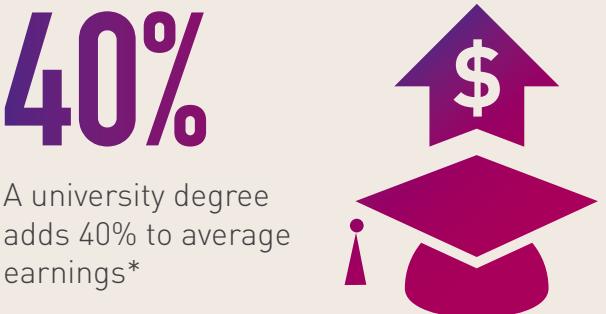
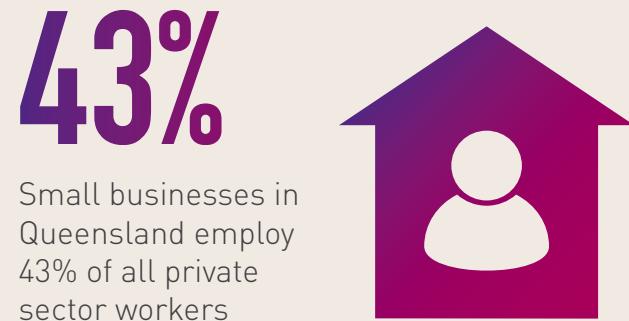
CCIQ has and will continue to be committed to ensuring businesses in Queensland can access the tools they need to become successful and remain globally competitive. This means being able to employ the right people, at the right time, with the right skills. CCIQ will continue to proactively work with government, industry and the wider community to develop a skilled workforce that meets the needs of Queensland's economy now and for years to come.

In 2011, CCIQ released the first blueprint on workforce development and planning which revealed employer views, issues and expectations of Queensland's education and training system. Five years on, this second blueprint acknowledges that while some progress has been made, there remain a number of systemic issues and inefficiencies that must be addressed.

Six key priorities are set out in this blueprint centred on delivering a quality education and training system that creates a productive workforce suited to a 21st century economy. This ranges from sweeping reforms to the VET system to employing the latest technology and best-practice to reduce barriers of demography and geography, so there can be equal access to employment for all Queenslanders.

This blueprint draws on the findings of CCIQ's 2016 Education and Training Survey undertaken by Queensland businesses in April 2016 as well as an analysis of the State's current economic data to develop the six priorities and summary of recommendations.

STATE OF PLAY



*Compared to an education attainment of Year 11

1 IN 2

businesses have faced
a need to provide literacy
and numeracy training
for their employees



80%

of businesses would
like to see universities
provide more practical
experience for students



70%+

of businesses are
unaware or do not
participate in government
funded training programs



SIX PRIORITIES

6

INDUSTRY
ENGAGEMENT TO
DRIVE SUSTAINABLE
GROWTH

1

SETTING STRONG
FOUNDATIONS TO
DEVELOP 21ST
CENTURY SKILLS

2

THE RIGHT
STRUCTURES FOR
CAREER DEVELOPMENT
AND MENTORING

4

LEVERAGING STEM
SKILLS TO DRIVE THE
DIGITAL WORKFORCE

3

LEVERAGING
THE WORKFORCE
THROUGH LIFELONG
LEARNING

QUEENSLAND LOOKING FORWARD



Early education sets the foundations for everyone to be able to participate in society in a meaningful way, but it is higher education that will be a key determinant of individual, social and economic prosperity.

Research has shown that higher levels of education are associated with significantly higher wages. Compared to a person with a year 11 education or less, on average¹:

- a year 12 education adds on average around 11.5% more to earnings;
- a diploma or certificate adds on average around 12.5% more to earnings; and
- a university education adds around 40% to earnings.

Economies which have a highly-skilled workforce are often able to capitalise on this through the advancement of high value-added industries such as finance, information technology and biomedical manufacturing. Undoubtedly, expansion of these innovative industries would boost overall productivity and support continued growth of living standards.

"An educated, skilled workforce is essential for innovation performance; such a workforce is able to generate and implement new ideas."
– David Miles AM, Innovation Australia

Queensland will not be immune to significant challenges that will affect the national economy over the next decade. Falling commodity prices coupled with the ageing population will mean overall workforce participation is projected to decline. In order to maintain our living standards and growth in income, Queensland will essentially need to produce "more with less", utilising our skills and intellectual resources more efficiently.

But competition will be fierce. As more and more countries around the world move towards a knowledge economy, "21st century skills" will be required by individuals in order to succeed in this current business environment beyond just literacy, numeracy and digital literacy skills.

Such skills include collaboration, creativity, problem-solving, persistence, curiosity and initiative - skills which are difficult to embed in curriculum.

Jobs in the 21st century are increasingly becoming centred on using data to find solutions to unstructured problems. With the rise of automation and the digitisation of more routine jobs, new roles are being created in areas needing interpersonal and non-routine analytical skills.

These roles will be found predominantly in high-skilled knowledge and service-based industries such as professional and technical services, health, education and finance. As seen in figure 1, there has been a consistently strong rise in the services share of GDP over the past 40 years in comparison to other major industries.

FIGURE 1: INDUSTRY AND SERVICES SHARE OF GDP IN AUSTRALIA



Source: ABS Catalogue 5206.0

A number of factors determine how Queensland can succeed in ensuring these skills are embedded in its workforce. This includes boosting human capital through improving teacher quality and attracting top talent by giving the teaching profession the recognition and remuneration it deserves.

The right governance and policy enablers are also vital to ensuring that our education system remains world-class. Policymakers and educators alike must provide students with the knowledge and skills that will allow them to have a successful working life and positively contribute to economic, social and individual wellbeing. Ensuring adequate financial resources, clearly defined responsibilities and a robust measurement of outcomes is essential.

The workforce structure will also need to change. Queensland currently has the lowest proportion of 15-75 year olds with a Bachelor degree or above, only behind Tasmania. In order to achieve a strong knowledge economy and capture the opportunities in the global economy, the current workforce structure will need to shift towards more people obtaining tertiary degrees and a higher level of skills.

Finally, access to new digital tools and content through having modern technological infrastructure will ensure students are not left behind when they transition to a highly connected business economy.

1. Australian Government Productivity Commission (2010) The Effects of Education and Health on Wages and Productivity

STATE OF PLAY



While it is vital to identify what lies ahead and prepare ourselves for different scenarios, we must look at Queensland's current situation and trends to establish the most effective priorities for workforce development and planning.

QUEENSLAND'S DIVERSIFIED ECONOMY

Queensland has a diversified and robust economy reliant upon a number of industries including agriculture, resources, construction, tourism, manufacturing and services.

Regional areas of Queensland have historically performed well on the back of the agriculture and resources industries which to this day remain vital to the State's overall economic performance.

The construction and tourism industries have also been major players to state-wide success. Queensland's growth prospects for the next few years are favourable for tourism, fuelled by the lower Australian dollar, advances in aviation, Queensland's stunning natural environment and continued growth of China's middle class.

As a whole, the Queensland economy has seen overall growth greater than the rest of Australia since 1990² and is forecast to grow at the strongest rate in Australia with 4% in 2015-16, largely driven by the strength of LNG exports.

FIGURE 2: ECONOMIC GROWTH BY ANNUAL PERCENTAGE CHANGE



Source: Queensland Treasury and Trade, Queensland State Accounts, June Quarter 2015 (Chain Volume Measure)

EMPLOYMENT

Employment rates in Queensland have largely been similar to the average for Australia, with the unemployment rate notably falling below the national average for a five-year period from 2004.

As with the rest of Australia and indeed many countries around the world, the Global Financial Crisis (GFC) had a detrimental impact on Queensland's employment levels in 2009. Increases in unemployment levels since that time can be attributed to the mining downturn.

As at June 2016, Queensland's unemployment rate sat at 6.5 per cent, compared to a national unemployment rate of 5.7 per cent.

FIGURE 3: QUEENSLAND'S UNEMPLOYMENT RATE

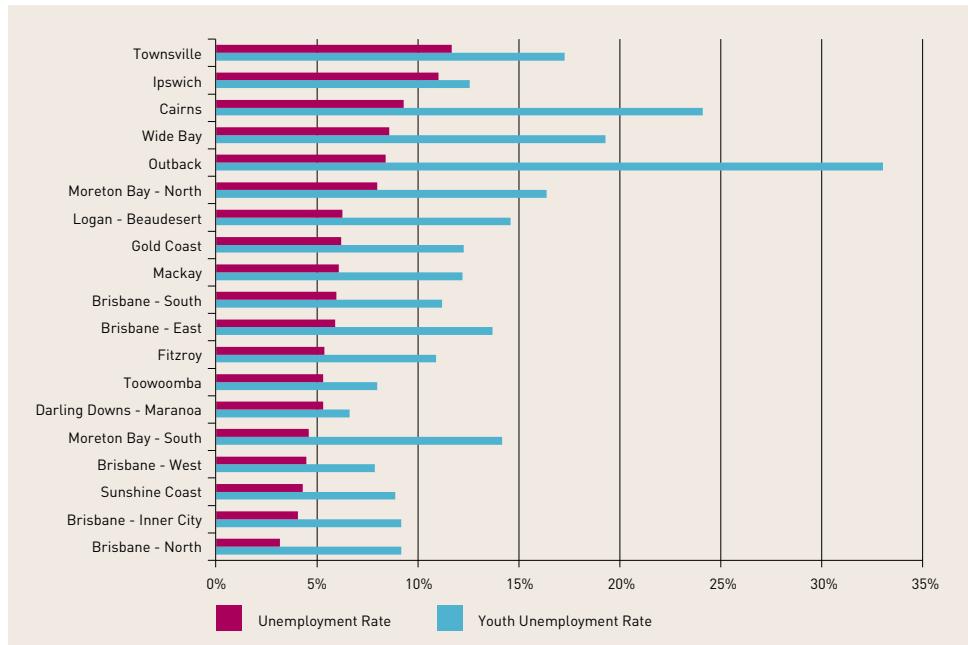


Source: ABS Catalogue 6202.0

While state-wide employment figures paint a relatively positive picture of Queensland's economy as a whole, a regional breakdown of the unemployment rates shows how areas outside of the south-east corner of the State are experiencing significant hardship, particularly in the Outback.

2. Queensland Treasury and Trade, Queensland State Accounts, June Quarter 2015

FIGURE 4: UNEMPLOYMENT RATES BY REGION, APRIL 2016



Source: ABS Labour Force 6291.0.55.001

These regional areas also face high rates of youth (15-24 year olds) unemployment. Outback Queensland has been listed as the biggest hotspot for youth unemployment (33%) in all of Australia. Other Queensland regions within the top 20 regions for youth unemployment in Australia include Wide Bay and Bundaberg (at 19.3%), Cairns (24.1%) and Townsville (17.3%).

With the slowdown in the resource sector and other economic factors at play, greater diversification will be key to maintaining employment, productivity and economic growth. Furthermore, improving the business case for employers to offer apprenticeship opportunities will better allow young people access to a reliable pathway from school or unemployment into work.

Regional and rural areas of Queensland will continue to face geographic challenges, but improved infrastructure, particularly with the roll-out of the National Broadband Network (NBN), can vastly improve the capacity of business in these areas.

SMALL BUSINESS TRENDS

As at June 2015, over 417,130 businesses were based in Queensland of which 406,000 businesses are small businesses employing less than 20 people. Often referred to as the 'engine room of the economy', small businesses are at the core of every industry, located in every region and employ 43% of all private sector workers.

Australia has always been an entrepreneurial nation and our spirit of independence and courage to take risks means that there will be a significant number of new businesses launching each year.

In 2015, a total of 2314 businesses started up in the 'Non-Residential Property Operators' (renting or leasing agricultural, commercial or industrial properties), followed by the 'Superannuation Funds' sector (+2279) and then 'Management Advice and Related Consulting Services' (+2058).

The 'Cafes and Restaurants' category continues to see large numbers of new businesses (entries) each year with 1453 new businesses established in 2015. The 10 sectors with the highest number of entries demonstrate a continuing trend of a rising services sector.

FIGURE 5: TOP 10 SECTORS WITH THE HIGHEST NUMBER OF ENTRIES; QUEENSLAND 2015

SECTOR	ENTRIES	EXITS	TOTAL NUMBER AS AT JUNE 2015	PERCENTAGE CHANGE OVER FINANCIAL YEAR
Non-Residential Property Operators	2314	1849	21711	2%
Superannuation Funds	2279	1052	16761	8%
Management Advice and Related Consulting Services	2058	1760	10979	3%
Cafes and Restaurants	1453	1103	6607	6%
Carpentry Services	1404	1552	8833	-2%
Real Estate Services	1335	1119	9833	2%
Road Freight Transport	1269	1414	10014	-1%
House Construction	1233	1245	9373	0%
Computer System Design and Related Services	1167	1181	7464	0%
Engineering Design and Engineering Consulting Services	1141	968	7120	3%

Source: ABS; Catalogue 81650 Counts of Australian Businesses, including Entries and Exits, Jun 2011 to Jun 2015

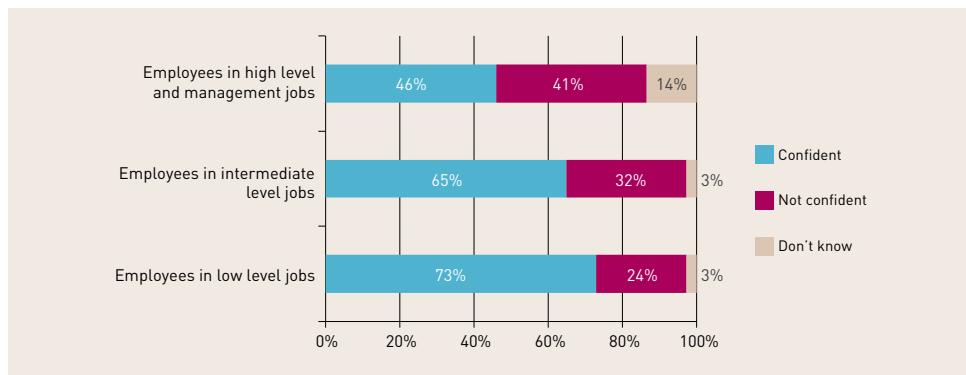
BUSINESS VIEWS ON WORKFORCE NEEDS

Businesses are constantly frustrated by lost opportunities when they have difficulty recruiting appropriately skilled staff. The loss is not only felt by the businesses themselves, but the economy and community as a whole including those individuals who cannot take advantage of the available job opportunities.

A 2016 CCIQ survey canvassed the views of Queensland business owners, exploring the issues and expectations on the education and training system and what workforce challenges employers are likely to face in the future.

Most employers were reasonably confident that there would be sufficiently skilled people available in the future to meet their organisations' skills needs in low and intermediate level jobs. However, employers were less confident that there would be sufficiently skilled people available to fill high level and management jobs in the future. This suggests a vital need to target education and training efforts to this specific cohort with greater industry engagement.

FIGURE 6: CONFIDENCE LEVELS ON THE AVAILABILITY OF SKILLED PEOPLE IN THE FUTURE TO MEET YOUR ORGANISATION'S NEEDS

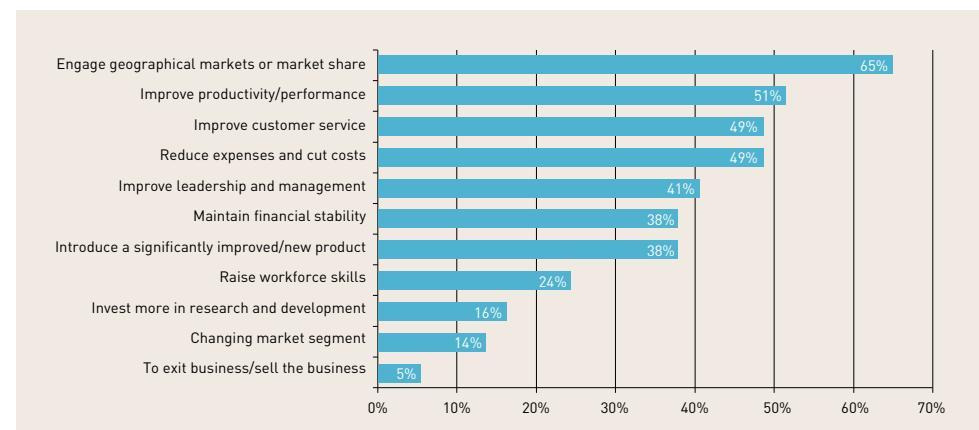


Source: CCIQ Workforce, Education and Training Survey 2016

These results are an improvement from confidence levels five years prior (2011), particularly for intermediate level jobs where confidence rose from 50% to 65%. Confidence for low level jobs rose from 64% to 73%, although confidence levels for sufficient skilled people in high level and management jobs grew by less than 1%.

In general, businesses are optimistic about their future and have plans in place to grow their business over the next three years. Almost 65% of businesses have plans to expand geographical markets or market share as a key strategic priority. This will most likely see new job opportunities on the market over the next few years.

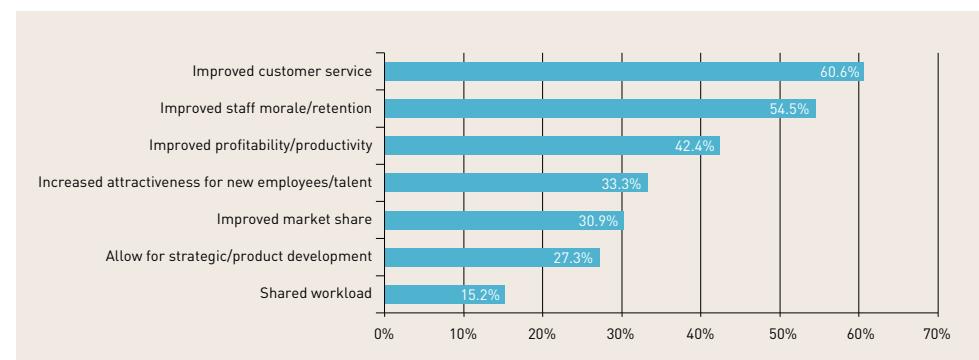
FIGURE 7: WHAT ARE YOUR ORGANISATION'S KEY STRATEGIC PRIORITIES FOR THE NEXT THREE YEARS?



Source: CCIQ Workforce, Education and Training Survey 2016

Recognising the importance of employees to a business' bottom line, almost one in four businesses will prioritise investing in their employees through raising workforce skills. It was then identified through the survey that businesses believed that the top three benefits of investing in employees' skills are: improved customer service, improved staff morale and retention, and improved profitability and productivity. This data shows that employers understand how critical customer service and an engaged workforce are to their bottom line.

FIGURE 8: KEY BENEFITS OF INVESTING IN EMPLOYEES' SKILLS



Source: CCIQ Workforce, Education and Training Survey 2016



PRIORITY 1:

SETTING STRONG FOUNDATIONS TO DEVELOP 21ST CENTURY SKILLS

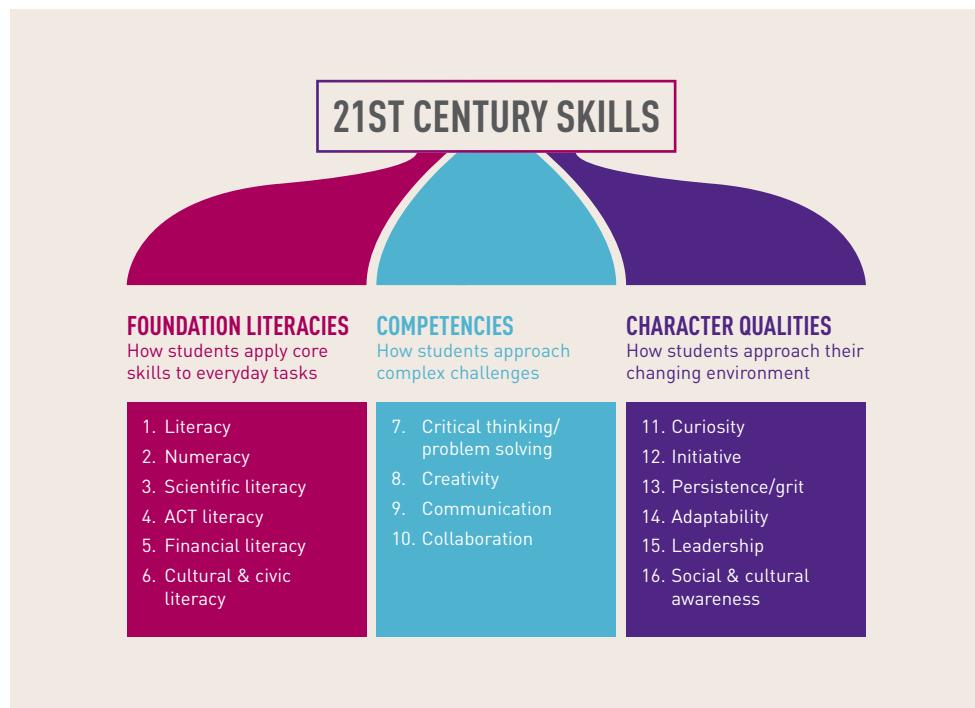
SKILLS STUDENTS REQUIRE FOR THE 21ST CENTURY

When students graduate with a sound education, they are better able to carve ways for society as a collective to become more self-sufficient.

That is why Queensland needs to equip students with the skills required for a 21st century economy through its education system.

Core subjects will always be critical for laying down the foundational literacies and skills, but education experts believe there are other vital skills students will need. These are centred on competencies that are required when students need to approach complex challenges, as well as character qualities relating to how adaptable students are to changing environments.

FIGURE 9: 21ST CENTURY SKILLS NEEDED FOR LIFELONG LEARNING



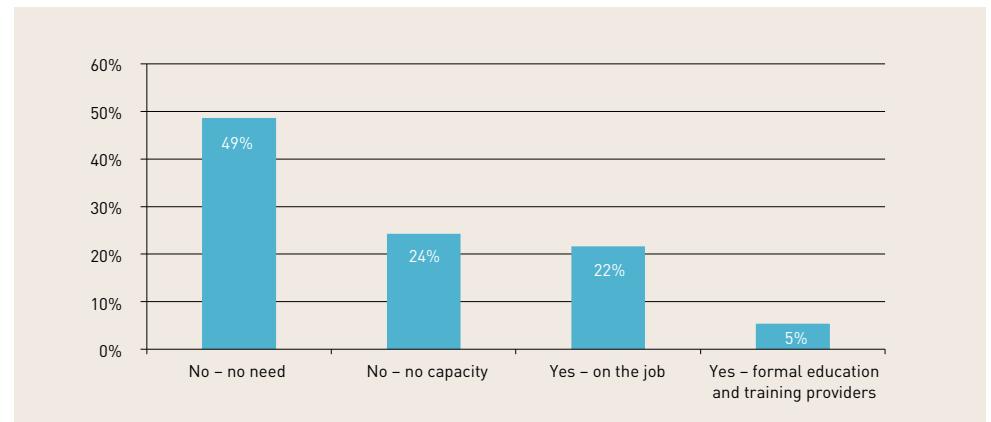
Source: World Economic Forum (2015), New Vision for Education

Competencies and character qualities are best developed through project-based learning which closely mimic the real world. Projects allow students to not only use their basic knowledge and skills, but teach them how to take initiative, solve real problems, as well as take responsibility and manage themselves. It allows students to think outside the box and be creative - skills which are becoming highly prized.

"Teach students communication skills, people skills, initiative and good manners." – Queensland business owner

Nevertheless, foundation literacies remain central to a well-educated workforce. Overwhelmingly, one in two businesses (51%) believes there is a need to provide training to their employees in the areas of literacy and numeracy. Furthermore, a considerable proportion (24%) of businesses are hampered by lack of capacity to provide training.

FIGURE 10: PERCENTAGE OF LITERACY AND NUMERACY TRAINING PROVIDED FOR EMPLOYEES



Source: CCIQ Workforce, Education and Training Survey 2016

SECONDARY EDUCATION

According to the World Bank, “the link between secondary education and economic growth suggests having a critical mass of people with secondary education is key to shifting the basis of economic growth from labour-intensive to a more knowledge-centric activity”. As such, secondary education has largely become the base of technology diffusion and obtaining the set of skills and competencies that can lead to productivity increases.

OECD data shows Australians who complete upper secondary education (year 11 and 12), on average increase their future wages by 10-15%.

“The transition from school to work must include far more practical work-based skills that incorporate the essentials to getting a job upon school commencing. Teach students about their tax file numbers, setting up a bank account, superannuation and so on.” – Queensland Business Owner

In Queensland, secondary schooling is the final period of compulsory education for students. Those who complete all 12 years of compulsory education from Year 1 to 12 are eligible to qualify for the Queensland Certificate of Education.

FIGURE 11: RETENTION RATES OF FULL-TIME STUDENTS (YEAR 10 TO 12)



Source: ABS catalogue 4221.0 Schools, Australia, 2015

Between 2011 to 2015, there has been an increase in the retention rate of full time year 10 to 12 students year on year. However, there is still some way to achieving 100% of Queensland students attaining the Queensland Certificate of Education particularly for Aboriginal and Torres Strait Islander Students.

TERTIAL EDUCATION SECTOR

Queensland's nine universities have an excellent international reputation and are highly respected around the world. In 2015, subjects taught by Queensland universities appeared 22 times in the top 50 rankings by subjects worldwide³ highlighting the strengths of Queensland's tertiary sector.

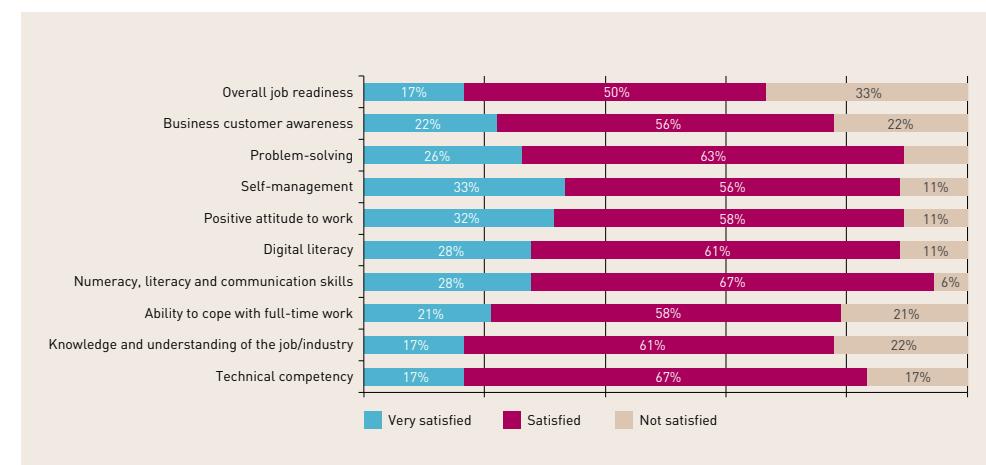
Universities continue to face increasing uncertainty in their funding model, which affects their ability to implement a long-term plan and adequately allocate resources for current and future students. This has the potential to impact many facets of the university's offering, including research, development, innovation, creative/marketing activities and most importantly, education.

QUEENSLAND'S UNIVERSITIES

- Australian Catholic University
- Bond University
- CQUUniversity
- Griffith University
- James Cook University
- Queensland University of Technology
- The University of Queensland
- University of Southern Queensland
- University of the Sunshine Coast

Businesses by and large believe our universities are of high-quality, with 67% or more businesses satisfied, or very satisfied, in all criteria of the survey question (figure 12). Around 9 in 10 businesses believe university graduates demonstrate a positive attitude to work and high levels of numeracy, literacy and communication skills, as well as good problem solving, self-management and digital literacy skills.

FIGURE 12: IF YOUR BUSINESS REQUIRES/EMPLOYS PERSONS WITH UNIVERSITY DEGREES, HOW WOULD YOU RATE THEIR ABILITY IN THE FOLLOWING AREAS?

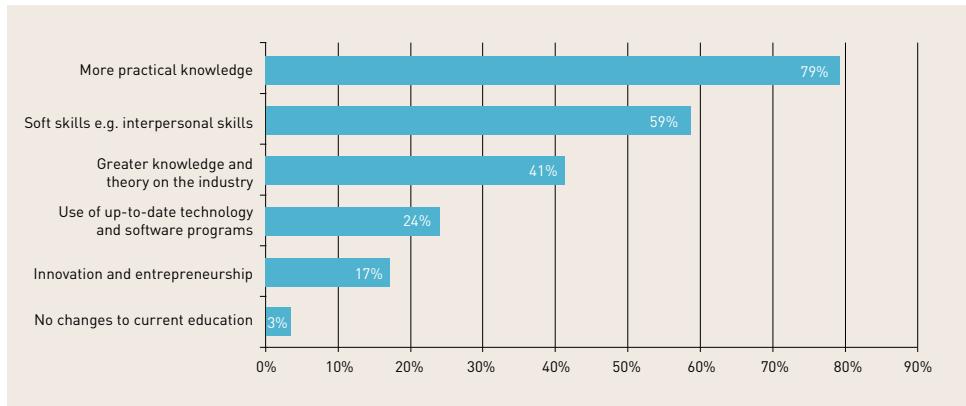


Source: CCIQ Workforce, Education and Training Survey 2016

Data has shown almost 80% of businesses would like to see universities provide more practical experience for their students to get them job-ready. A number of universities already offer “undergraduate sandwich courses”, where students spend a year learning on the job usually in the penultimate year of the course.

Interestingly, businesses would like to see universities focus more on developing the soft skills of their students than on providing greater industry knowledge or innovation.

FIGURE 13: IN WHAT AREAS DO YOU BELIEVE UNIVERSITIES SHOULD PROVIDE GREATER FOCUS ON TO PROVIDE JOB-READY EMPLOYEES?



Source: CCIQ Workforce, Education and Training Survey 2016

The benefit of work-based learning in universities is that students have the chance to put into practice what they have learnt and “get to know” the industry they will eventually be working in. Furthermore, it increases the chances of students finding a job upon graduation due to either continuing with the business or having that experience on their CVs.

Other forms of practical experience universities can incorporate into their courses include entrepreneurship schemes where launching their own business becomes part of the curriculum. This is geared towards student-led learning where developing entrepreneurship and business skills are the focus.



RECOMMENDATIONS

1. Develop the skills of teachers to approach core subjects at school with a project-based learning approach to develop competencies and character qualities needed for success in the 21st century economy.
2. Improve adult foundational learning by supporting, enhancing and promoting the programs that encourage employers to invest in the literacy and numeracy skills of their workforce.
3. Introduce national minimum standards for literacy and numeracy for all school leavers that relate to the standards required in most workplaces.
4. Establish a 100% target for Year 12 completion of all Queensland students by 2025, with additional resourcing to assist Indigenous students and disadvantaged regional areas on a needs-basis.
5. Ensure students benefit from quality teaching through recruiting the brightest students into teaching courses by offering attractive remuneration and high-quality opportunities to upskill throughout their careers.
6. Assist universities in building partnerships with external industries for greater integration of practical placements or industry-based projects into their courses.
7. Resolve indecisions around the Commonwealth university funding model so institutions can better prepare and implement long-term plans with greater certainty.



PRIORITY 2:

THE RIGHT STRUCTURES FOR CAREER DEVELOPMENT AND MENTORING

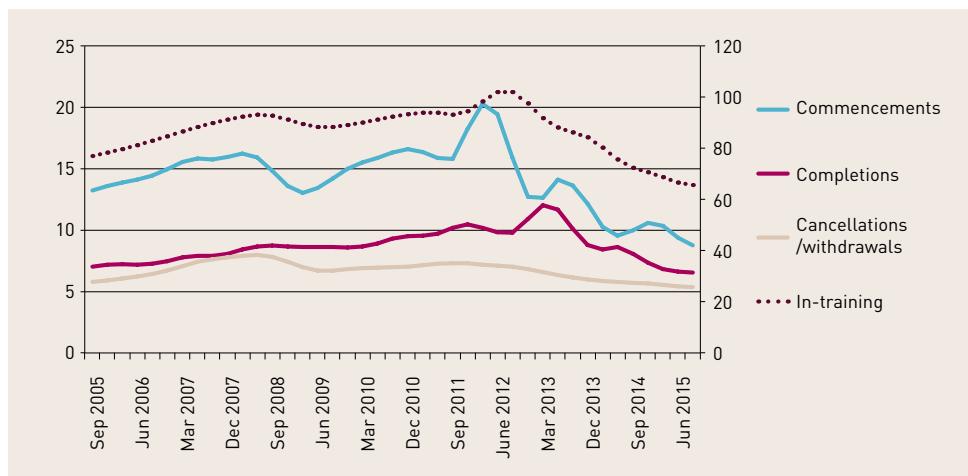
MENTORING THROUGH APPRENTICESHIPS AND TRAINEESHIPS

Apprentices and trainees have long been a part of Queensland's employment structure and a large number of businesses have taken part in developing highly skilled workers through these programs. In doing so, businesses have helped in lowering the unemployment rate and transitioning youths into learning a trade for life.

Both State and Federal Governments have over the years introduced a number of incentive schemes to promote apprentices and trainees to the business community. In Queensland, largely due to economic fluctuations, we have seen apprenticeship and traineeship models modernised, resulting in a workforce that has gone a considerable way in meeting our skills demand.

However, greater efforts are required so businesses can continue to embrace apprenticeships and traineeships. Without such reform, the decline and irregularity in the number of those entering apprenticeships and traineeships will continue to occur. This would provide significant concern for some industries, particularly those where doing an apprenticeship is the only way workers can become licensed.

FIGURE 14: QUEENSLAND'S APPRENTICESHIP AND TRAINEESHIP FIGURES 2005-15 ('000)

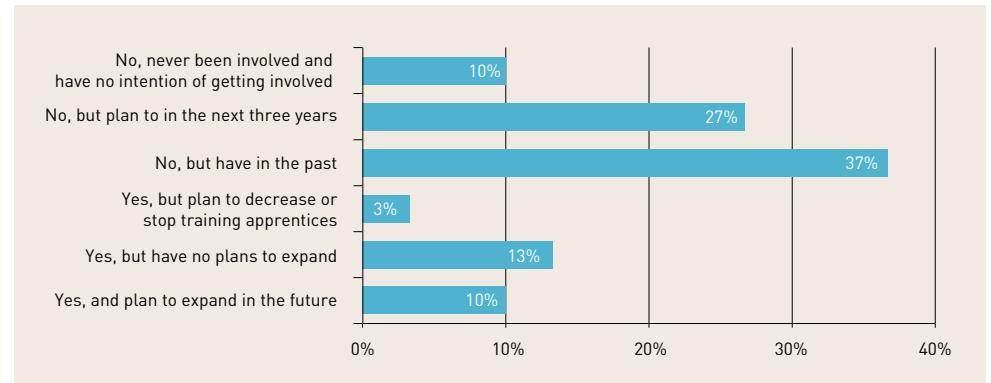


Source: NCVER, 2015, Seasonally adjusted and smoothed figures in each quarter.

The spikes in commencements can be largely attributed to government incentives, particularly in September 2011 where a notable apprenticeship incentive program was established to cater for the significant skills shortage in the mining industry.

Looking at the following figure, it shows that 90% of businesses are in fact open to employing an apprentice or trainee, i.e. have done so in the past, currently employ them or are willing to in the future. Only 10% of businesses have never been involved and have no intention of getting involved.

FIGURE 15: ARE YOU CURRENTLY PARTICIPATING IN APPRENTICESHIP OR TRAINEESHIP TRAINING SCHEMES?

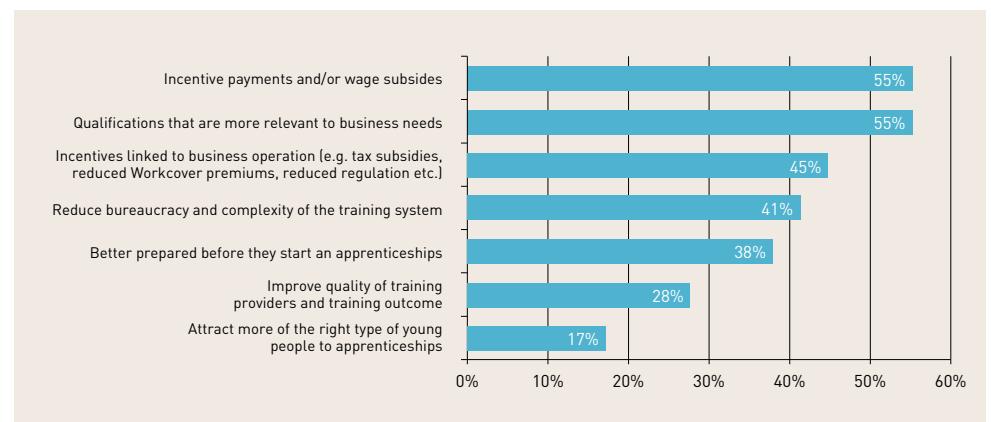


Source: CCIQ Workforce, Education and Training Survey 2016

Mentoring of an apprentice or trainee in the workplace is one of the most valuable and effective development opportunities an organisation can offer their employees, particularly for youths. The guidance and support of a highly-experienced mentor can lead to engaged workers and improved performance of the organisation.

More than 50% of businesses have indicated subsidies as well as more relevant qualifications would be the best incentive for them to get more involved in apprenticeships and traineeships.

FIGURE 16: WHICH OF THE FOLLOWING WOULD ENCOURAGE YOUR ORGANISATION TO GET MORE INVOLVED IN APPRENTICESHIPS/TRAINEESHIPS?



Source: CCIQ Workforce, Education and Training Survey 2016

THE RIGHT ADVICE

Career advisors and mentors have for many years assisted in bridging the gap between education and the workplace. Their contributions are often presented at one of the most critical cross points in many people's lives. With work defining our identity and ultimately our sense of fulfilment, it is important the guidance offered is appropriate as well as accurate.

Career guidance allows those entering the workforce to be fully informed about the career options available to them and the various routes they can take to prepare themselves. Not being fully informed could see students set off on a long journey towards jobs that may not even exist in five to 10 years' time.

"Better decisions by individuals mean less wasted investment in unused skills, less 'churn' through education and employment pathways and higher productivity" – Australian Government, National Career Development Strategy

However, advisors will need to know more than just knowledge on how to get from A to B. In today's working environment, much more is at play. Analysing employment and industry trends will become central to being able to fully inform a person about their career choice.

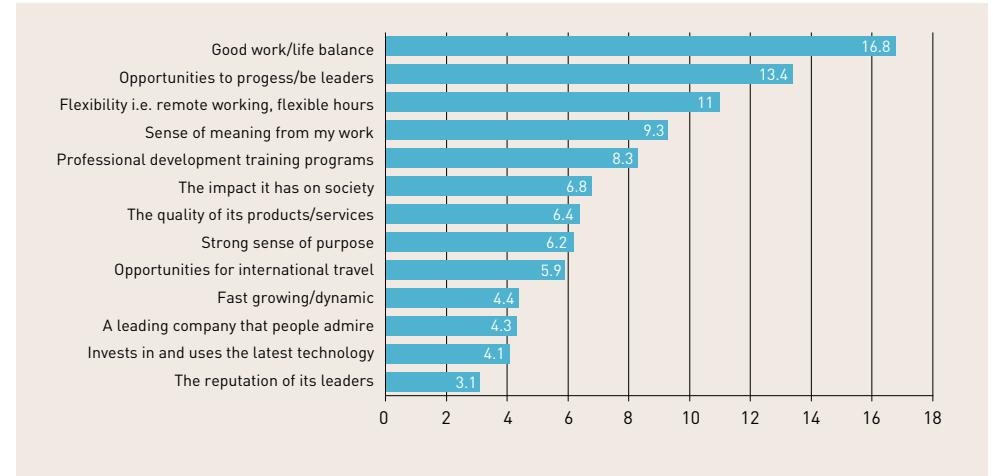
The provision and quality of career advice and career guidance has remained a significant issue for Queensland businesses. Businesses see the growing importance of education and training providers, including mentors and those in the career advising profession, to collaborate with industry and the government for a holistic approach to workforce planning and development.

"I think that young people need to be coached and guided from an early age to pursue their career goals. Sites like LinkedIn offer an array of resources to help young people identify what they are interested in and how to pursue it. Increasingly, online tools will offer guidance on career paths to the greatest economic opportunities for all workers." – Queensland business owner

SHIFTING ATTITUDES AND ASPIRATIONS

Customer and workforce attitudes will naturally evolve over the next 20 years, particularly as the tech-savvy Generation Y and Z workers begin to dominate the demographics of the workplace. Employers are finding that Generation Y employees, who currently make up the largest percentage of the workforce (34%)⁴, want more than just a stable job and are looking for other opportunities such as good work/life balance and prospects for career progress.

FIGURE 17: STRONGEST REASONS FOR GENERATION Y IN CHOOSING AN ORGANISATION TO WORK WITHIN (EXCLUDING SALARY)



Source: Deloitte (2016) The 2016 Deloitte Millennial Survey

Generation Z will again transform the workplace as they enter. They will be largely autonomous, value professional development and more likely to change jobs frequently in the search of a workplace that stimulates their entrepreneurial edge.

The challenge with this generational shift in attitudes and aspirations is that career advisors will need to inform these workers of the expectations and opportunities afforded to them, at the same time employers must understand how to attract, motivate, mentor and retain them.

CASE STUDY

Construction Skills Queensland and CSIRO team-up to predict the tradie of the future

CSQ has partnered with Australia's scientific research agency CSIRO to undertake a detailed report on the technological changes underway in Australia's construction workforce.

The Farsight Project aims to predict how the role of construction workers will evolve over the next 20 years and provide a vital roadmap as the industry enters a period of major transition.

As Queensland's third largest employer, the construction industry will be reshaped by rapid technological advancement, the globalisation of supply chains, new building systems, and the changing preferences of consumers.

CSQ's Chief Executive Officer, Brett Schimming, knows that jobs in the construction industry of the future won't look very much like they do today.

Mr Schimming says the changes to the skills and training needed in the future "need to be foreseen, understood, and managed so we can anticipate the challenges and harness the opportunities".

"The first step is to understand what that future might look like. For example, what will it mean for the construction worker when every single piece of material, machine and person is wirelessly connected to the internet?" – Dr George Quezada, CSIRO



RECOMMENDATIONS

1. De-risk businesses when they take on apprentices or trainees through attractive incentives, reduced red tape and additional support for the apprentices and trainees.
2. Establish the 'Queensland Business Pledge' centred on a professional commitment and dedication among the business community to be speakers, mentors, role models and employers for young Queenslanders.
3. Develop a strong network among career advisors to ensure their approach to counselling involves looking at industry trends and working more collaboratively with industry.
4. Promote employer-employee engagement and commitment initiatives, particularly as the next generation enters the workforce, including job design and increased professional development opportunities.

PRIORITY 3:

LEVERAGING THE WORKFORCE THROUGH LIFELONG LEARNING



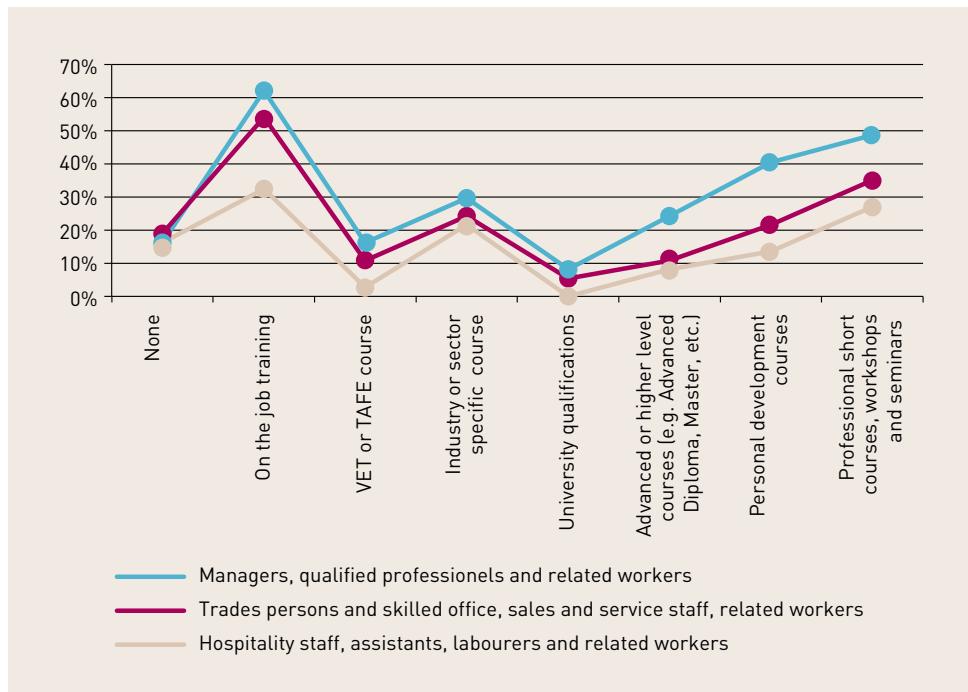
LIFELONG LEARNING

Empowering staff with functional and transferable skills allows them to participate in various aspects of the business from communications, planning, managing, analysis to innovative problem-solving. Continually engaging staff in the bigger vision of an organisation will mean that the workforce will be immersed in lifelong learning.

When research shows 60% of Australian students are training for jobs that will not exist in the future or will be drastically transformed by technology⁵, lifelong learning should be viewed as a necessity. With increased globalisation and the rise of the sharing economy, jobs will be structurally changed and people will have greater fluidity in how they earn an income.

Lifelong learning will apply to both low-skilled and high-skilled employees in this 21st century global economy. However, research has shown those in high-skilled professions received more education and training by their employer than those in lower skilled jobs.

FIGURE 18: WHAT FORMS OF TRAINING HAVE YOU PROVIDED YOUR EMPLOYEES OVER THE PAST 12 MONTHS?



5. Foundation for Young Australians, 2015.

On-the-job training was the most prevalent form of training among Queensland businesses (on average 1 in 2 businesses), followed by professional short courses, workshops and seminars. Unsurprisingly, the cost and lengthy nature of obtaining university qualifications meant less than 5% of businesses engaged in that form of training.

The education and training system will need to keep pace and provide the right courses that will allow for continual upskilling. This new way of learning needs to be reflected in the way they are taught, not just in the material itself.

FIGURE 19: COMPARISON OF LEARNING MODELS

TRADITIONAL LEARNING MODEL	LIFELONG LEARNING
The teacher is the source of knowledge.	Educators are guides to sources of knowledge.
Learners receive knowledge from the teacher.	People learn by doing.
Learners work by themselves.	People learn in groups and from each other.
Tests are given to prevent progress until students have completely mastered a set of skills and to ration access to further learning.	Assessment is used to guide learning strategies and identify pathways for future learning.
All learners do the same thing.	Educators develop individualized learning plans.
Teachers receive initial training plus ad hoc in-service training.	Educators are lifelong learners. Initial training and on-going professional development are linked.
"Good" learners are identified and permitted to continue their education.	People have access to learning opportunities over a lifetime.

Source: The World Bank; Lifelong Learning in the Global Knowledge Economy

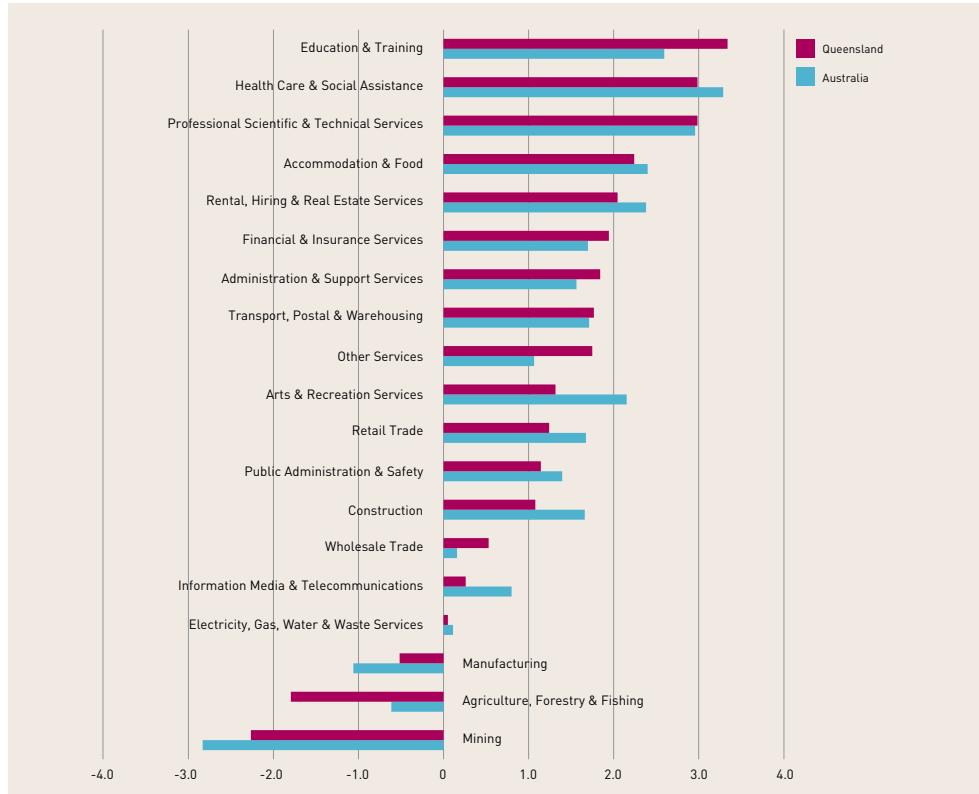
"I would invest more in education and training for my employees if there was confidence that employees will see benefit in further training, not simply being forced to do something."
– Queensland business owner

EMERGING INDUSTRIES

Looking at emerging industries that are set to experience high growth can be an indicator of where skills training will be in most demand in the future.

The structure of Queensland's economy will shift over the next five years with some industries predicted to grow by over 3% annually. There is strong anticipated growth for health care & social assistance, and education & training.

FIGURE 20: EMPLOYMENT GROWTH BY INDUSTRY, AVERAGE YEARLY GROWTH RATE, 2015-20



Source: Australian Government; Department of Employment, 2016 Employment Projections

The strong growth in the 'Education and Training' industry will be led mainly by population growth and the need for more school teachers, but an increase in international education and higher skill needs of the economy will also contribute to the 3% plus growth rate. It is also expected that the VET sector will continue to grow and provide more employment opportunities for both TAFE and private providers.



CASE STUDY

Workplace Age Management advocates for lifelong learning through supporting mature workers

Consultancy firm, Workplace Age Management, believes employers who actively support the end-to-end experience of a mature employee throughout their employment tenure, will realise greater profitability, greater productivity and closer connectivity of worker to an organisation's goals.

Founder of Workplace Age Management, David Norris, identifies that lifelong learning programs which meet organisation and individual goals are essential to harnessing not just the potential of mature workers, but the entire workforce.

Mr Norris describes Queensland's mature workforce as "the most lucrative demographic in history" and through employer training courses and workshops, encourages businesses to adopt greater flexibility, job design and individual customisation which supports lifelong learning for mature workers.

"Quality roles, career mobility, learning opportunities, flexible work arrangement and "give back" are significant factors in the retention of older workers and the reasons to support an extended career. It is a mix of the tangibles and intangibles. What is valuable to the younger work is likely to be entirely different to the older worker."
- David Norris, Founder of Workplace Age Management

Workplace Age Management is committed to growing businesses in Queensland by maximising the potential of age at work for a workforce that can meet the challenges of today and for years to come.



RECOMMENDATIONS

1. Promote, coordinate and support lifelong learning through a decentralised and participatory structure that maintains equitable access to finance and upholds Queensland's quality of education.
2. Focus on facilitating access to education and training for those in the workforce who want to upskill and transition into higher-skilled roles, particularly for those in entry-level jobs.
3. Provide better access to information for educators on fostering lifelong learning and encourage them to collaborate and share their mistakes and challenges as part of the learning process.
4. Career advisors, educators and trainers are provided with up-to-date information on emerging industries and technology to better prepare their students for their futures outside of the classroom.



PRIORITY 4:

LEVERAGING STEM SKILLS TO DRIVE THE DIGITAL WORKFORCE

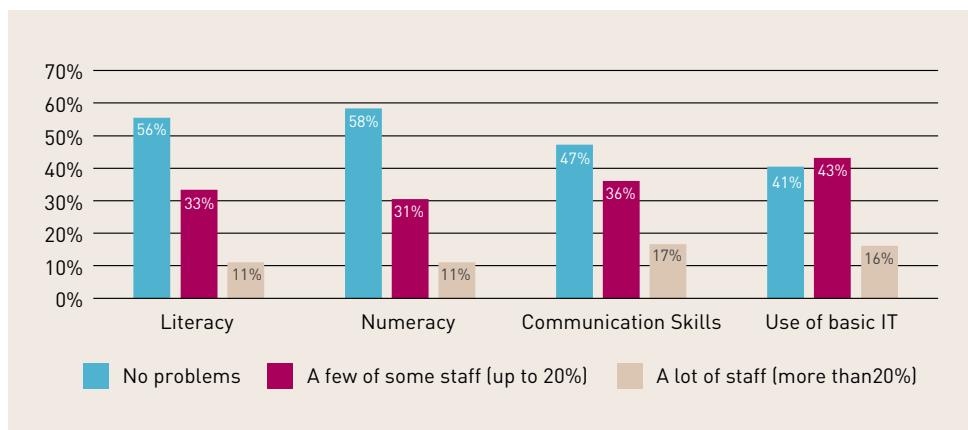
DIGITAL WORKFORCE

The implications of new technology for the workforce can present challenges as much as it does opportunities. Cloud computing, artificial intelligence, 3D printing and so on, will undoubtedly drive the creation of new jobs and the need for new skills while in effect replacing scores of predominantly low-skilled jobs. Education and training must therefore harmonise with this digital workforce.

With the contribution of digital technologies to the Australian economy forecast to grow from \$79 billion in 2014 to \$139 billion in 2020⁶, workers in the Information and Communications Technology (ICT) field are expected to be in high demand over the next five years.

Having a sufficient number of Queensland workers equipped with ICT skills will mean the State can capture the full potential of this growing digital economy. Research has shown there were in fact more businesses with staff who have problems using basic IT, than businesses who do not experience any problems.

FIGURE 21: ARE THERE LITERACY, NUMERACY, COMMUNICATION OR IT SKILL PROBLEMS IN YOUR WORKFORCE?



Source: CCIQ Workforce, Education and Training Survey 2016

However, with the youngest generation of workers being “digital natives”, this is likely to change the landscape quite considerably in the future.

The digital workforce will also utilise their social networks and seek collaborative solutions instantaneously. This means businesses must have the right infrastructure in place to support the heavy reliance and utilisation of the digital economy and its workforce.

CCIQ's annual Digital Readiness survey in 2016 revealed that digital adoption and implementation of various technological strategies and tactics are being applied with greater confidence and certainty than before.

It is a given that businesses need to be online and 90 per cent of the survey respondents have a dedicated web presence, with almost 75 per cent declaring it essential for their business.

The 2015 survey revealed that 60 per cent of businesses were generating less than 10 per cent of their revenue from online sales. But, a year later, that figure had jumped to 70 per cent generating about 20 per cent of their revenue online.

KEY RESULTS OF THE DIGITAL READINESS SURVEY

- 70 per cent of businesses generating less than 20 per cent of revenue online
- 60 per cent of businesses have built mobile-friendly websites (up from 10 per cent last year)
- 90 per cent of respondents have a dedicated web presence
- 25 per cent do not have an emergency plan if they lost company data or internet connection
- 30 per cent use professional software to manage customer relationships
- 40 per cent of businesses have no idea when or if they will be connected to the NBN
- 60 per cent have IT equipment more than two years old
- 50 per cent are looking to invest in new equipment in the next year
- 65 per cent of businesses believe they are digitally ready for the future
- 60 per cent are advertising online across AdWords, Facebook, SEO and traditional banner-style ads

Survey findings show that businesses have greater confidence in the digital opportunity, have made wise investment decisions and are looking to invest pragmatically in the future. They are confident that the NBN, social media and cloud-based technology will improve the way that they do business and open up new areas of opportunity.

6. Deloitte Access Economics (2016), Australia's Digital Pulse

SCIENCE, TECHNOLOGY, ENGINEERING & MATHEMATICS (STEM)

STEM knowledge is associated with 75% of the fastest growing occupations, innovations and wage premiums⁷. Furthermore, it was estimated there would be a \$57.4bn increase in GDP if 1% of the workforce shifted into STEM roles⁸. It is no wonder STEM is becoming the most talked about term for politicians when it comes to education reform.

Since the 2014-15 budget, the Australian Government has committed a further \$17 million to restore the focus and increase student uptake of STEM subjects in primary and secondary schools across the country. The Queensland Government in the 2016-17 State Budget set aside \$3.3 million towards 'Schools for the future', a program encouraging students to study STEM subjects.

The focus and investment into STEM will provide benefits to Queensland, particularly as it is reported as few as 49.9% of Queensland students achieved at or above the proficient standard in scientific literacy at a Year 6 level⁹. Furthermore, Queensland has experienced a fall in students studying STEM subjects at school and university over the past decade.

While consultation with career advisors revealed a shortage of secondary mathematics and science teachers, generally speaking businesses have not voiced their concern at this point of a severe skills shortage in STEM-qualified people. By either subsidising or heavily promoting STEM subjects, the government may be taking a supply-driven approach.

A CCIQ survey in March 2016 found the cost of technology and the availability of employing people with the right skills was considered less of a barrier for businesses wanting to grow and innovate. The top five barriers preventing businesses from growing and innovating were:

1. Not enough demand/declining market
2. Government regulation and red tape
3. Lack of time
4. Not connecting to existing and new customers
5. Lack of marketing expertise.

The cost of developing or introducing new technology, and the availability of people with the right skills, were in sixth and seventh position respectively.

Businesses reveal that it is important for employees to be familiar and competent with basic digital literacy, which is currently an issue for the majority of businesses as discussed earlier.

While studying STEM should in no way be discouraged, the focus should additionally be placed on teaching the workforce on how to leverage available STEM skills to innovate.



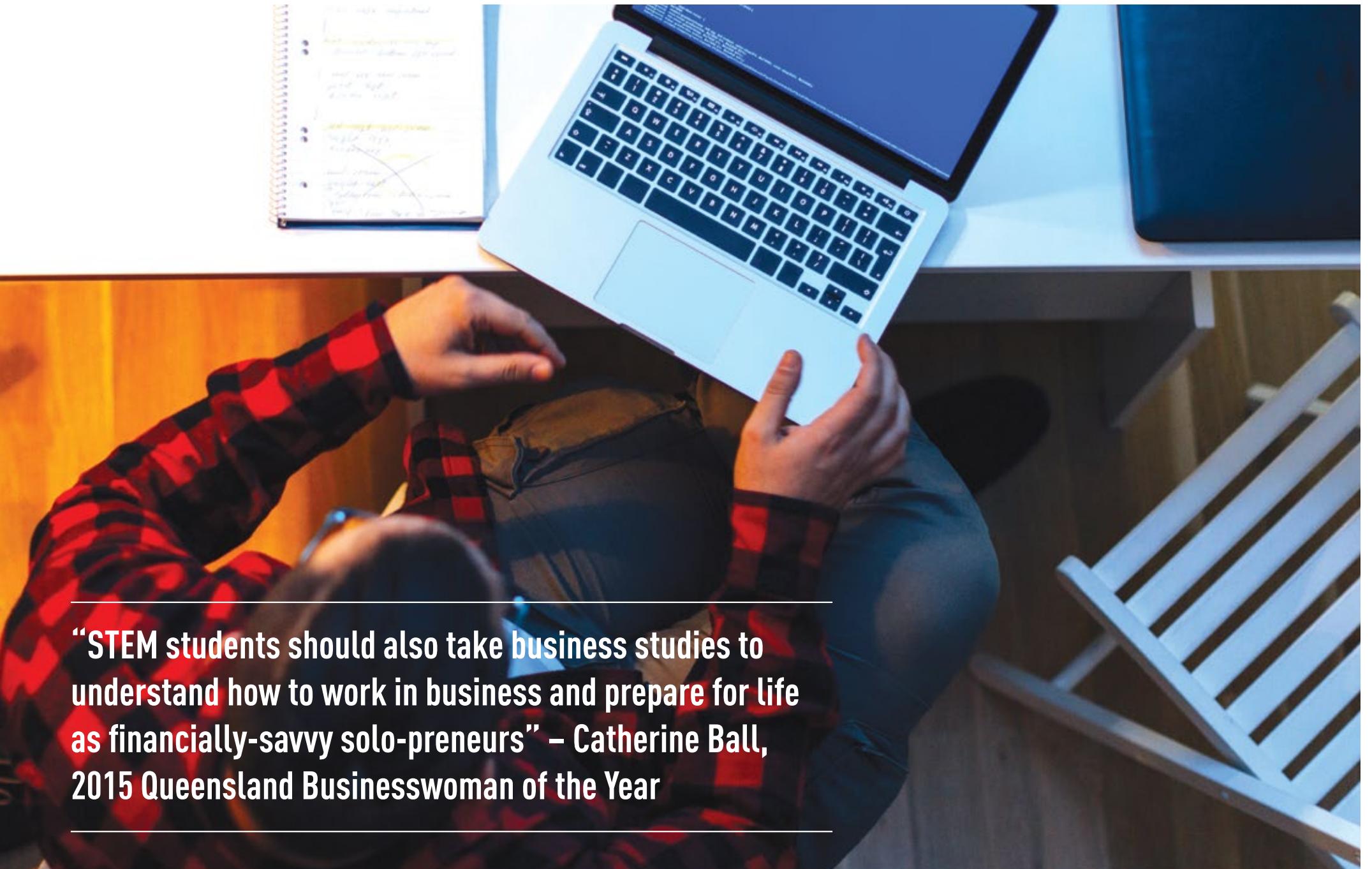
RECOMMENDATIONS

1. Support businesses in building internal capacity to train, upskill and improve the digital literacy of their existing workforce.
2. Increase the scientific literacy of Queensland students in primary and secondary schools, to achieve at least 70% of students at or above the proficient standard.
3. Businesses in STEM-related fields to be part of a state-wide effort in demonstrating the benefits of a career in STEM and commit to providing practical experience for university students.
4. Increase the pool of qualified STEM educators by encouraging STEM graduates to pursue teaching careers with incentives such as high remuneration and quality professional development opportunities.
5. Expedite the NBN roll-out particularly in regional Queensland so businesses have the right infrastructure in place to support the heavy reliance of the digital economy.

7. CSIRO (2016) Tomorrow's Digitally Enabled Workforce

8. PWC (2015) A smart move

9. Deloitte Access Economics (2016), Australia's Digital Pulse



“STEM students should also take business studies to understand how to work in business and prepare for life as financially-savvy solopreneurs” – Catherine Ball, 2015 Queensland Businesswoman of the Year

A professional woman with dark hair tied back, wearing a light grey blazer over a blue striped shirt, is smiling and looking towards the right. She is holding a white coffee cup in her left hand. Another person, seen from the side with blonde hair and a dark jacket, is facing her. They appear to be in an outdoor setting with blurred greenery and sunlight in the background.

PRIORITY 5:

BUILDING REGIONAL CAPACITY FOR ENTREPRENEURSHIP

ENTREPRENEURSHIP EDUCATION

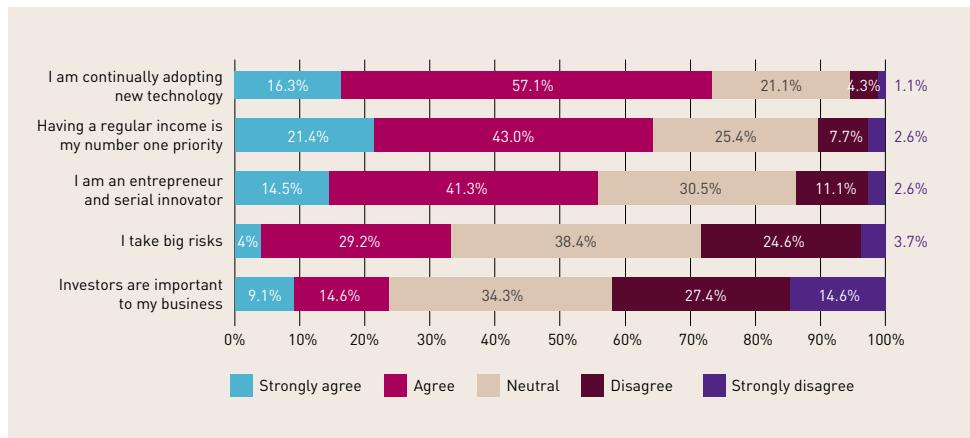
When entrepreneurs create new businesses, they are creating new products and services, more job opportunities and other gains that create a virtuous circle in the economy. This relationship between entrepreneurship and economic development is one that policy makers need to keep front of mind when looking to build regional capacity.

Entrepreneurship education is a proven path to creating higher occupational aspirations in individuals and sequentially increasing their degree of job readiness. It goes beyond improved academic performance into areas such as enjoyment for learning, decision-making abilities, improved relationships, good financial management and social psychological development such as self-confidence.

Entrepreneurship education is a means to job creation but most importantly, re-creation. As such, entrepreneurship does not always relate to a person starting their own business. It encourages people to create opportunities rather than waiting for them, and approaching work with an entrepreneurial mindset.

Just over 50% of business owners identify themselves as an entrepreneur and serial innovator. For the large majority of businesses (70%), continually adopting new technology is a business strategy in which they employ.

FIGURE 22: PLEASE INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THE FOLLOWING STATEMENTS ABOUT YOURSELF.



Source: CCIQ Innovation Survey 2016

The overall strength and stability of today's economy is going to be reinvented by the actions of individuals - and certainly businesses who hire these individuals - with a resilient and entrepreneurial mindset.

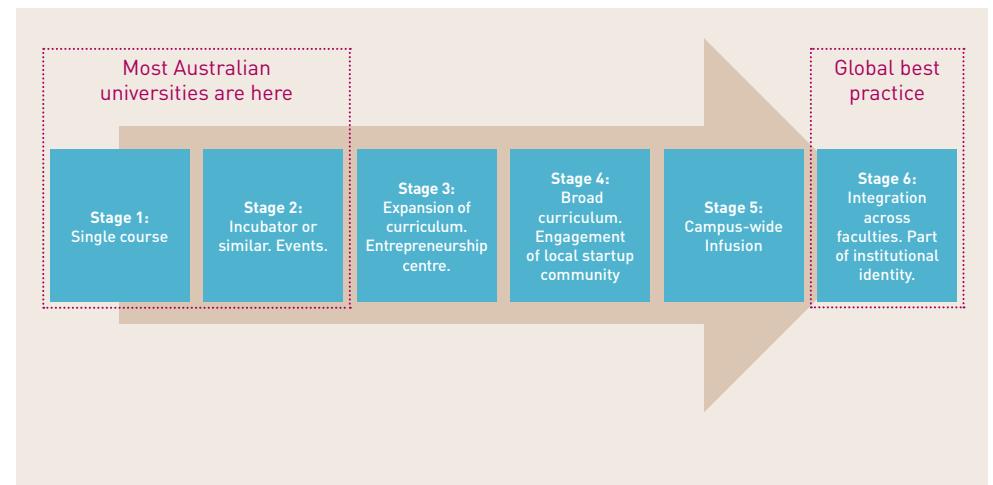
UNIVERSITIES, ENTREPRENEURSHIP AND COMMERCIALISATION

Universities undoubtedly play an important role in equipping students with entrepreneurial skills. They are educating for jobs that may not exist in the future and so developing their students to be adaptable to change and innovation will become essential.

Another outcome of teaching entrepreneurship will be a rise in intrapreneurs – those highly valuable team members who do not go out on their own but instead practice the principles of entrepreneurship in their roles as employees. Developing intrapreneurial skills supports the needs of businesses and better enables them to identify and grasp opportunities.

Research and subjects on entrepreneurship, innovation and business management are well established in Australian universities. It is estimated that postgraduate entrepreneurship or small-business subjects are offered in 90% of Australian universities, while one in five universities have dedicated entrepreneurship or small-business research centres . Nevertheless, there is still some way to go towards global best practice of total integration of entrepreneur education across faculties and embedding it as part of the institutional identity.

FIGURE 23: MATURITY OF ENTREPRENEURSHIP EDUCATION



Source: Morris, M; Kuratko, D & Cornwall, J [2013] Entrepreneurship Programs and the Modern University

It is within the areas of technology transfer and commercialisation where the often disjointed relationship between universities and industry create a weakness within the innovation ecosystem. This however, is a global challenge and requires consideration to be given to the intrinsically different roles and culture of the two communities.

Academic career development has been more closely linked to the publication of peer reviewed research papers in scholarly journals, more so than building relationships with industry. Queensland's universities will be challenged to strike the right balance between advancing their scientific research, while ensuring their work can be commercialised and support policy and practice.

CASE STUDY

CQUNIVERSITY CONNECTS TO ELITE GLOBAL CONGLOMERATE OF SOCIAL ENTREPRENEURS

CQUniversity has become Australia's first 'Changemaker Campus' for social innovation education under the Ashoka U initiative.

Ashoka U takes an institutional change approach to impact the education of millions of students by collaborating with colleges and universities to break down barriers to institutional change and foster a campus-wide culture of social innovation.

After a rigorous two year selection process assessing the university's social innovation credentials, plans and corporate values, CQUniversity was announced as the second Changemaker Campus for the entire Asia Pacific region.

"We have never cared to be like the other universities – we have always sought social impact, altruism and civic contribution ahead of prestige and exclusivity."
– Prof Scott Bowman, CQUniversity Vice-Chancellor

CQUniversity's focus on social innovation and becoming a Changemaker Campus is a natural extension to the University's values of inclusiveness and engagement, and their mission to create connections across local, national and international footprint.

The University proudly boasts to be engineers of profound social change. This includes activities such as the delivery of distance education, research and program design that is informed by engagement with community and industry, the delivery of access education, and providing students with multiple opportunities to engage with the world around them.



RECOMMENDATIONS

1. Integrate the development of entrepreneurial skills into school-based learning so that core education subjects can be brought to life.
2. Aim towards global best practice in entrepreneurship education in tertiary institutions by making it a strategic objective in universities that receives top-down support.
3. Increase regional capacity and potential for innovation through better understanding the opportunities and gaps in the innovation ecosystem across Queensland's regions and boosting investment accordingly.
4. Improve student understanding of the importance of a strong economy, the role of small business and entrepreneurship and innovation, and encourage students to see running a small business as a positive career aspiration.
5. Universities are given a mandate to undertake their research with a view to commercialise. A central commercialisation entity is to be established to manage risk and disseminate information regarding research activities to business.
6. Government investment into university research should consider the university's progress and support for commercialisation of its research work.

PRIORITY 6:

INDUSTRY ENGAGEMENT TO DRIVE SUSTAINABLE GROWTH



INDUSTRY ENGAGEMENT

Employers and industry in essence specify the skills and knowledge that will allow its workforce to perform effectively and for business to thrive in the current economy. In order for a government's policy settings to be successful, it is critical that this industry insight is disseminated into bureaucracy and decision making.

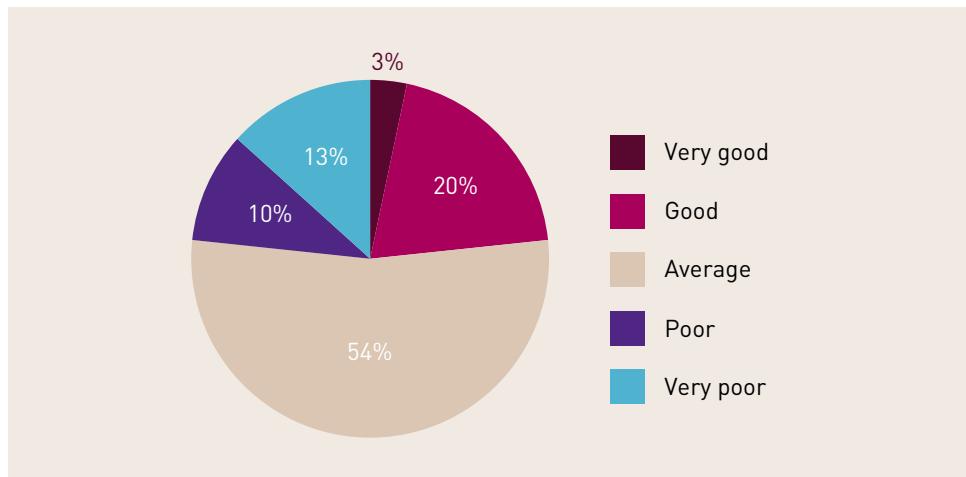
Common practice in facilitating this knowledge transfer is through the establishment of federal and state-based industry and skills advisory bodies. When provided with the right level of authoritative influence, these advisory bodies become a valuable source of information and tool for strengthening industry-government relations.

In 2015, the Queensland Government established Jobs Queensland as an independent statutory authority providing strategic industry advice to government on skills demand and future workforce planning.

Industry representatives provide a skills analysis of industry sectors across the state to advise government on current and future skills needs, undertake workforce planning activities and provide advice to government on the apprenticeship and traineeship system.

But at present, only 23% of Queensland businesses rate the effectiveness of engagement by government with industry on workforce, education and training issues as good or very good. A further 23% believe it to be poor or very poor, signalling a need for a reinvigorated approach to industry consultation and collaboration.

FIGURE 24: HOW WOULD YOU RATE THE EFFECTIVENESS OF ENGAGEMENT BY GOVERNMENT WITH BUSINESS AND INDUSTRY ON WORKFORCE, EDUCATION AND TRAINING ISSUES?



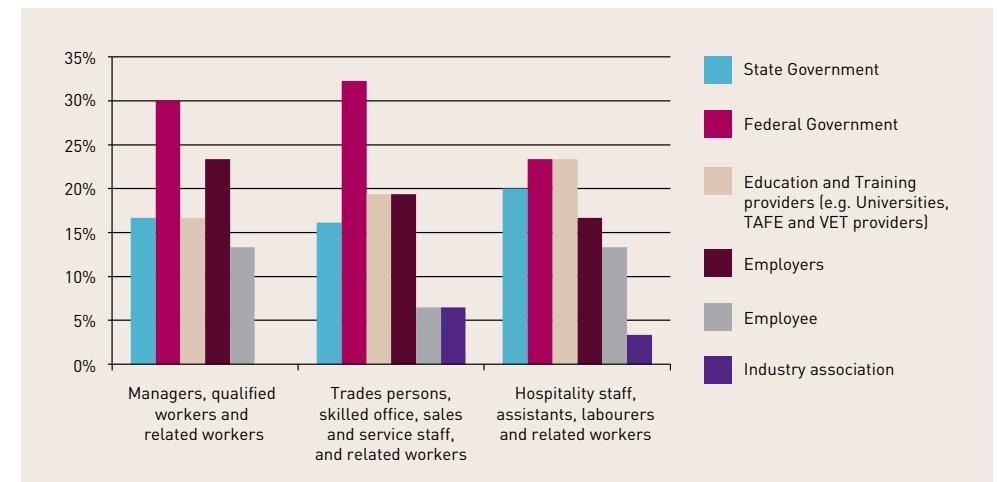
Source: CCIQ Workforce, Education and Training Survey 2016

FUNDING MODELS

Government at both the State and Federal level are responsible for the delivery of education and training and addressing the skill shortages in Queensland. However, the majority of businesses believe the Federal Government should hold primary responsibility for increasing the skill levels of the Queensland workforce.

Surprisingly, businesses recognise that they themselves have a high degree of responsibility to address workforce issues, even having more responsibility than State Government for workers in intermediate-high level jobs.

FIGURE 25: WHO DO YOU SEE AS HAVING PRIMARY RESPONSIBILITY FOR ADDRESSING THE SKILL SHORTAGE CHALLENGES AND INCREASING THE SKILLS LEVELS OF THE QUEENSLAND AND AUSTRALIAN WORKFORCE?



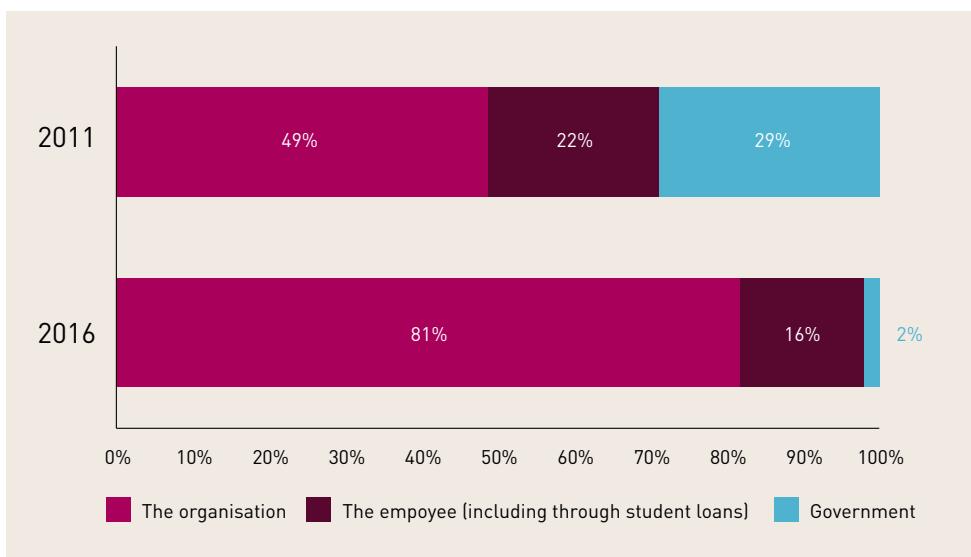
Source: CCIQ Workforce, Education and Training Survey 2016

The Federal Government continues to invest in the Industry Skills Fund with the 2016-17 Budget allocating \$207 million over five years to support the training needs of small and medium enterprises which cannot be readily met by the national training system.

However, this amount represents a cut of \$247 million to the programme from the previous budget. Industry has cited the difficulty in the application process as a significant contributor to low participation rates, rather than the lack of demand.

The increase in the proportion of employers funding training for their employees and the decline of government assistance demonstrates how businesses are increasingly shouldering the burden of training the workforce. Over the past five years, there has been a significant increase in the proportion of training that has been funded by the employer (49% in 2011 increased to 81% in 2016).

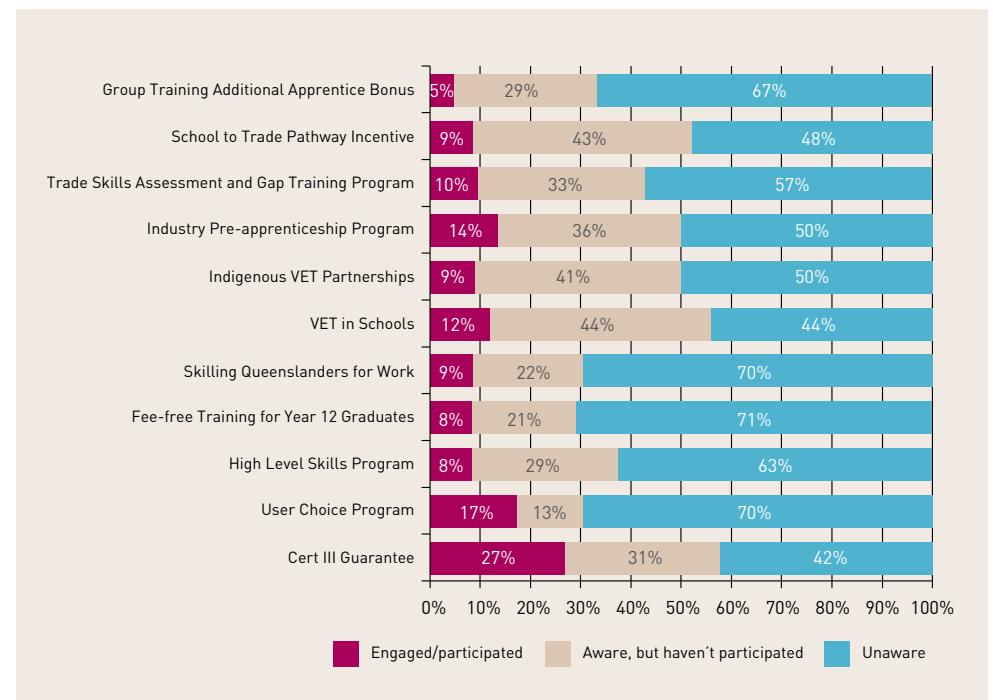
FIGURE 26: FUNDING FOR TRAINING AND COURSES UNDERTAKEN BY EMPLOYEES WAS PRIMARILY OR FULLY FUNDED BY:



PROGRAM AWARENESS AND TAKE-UP

Research found that at least 40% of businesses were largely unaware of Queensland Government funded programs and incentives, and if they were aware then many businesses did not participate or engage in these initiatives.

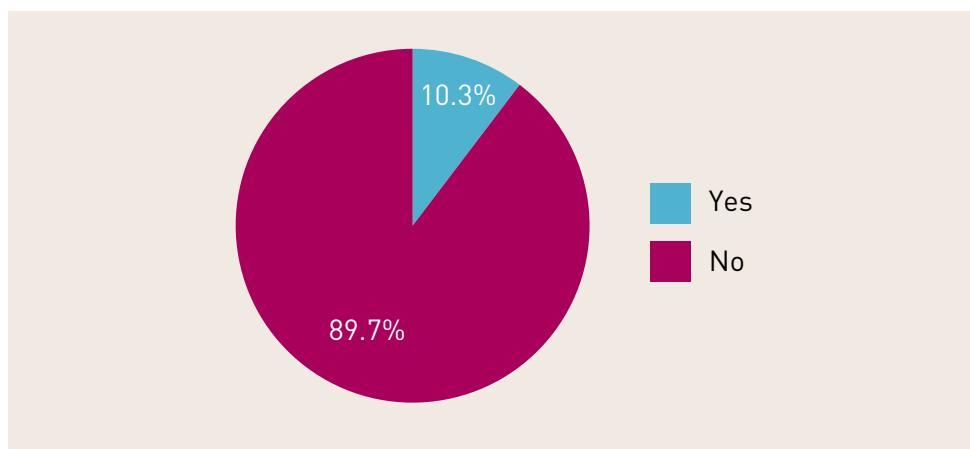
FIGURE 27: ARE YOU AWARE OF OR BEEN INVOLVED IN ANY OF THESE QUEENSLAND GOVERNMENT FUNDED PROGRAMS/INCENTIVES?



“We need incentives to help fund the training. It is a big risk to up-skill when we struggle to retain them. We have a terrible skill shortage.”
– Queensland Business Owner

Similar to State Government initiatives, education and training programs offered by the Federal Government were largely under-utilised by businesses. Only 10% of businesses indicated they had participated in a Federal Government program for the education and training of their workforce.

FIGURE 28: HAVE YOU PARTICIPATED IN ANY FEDERAL GOVERNMENT PROGRAMS OR INITIATIVES FOR THE EDUCATION AND TRAINING OF YOUR WORKFORCE?



Source: CCIQ Workforce, Education and Training Survey 2016

The lack of awareness of government programs means that businesses are not aware of available incentives that can help them grow and sustain their businesses. While governments could better inform the business community of their programs, the paperwork burden has also been a barrier to take-up as has been the case with the Industry Skills Fund.

VET REFORM

The Vocational Education and Training (VET) sector prepares workers with workplace-specific skills for a wide range of careers and industries including trade, office work, retail, hospitality and technology.

Each year, the Australian government spends approximately \$14 billion on VET and higher education. However, this significant investment has not yielded the expected outcomes and has created a number of issues such as:

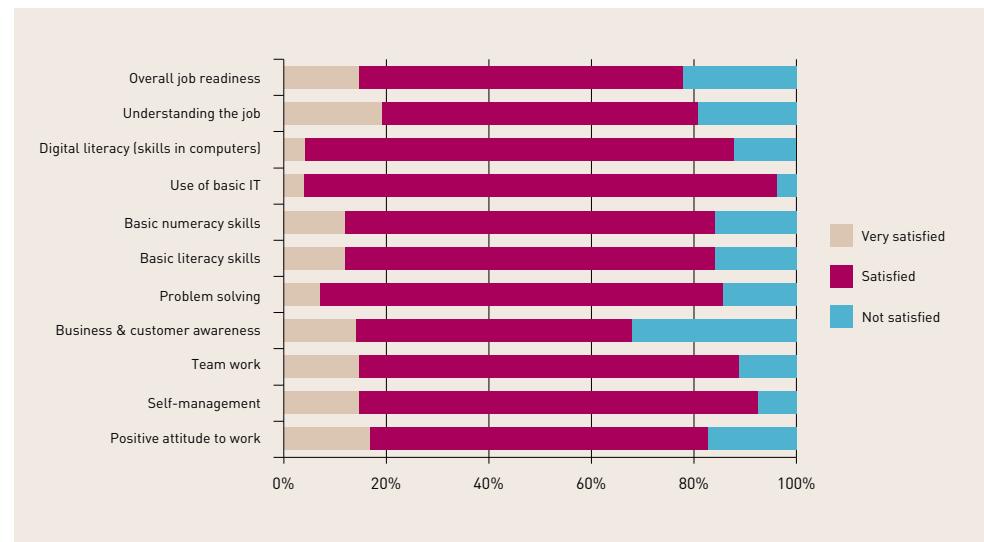
- duplication across State and Federal Government;
- distorted funding incentives;
- scant market information;
- providers having disproportionate power in the marketplace;
- VET being a 'poor cousin' to higher education; and
- poor provider behaviour resulting in diminished confidence in the VET sector.

From an industry perspective, it is important to establish a system that prepares students for the expectations of employers and the demands of the labour market, as well as embrace life-long learning. This would include:

- ensuring the fundamental role of industry in the system;
- the funding model across VET and higher education including FEE-HELP; and
- a redesigned apprenticeship system that develops contemporary, relevant and higher level trade and para-professional skills across the economy.

Currently, 78% of Queensland businesses are satisfied or very satisfied with the "overall job readiness" of employees who received training from TAFE and private VET providers. This encouraging figure suggests Queensland's VET system has largely avoided many of the widely reported issues of southern States, and also indicates significant improvements in TAFE performance in recent years.

FIGURE 29: HOW SATISFIED ARE YOU IN THE FOLLOWING AREAS IN REGARD TO EMPLOYEES WHO HAVE RECEIVED TRAINING FROM TAFE AND PRIVATE VET PROVIDERS?



Source: CCIQ Workforce, Education and Training Survey 2016

The highest rate of dissatisfaction, at 32% of businesses, was attributed to "business and customer awareness" in VET graduates. Having business and customer awareness simply means having a basic understanding of the key drivers for business success and the need to provide customer satisfaction. Graduates who struggle to grasp this will find it difficult to find a job or advance their careers, while businesses will continue to have trouble finding suitable, well-rounded employees who actively pursue ways to drive business growth.



RECOMMENDATIONS

1. Government should acknowledge the Federal and State industry advisory bodies as fundamental to creating policy and increase their sphere of influence in decision-making.
2. Establish formal partnerships with business organisations to be platforms for disseminating information and providing up-to-date information on VET grants and programs available.
3. Maintain the current level of investment into the industry skills fund and streamline the application process to encourage greater participation.
4. Reduce red tape around the application process for grants and programs, particularly those targeting higher youth employment.
5. Maintain contestability in the VET provider marketplace to ensure the responsiveness of qualifications to industry needs.
6. VET funding and policy development should be the responsibility of the Federal Government rather than the current inefficient approach of shared responsibility with the States.
7. Implement and reinforce an industry-driven system, where industry input from employers is a requirement at all levels from ministerial Advisory mechanisms, through to training packages, standards for providers and down to delivery, in order that the system delivers outcomes that meet the needs of the labour market.



SUMMARY OF RECOMMENDATIONS

PRIORITY 1: SETTING STRONG FOUNDATIONS TO DEVELOP 21ST CENTURY SKILLS

1. Develop the skills of teachers to approach core subjects at school with a project-based learning approach to develop competencies and character qualities needed for success in the 21st century economy.
2. Improve adult foundational learning by supporting, enhancing and promoting the programs that encourage employers to invest in the literacy and numeracy skills of their workforce.
3. Introduce national minimum standards for literacy and numeracy for all school leavers that relate to the standards required in most workplaces.
4. Establish a 100% target for Year 12 completion of all Queensland students by 2025, with additional resourcing to assist Indigenous students and disadvantaged regional areas on a needs-basis.
5. Ensure students benefit from quality teaching through recruiting the brightest students into teaching courses by offering attractive remuneration and high-quality opportunities to upskill throughout their careers.
6. Assist universities in building partnerships with external industries for greater integration of practical placements or industry-based projects into their courses.
7. Resolve indecisions around the Commonwealth university funding model so institutions can better prepare and implement long-term plans with greater certainty.

PRIORITY 2: THE RIGHT STRUCTURES FOR CAREER DEVELOPMENT AND MENTORING

8. De-risk businesses when they take on apprentices or trainees through attractive incentives, reduced red tape and additional support for the apprentices and trainees.
9. Establish the 'Queensland Business Pledge' centred on a professional commitment and dedication among the business community to be speakers, mentors, role models and employers for young Queenslanders.
10. Develop a strong network among career advisors to ensure their approach to counselling involves looking at industry trends and working more collaboratively with industry.
11. Promote employer-employee engagement and commitment initiatives, particularly as the next generation enters the workforce, including job design and increased professional development opportunities.

PRIORITY 3: LEVERAGING THE WORKFORCE THROUGH LIFELONG LEARNING

12. Promote, coordinate and support lifelong learning through a decentralised and participatory structure that maintains equitable access to finance and upholds Queensland's quality of education.
13. Focus on facilitating access to education and training for those in the workforce who want to upskill and transition into higher-skilled roles, particularly for those in entry-level jobs.
14. Provide better access to information for educators on fostering lifelong learning and encourage them to collaborate and share their mistakes and challenges as part of the learning process.
15. Career advisors, educators and trainers are provided with up-to-date information on emerging industries and technology to better prepare their students for their futures outside of the classroom.

PRIORITY 4: LEVERAGING STEM SKILLS TO DRIVE THE DIGITAL WORKFORCE

16. Support businesses in building internal capacity to train, upskill and improve the digital literacy of their existing workforce.
17. Increase the scientific literacy of Queensland students in primary and secondary schools, to achieve at least 70% of students at or above the proficient standard.
18. Businesses in STEM-related fields to be part of a state-wide effort in demonstrating the benefits of a career in STEM and commit to providing practical experience for university students.
19. Increase the pool of qualified STEM educators by encouraging STEM graduates to pursue teaching careers with incentives such as high remuneration and quality professional development opportunities.
20. Expedite the NBN roll-out particularly in regional Queensland so businesses have the right infrastructure in place to support the heavy reliance of the digital economy.

PRIORITY 5: BUILDING REGIONAL CAPACITY FOR ENTREPRENEURSHIP

21. Integrate the development of entrepreneurial skills into school-based learning so that core education subjects can be brought to life.
22. Aim towards global best practice in entrepreneurship education in tertiary institutions by making it a strategic objective in universities that receives top-down support.
23. Increase regional capacity and potential for innovation through better understanding the opportunities and gaps in the innovation ecosystem across Queensland's regions and boosting investment accordingly.
24. Improve student understanding of the importance of a strong economy, the role of small business and entrepreneurship and innovation, and encourage students to see running a small business as a positive career aspiration.
25. Universities are given a mandate to undertake their research with a view to commercialise. A central commercialisation entity is to be established to manage risk and disseminate information regarding research activities to business.
26. Government investment into university research should consider the university's progress and support for commercialisation of its research work.

PRIORITY 6: INDUSTRY ENGAGEMENT TO DRIVE SUSTAINABLE GROWTH

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30. Reduce red tape around the application process for grants and programs, particularly those targeting higher youth employment.
31. Maintain contestability in the VET provider marketplace to ensure the responsiveness of qualifications to industry needs.
32. VET funding and policy development should be the responsibility of the Federal Government rather than the current inefficient approach of shared responsibility with the States.
33. Implement and reinforce an industry-driven system, where industry input from employers is a requirement at all levels from ministerial Advisory mechanisms, through to training packages, standards for providers and down to delivery, in order that the system delivers outcomes that meet the needs of the labour market.

CQUNIVERSITY AUSTRALIA

CQUniversity's School of Business and Law are proud to have partnered with CCIQ to develop this report into the future of Queensland's workforce.

CQUniversity's School of Business and Law is a national multi-campus business school dedicated to excellence in teaching, research, scholarship and service. By creating connections with our communities and offering personal attention, we engage our students and partners in an innovative and learner-centred environment that creates opportunities for working in the global community.

Our vision is to be recognised nationally and internationally by our communities as an innovative, inclusive and engaged partner of choice in learning and research. Our partnership with CCIQ supports our core values of engagement, leadership, a can-do approach, openness and inclusiveness.

If you're thinking of changing careers or want to skill up to enter the workforce, CQUniversity's comprehensive range of TAFE and university qualifications – as well as seamless pathways between the two – can help you get there. With more than 300 courses on offer, designed alongside industry and delivered by award-winning and highly experienced teaching professionals using a practical approach, CQUniversity will ensure you'll graduate with up-to-date, real-world skills.



BE WHAT YOU WANT TO BE
cqu.edu.au



CQUNIVERSITY AT A GLANCE

GROWTH



Consistent growth in domestic enrolments since 2009.



30 000+

Students

2000

Staff



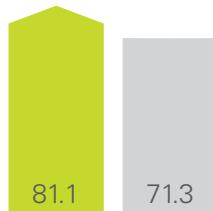
LARGEST

Australia's only university with a geographic footprint spanning the entire country.

20+ Physical sites across Australia.

\$200 m+ More than \$200 million invested in capital works in five years

GRADUATES



81.1% employment rate

Full-time graduate employment rate of 81.1% (sector average 71.3%)^{*}



CQUni graduates exceeded national average employment rates in 10 of the 14 recognised areas of study.*



Consistently ranked among the top universities for graduate starting salaries.*

* Graduate Careers Australia website data.

REPUTATION

TOP 3% UNIVERSITY WORLDWIDE



Reflects our commitment to research, learning and teaching, international outlook as well as providing the best student experience.

Times Higher Education World University Rankings 2015 – 16



MBA ACCOLADES

Our refreshed MBA courses in the nation.

- » 5th CEO Magazine Australian MBA Ranking 2016.
- » 13th The Financial Review BOSS Magazine 2015.
- » 20th CEO Magazine Global Online MBA Ranking 2016.





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