



Q2 Target Delivery Plan 2010–2011: Strong

Increase by 50 per cent the proportion of Queensland businesses undertaking innovation or research and development

Target: Increase by 50 percent the proportion of Queensland businesses undertaking innovation or research and development

Definition of target: By 2020, 54 percent of Queensland businesses will be regularly undertaking innovation or research and development

Measurement: Replacement of ABS 8158.0 is currently under development

Baseline **36 percent of Queensland businesses were innovating in 2006-07. This was 3.6 percent above the national average, and the best performance in the nation.**

Complementary Venture Capital invested in Queensland firms as measured by ABS Cat 5678.0.

Indicators Business Expenditure on Research and Development as measured by ABS Cat 8104.0
Number of patents, copyrights, trade marks or new licences generated per annum

Reporting: Anticipated Data available November 2010 (2009-10)
5678.0 Data next available February 2011 (2009-10)
8104.0 Data next available September 2010 (2008-10)
IP Australia Data next available 2010 (2007-08)

Lead department: *Department of Employment, Economic Development and Innovation*

Contributing department/s:

Department of Education and Training

Department of Infrastructure and Planning

Department of Environment and Resource Management

Department of Transport and Main Roads

Department of Justice and Attorney-General

Queensland Health

Part 1: Strategy

About the Target

The *Toward Q2 Strong* Ambition to develop a diverse economy powered by bright ideas will position Queensland as a prosperous and dynamic economy. The ambition aims to build an economy that is characterised by high growth businesses investing in continuous improvement and research and development to increase their competitiveness and productivity. Underpinning productivity and competitiveness is innovation.

The *Toward Q2 Strong: Innovation* Target is to increase by 50 per cent the proportion of Queensland businesses undertaking research and development or innovation. This target aims to build on the Queensland Government's ongoing efforts to support businesses across the economy.

What is Innovation?

For the purpose of this plan, innovation in business is defined as “the ability to convert a clever idea into commercially successful outcomes”¹. It encompasses all processes by which new ideas are generated and converted into useful products and services. It includes the introduction of a new, or significantly improved, product, process or method² or improved sustainability.

Role of Innovation in Productive Growth

Innovation drives productivity growth³ which leads to increased competitiveness, increased profitability, rises in real wages, increased returns to shareholders, and higher per capita income for a nation or region. Research shows almost 70 percent of recent economic growth is the result of productivity improvements (largely driven by innovation)⁴. Additionally, investing in innovation is one of the most effective ways of cushioning Australia against the effects of global downturn and accelerating recovery⁵. Innovation needs to continue across all industries and businesses contributing to the Queensland economy – this is the key to a stronger, environmentally responsible, globally competitive and sustainable economy.

To achieve the *Toward Q2 Strong: Innovation Target*, the Queensland Government’s role is two-fold: working to create an environment for business success while helping businesses respond to the economic challenges they face. The Queensland Government plays an important role in implementing policies to minimise barriers and maximise opportunities for businesses to improve their productivity, supporting the commercialisation and diffusion of new ideas and new technologies; and fostering an environment for business to grow.

This strategy is intrinsically linked to the *Toward Q2 Strong: Economy Target Delivery Plan (TDP)* which aims to position Queensland as Australia’s strongest economy, with infrastructure that anticipates growth. The *Toward Q2 Strong: Innovation TDP* complements the suite of *Toward Q2 Strong: Economy TDP* initiatives which create the right environment for global competitiveness; a regionalised state and economy; connecting skills with business; and infrastructure for economic growth.

Past, Current and Projected Performance

Under the *Toward Q2 Strong: Innovation Target*, 54 percent of Queensland businesses will be undertaking innovation or research and development by 2020. Australian Bureau of Statistics (ABS) data (2006-07) shows 36 percent of Queensland businesses were innovating (i.e. an estimated 145,605 of 404,457 businesses). This is 3.6 percent points above the national average and is ahead of all other Australian States and Territories. Based on this figure, the target will see the proportion of Queensland businesses innovating increase by 18 percentage points.

Other ABS indicators which measure Queensland’s innovation performance reflect overall positive growth in innovation. For example, venture capital investment in Queensland firms increased from \$941 million in 2006-07 to \$1,073 million in 2007-08⁶ (prior to the effects of the global financial crisis) and \$1,059 million in 2008-09⁷. Business expenditure on research and development in Queensland was also up 15.9 percent from \$1.7 billion in 2006-07 to \$1.95 billion in 2007-08⁸. Knowledge-intensive industry exports increased 23.3 percent from \$4.952 billion in 2007-08 to \$6.106 billion in 2008-09.

Based on this data, Queensland is doing well against other Australian states in business innovation and research and development. In comparison to OECD member countries, however, Queensland is performing below average on many innovation indicators, putting Queensland at a potential competitive

¹ Queensland Manufacturing Solutions, *Innovation: Growth through Productivity and Competitiveness*, 4 March 2010

² Organisation for Economic Cooperation and Development.

³ Growth that generates more highly-valued outputs from a given level of inputs

⁴ *Toward Q2: Tomorrow’s Queensland* (2008)

⁵ Commonwealth Government (2009) *Powering Ideas: An Innovation Agenda for the 21st Century*

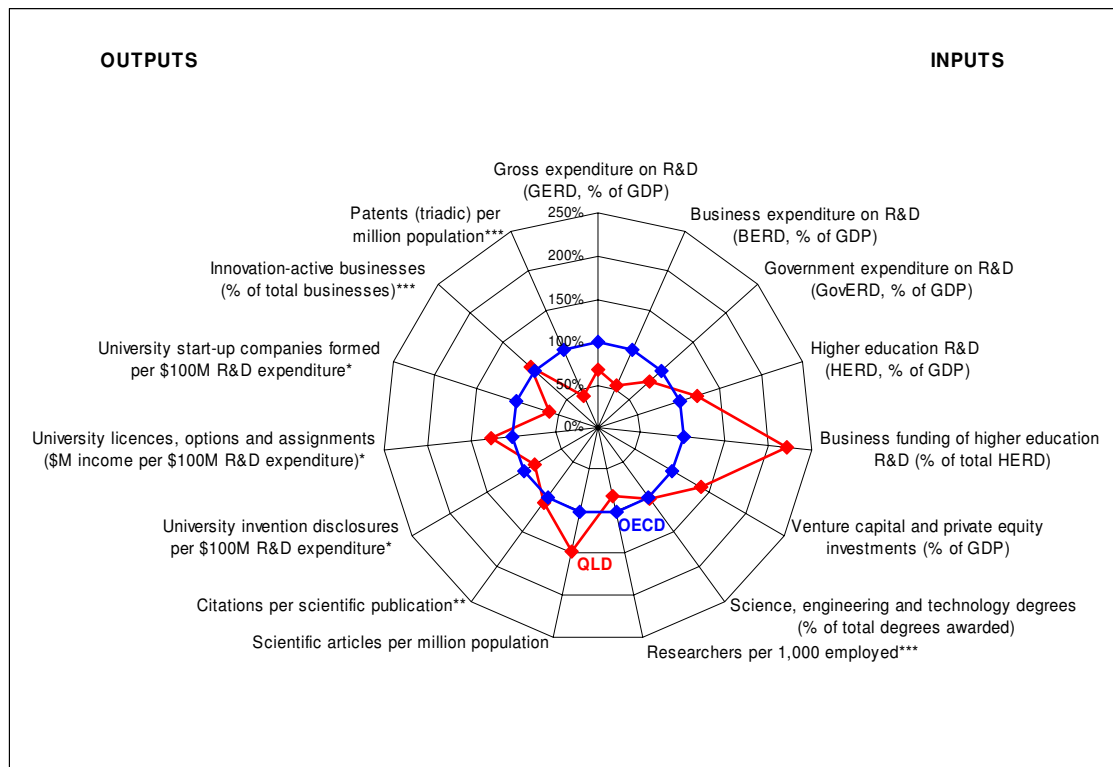
⁶ Latest figures released February 2009.

⁷ Latest figures released January 2010.

⁸ Latest figures released September 2009.

disadvantage against leading OECD economies⁹ (refer Figure 1). This is particularly so when comparing new-to-market product innovations (the introduction of new goods or services to a particular market by a business) – an indicator of knowledge creation in the industry sector¹⁰. On this indicator, Australia comes last in the OECD. Queensland is likely to reflect the Australian level of new-to-market innovations.

Figure 1: Innovation profile – Queensland versus the OECD



[†] For each indicator, Queensland values were expressed as a percentage of the OECD average, which was assigned as 100%.

* International data for universities refers to Canada, USA and UK, not the OECD.

** International data refers to the world, not the OECD.

*** Queensland data has been derived.

Additionally, small businesses (with 0-9 employees) make up over 90 percent of businesses in Queensland. Data indicates that these smaller businesses undertake much lower levels of innovation than larger firms.

Measuring Performance

While these indicators broadly reflect levels of innovation activity in Australia measurement of specific progress in Queensland in the short term toward the target is difficult. At present, innovation is measured by the ABS (Survey Catalogue No. 8158.0), based on a biennial business characteristics survey. The latest data was released in 2008 (for 2006-07), with the next set of data due to be released in September 2010 (for 2008-09).

ABS data also currently excludes a number of industry sectors key to Queensland Government investments in innovation such as agriculture, and education and training. The underlying assumptions

⁹ Queensland Parliament Economic Development Committee, Inquiry into identifying world's best practice by governments to effectively stimulate employment opportunities in Queensland, Report No.2, November 2009

¹⁰ Innovations are classified by novelty into new to a business, new to the market or new to the world. New-to-business innovations are the adoption of already existing innovations by a business and simply reflect technology diffusion, whereas new-to-market innovations (including new-to-world innovations) indicate the ability to develop from within.

(small sample size, national basis for stratification by industry and employment) also make this data unreliable.

The ABS informed the Queensland Government on 22 April 2010 that unlike previous surveys, the 2008-09 publication to be released in August 2010 would not provide any state-level innovation data due to dwindling survey sizes and response rates. This change to the scope of data collected will impact on the Government's ability to report on the growth of business innovation in Queensland and compare performance with other states and territories.

The Queensland Government is working with the Office of Economic and Statistical Research and will have an alternative provider in place with a survey undertaken prior to December 2010. It is expected that suitable state-level innovation figures will be available by the first quarter of 2011. This will replace the state data previously captured through the ABS Survey Catalogue No. 8158.0, with the intention of providing more robust and Queensland specific innovation data.

The Queensland Government is also working federally through the Commonwealth, State and Territory Advisory Council on Innovation (CSTACI) to improve measurement data available at the state and regional level in line with the Australian Government's commitments to improve measurement of innovation performance. Emphasis will be given to the ABS undertaking the next Innovation Survey expected in 2012 to include state and territory stratified data as well as potential collaboration in an alternative nationwide survey.

Additionally, performance against the target will continue to be measured using an 'innovation scorecard approach' comprising a range of complementary indicators. This will provide a more comprehensive view of Queensland's performance and the Queensland Government's innovation effort.

Barriers to Achieving the Target

In 2006-07, 46 percent of Australian businesses¹¹ identified the following barriers to innovation:

- Lack of skilled persons (within the business (16.1 percent) and the labour market (18.7 percent)) – 25.7 percent
- Lack of access to additional funds – 15.9 percent
- Cost of development or introduction/implementation – 10.9 percent
- Government regulations or compliance – 10.3 percent
- Uncertain demand for new goods or services – 8.8 percent
- Attitude of staff towards change – 6.0 percent
- Lack of access to knowledge or technology to enable development or introduction/implementation – 3.4 percent.

It is important to recognise that the baseline data indicating 36 percent of Queensland businesses were innovating in 2006-07 pre-dates the global financial crisis. During the crisis, many Queensland businesses faced financial challenges requiring cost-cutting in areas non-essential to production (eg business investment in research and development and other innovation activities). This could have a short term impact on innovation activity by businesses.

The supply of funds for early-stage venture capital investment has also contracted since the onset of the crisis and this has created a significant market gap. The Queensland Government has moved to address this through the establishment of a new venture capital fund, however this will not address the broader systemic problem in the Australian and World economy. It is possible that future data may reflect the negative effects of the global financial crisis.

¹¹ ABS 8158.0 Innovation in Australian Business

Policy Analysis / Impact of Current Policies

The Queensland Government recognises the importance of innovation to building and sustaining a strong economy, and has invested substantially in innovation since 1998 through its *Smart State Strategy*. The initiatives under the Strategy focused on maximising Queensland's research and development capacity. These investments have been complemented by commercialisation and knowledge diffusion programs and the development of collaborative partnerships with universities, research institutions, industry groups and philanthropic organisations.

The *2005 Smart State Strategy* continued to build upon these initiatives with a stronger focus on programs to attract and retain skilled researchers. In *Smart State Strategy: Queensland's Smart Future – 2008-2012* the focus on the role of enabling technologies to support a range of traditional and emerging industries was continued. This shift has been termed as moving from “bricks to brains” refocusing support for skills and attracting leading researchers.

Investment under the Strategy since 1998 has been in the key areas of raising education standards, increasing the supply of highly skilled workers, boosting research, fostering new innovative industries, and ensuring existing industries are best able to adopt new technologies and practices.

This policy direction is maintained through the *2020 Toward Q2 Strong Ambition* and targets to provide Queensland with a diverse economy powered by bright ideas. There is an emphasis on improved outcomes for business, the economy and employment. The Queensland Government is now shifting focus to translate its Smart State Investment into commercial outcomes by prioritising resources to business innovation, hence, refocusing the Queensland Government's innovation strategy from bricks and brains to business.

In February 2010, the Queensland Government endorsed the *Queensland R&D Investment Strategy 2010 – 2020*. This Strategy details the research and development objectives behind the Smart State investment, providing a framework within which government departments and their collaborators can align their research and development activities with the government's targets for our economy, environment and lifestyle, health, education and skills, and the community in 2020. This Strategy contains five actions:

- Focus on needs and strengths
- Build critical mass
- Skill the workforce
- Connect researchers, end users and investors
- Engage the community.

The *Toward Q2 Strong: Innovation TDP* complements the *Queensland R&D Investment Strategy 2010 - 2020*.

In addition to these key policies, the Queensland Government delivers a range of business services which support businesses across all sectors. These services offer a mix of information provision and referral, business mentoring, skills transfer and networking, benchmarking and tailored intervention, incubation services, promotion, facilitation and capability development and targeted financial incentives, to keep Queensland businesses innovating and ensure their full potential is realised. A key aim of these services is to lower or remove barriers obstructing businesses from innovating. Specifically, a targeted effort is being made to encourage small to medium sized businesses to innovate and is a key focus of the Queensland Government's 2010-11 Target Delivery Plan (TDP).

Overcoming the Challenges to Meeting the Target

Although Queensland appears to have fared better than most through the global financial crisis, it will be essential to continue supporting innovation to assist businesses in meeting the challenges they face and to help maintain an environment for business to thrive in increasingly competitive markets. Critical to this is educating business on the importance of innovation to productivity and the bottom line, and boosting support for regional businesses.

In 2010-11 the Queensland Government will refocus and renew effort in areas such as commercialisation, technology and knowledge diffusion, and collaboration between industry and research institutions, and extend programs in the regions to focus on the economic opportunities available in Queensland. The Queensland Government's Department of Employment, Economic Development and Innovation (DEEDI) is currently reviewing its business innovation services and programs with the aim of delivering a suite of services to business across sectors that will improve productivity and profitability and meet the needs of businesses at the local level. The focus will be on building business innovation skills, building the capacity of business to capitalise on new opportunities, connecting business to new ideas and partners, and improving market development and promotion.

The formation of DEEDI has given renewed focus and effort as well as improved coordination across the Department and other Queensland Government agencies. It has also created potential for stronger partnerships that leverage Australian Government programs and improve regional access taking a whole of economy approach with the aim of supporting a strong and diversified economy.

The Action Plan

The Action Plan outlines the refreshed and new efforts to be delivered over the next twelve months to support business innovation which specifically deliver against the Strong Innovation target of increasing the proportion of businesses undertaking research and development or innovation. These initiatives aim to assist businesses increase their productivity and competitiveness, hence increasing profitability.

Collaborating agency initiatives are grouped under key strategies in alignment with the directions within *Toward Q2*.

Action 1

Help businesses to improve their productivity

Increasing business productivity has a positive impact on economic growth, and thus impacts broadly on the general community.

To help businesses improve their productivity, refreshed programs will be introduced that target how business, particularly small to medium-sized businesses, can adopt new products, processes or methods to increase their competitiveness. Skills development in the workforce plays an important role in enhancing business productivity.

Actions include the implementation of a new Innovation Voucher scheme, an eco-efficiency advice service and strategies to enhance workforce skills that target business productivity and innovation.

Action 2

Support businesses to commercialise new products and ideas and adopt new technology

Commercialisation is a central cog in the innovation process, and as such is a critical factor in the success of business. Commercialisation remains a challenge for many businesses due to a number of factors including a lack of commercialisation skills, a traditional focus in Australia on the supply or push model of commercialisation (a solution looking for a problem) rather than the demand or pull model, and poor alignment between research and industry organisations in terms of intellectual property and commercialisation wants and needs.

To help business improve commercialisation outcomes, the Queensland Government is delivering enhanced services focused on commercialisation advice and networking, uptake of new skills, knowledge and technology, and promotion of efficient and sustainable business practices.

Actions include the creation of a web portal for delivery of innovation services, implementation of new services and networks to assist business to increase energy and water efficiency, enhancement of regional based commercialisation advice and networking services, support for firms promoting their technologies to the domestic and international markets, and assisting businesses to uptake ICT technologies.

Action 3

Foster a favourable environment for businesses to grow

Government plays an important role in the innovation system by providing and supporting positive conditions to foster innovative activity. This includes a favourable economic and fiscal environment, implementation of policies and measures to minimise barriers and maximise opportunities for businesses to improve productivity, regulatory environment, research capacity and assistance to better understand the importance of the innovation system in driving growth.

The Queensland Government is delivering a number of new services to encourage innovative activity in the business sector, improve innovation skills and build capacity across industry sectors.

Actions include investment in state-of-the-art research infrastructure, new measures to facilitate research opportunities into sustainable practices in the building sector, help for businesses to develop sustainable energy technologies, measures to improve business understanding of the importance of innovation, up-skilling of workers to meet industry needs, and provision of new technologies and improved practices to underpin increased innovation.

Part 2: Annual Action Plan 2010-2011

	Action	Department responsible	Related Services or Objectives	Timeframe	What impact will the action have on the target?	How will progress be reported?	When will progress be reported?	Notation
Action 1: Helping Businesses to improve their productivity								
1.1	Pilot an Innovation Voucher Program which will provide up to \$50,000 per eligible Queensland based businesses to improve productivity	Department of Employment, Economic Development and Innovation (DEEDI)	DEEDI Service Delivery Standards: Diversify and strengthen Queensland's economy Assist businesses to respond to challenges and opportunities	This program will run as a pilot program for 2 years	Help businesses to improve their capability and sustainability through the commercialisation of research and implementation of innovative practices	<ul style="list-style-type: none"> - Increase in productivity, profitability and/or exports as a consequence of implementing new or improved practices, processes, systems, products and technologies - Proportion of assisted firms reporting improved performance 	Annually in June	
1.2	Implement ecoBiz Partnership Program to improve capacity of businesses to adopt more eco-efficient and innovative practices and technologies that will enhance business sustainability.	Department of Environment and Resource Management (DERM)	Provide assistance for business to accept sustainable practices to reduce environmental impacts.	Ongoing	Motivate business to develop innovative approaches and technologies to reduce resource use and therefore, their carbon footprint. Ultimately helping businesses to increase competitiveness.	<ul style="list-style-type: none"> - Average 10 percent savings in greenhouse gas emissions by ecoBiz partners. 	Annually - June	
1.3	Work with industry to develop strategies to enhance workforce skills that target business productivity and innovation.	Department of Employment and Training (DET)	Strategic Plan - Developing Skills for the Economy	Ongoing	Increase skilled workers within businesses and the labour market	<ul style="list-style-type: none"> - Annual Hours Curriculum (length of VET courses) - Participant numbers 	Annually in June	

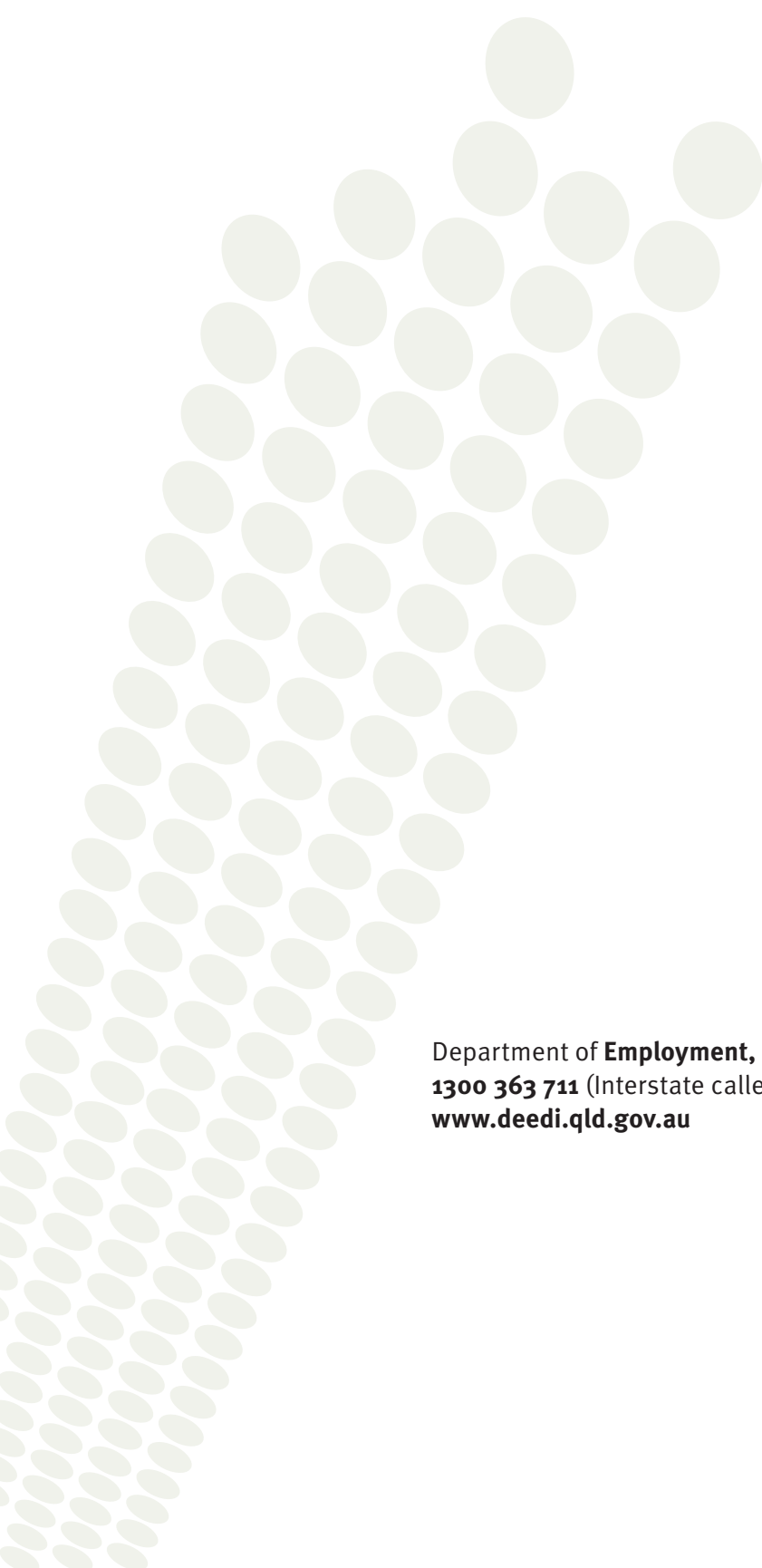
Action 2: Support businesses to commercialise new products and ideas and adopt new technology								
2.1	Create a single web based delivery service for businesses requiring commercialisation advice.	DEEDI	DEEDI Service Delivery Standards: Assist businesses to respond to challenges and opportunities	To be implemented during 2010-11 period	Build the capability of businesses to adopt innovation through easily accessible information	- Number of businesses accessing service	Annually - June	
2.2	Implement Climate Smart Business Services	DEEDI	DEEDI Service Delivery Standards: Assist businesses to respond to challenges and opportunities	To be delivered online for the 2010-11 period	Help businesses increase their energy efficiency and reduce greenhouse gas emissions and prepare for a low-carbon economy.	- Number of businesses assisted	Annually - June	Announced in the 2009 Budget under the Queensland Government's climate change strategy, ClimateQ.
2.3	Create business awareness and uptake of new products and technologies that are more efficient and sustainable	DERM	Queensland Water and Energy Sustainable Technologies Network	On-going	Increased uptake of leading-edge technologies, driving innovation by Queensland businesses and industry	- Number of forums held each year and number of businesses reached through network.	Annually - June	
2.4	Provide a refreshed program of practical business innovation advice and support services including productivity improvement advice, diagnostic and benchmarking assistance and targeted commercialisation advice to businesses located across Queensland through: <ul style="list-style-type: none"> • Q-WIN Innovation Coaching • Investment Ready Programs • Technology clinics and • Research and Development Forums • QMI Solutions Manufacturing Innovation Programs • Advanced Manufacturing Advisory Service • Ulysses Pilot Program 	DEEDI in partnership with the Australian Institute of Commercialisation and Queensland Manufacturing Institute	DEEDI Service Delivery Standards: Diversify and strengthen Queensland's economy Assist businesses to respond to challenges and opportunities Create a business environment that supports success, ethical and responsible business practices	July 2010- June 2011 (Subject to CBRC approval)	Increase business competitiveness across all industry sectors through the adoption of new ideas, technologies and knowledge.	<ul style="list-style-type: none"> - Value of venture capital invested in Queensland - Estimated value of efficiency savings, new business generated or imports replaced - Proportion of assisted firms reporting improved performance - Structured business capacity building programs and activities delivered - Number business consultations undertaken - Businesses involved in DEEDI facilitated alliances, partnerships, industry networks, supply chains, clusters. - Businesses assisted to export or expand market 	Annually	

						share		
2.5	Encourage exports and increase employment by promoting technologies to the domestic and international markets through the Australian Technology Showcase and Techsite demonstration projects	DEEDI	DEEDI Service Delivery Standards: Diversify and strengthen Queensland's economy Assist businesses to respond to challenges and opportunities	2011/2012	Businesses improve competitiveness by adopting new ideas, technologies and knowledge	<ul style="list-style-type: none"> - Progress will be reported through Source: DEEDI PRS database: - Value of new exports generated - Number of significant one-on-one business consultations undertaken 		
2.6	Grow enabling industries such as biotechnology and Information & Communication Technologies (ICT) <ul style="list-style-type: none"> • Extending the Queensland Clinical Trials Network to include the life sciences sector • Assist regional businesses to uptake ICT technologies capitalising on the National Broadband roll-out in Queensland 	DEEDI	DEEDI Service Delivery Standards: Diversify and strengthen Queensland's economy Create a business environment that supports success, ethical and responsible business practices	July 2010- June 2014	Create new business opportunities by increasing linkages between life science companies	<ul style="list-style-type: none"> - Number and value of trials - Achievement of Project milestones - No. Consultative/engagement forums and participants - No. businesses implementing new/improved practices - Value of exports - Businesses reporting improved performance 	Based on project milestones and Annual Reports	

Action 3: Foster a favourable environment for businesses to grow

3.1	Investigate measures to improve energy and water efficiency, greenhouse gas emissions reductions and low emission energy generation capacity of the built environment.	Department of Infrastructure and Planning (DIP)	Collaboratively plan sustainable and dynamic urban and regional communities	Ongoing	Facilitate research opportunities into new sustainable building initiatives and concepts for contractors Facilitate partnerships with industry to support in the delivery of sustainable building initiatives	- Number of contractors engaged to investigate proposed measures.	Annually - June	
3.2	Fund projects to develop Queensland's capability in sustainable energy and water technologies	DERM	Queensland Sustainable Energy Innovation Fund	Ongoing	Help businesses develop sustainable energy technologies	- Leverage private to public investment ratio for projects supported by the Queensland Sustainable Energy Innovation Fund	Annually - June	
3.3	Improve business and wider community understanding of the importance of innovation	DEEDI	DEEDI Service Delivery Standards: Create a business environment that supports success, ethical and responsible business practices	2010/2011 to 2011/2012	Engage additional Queensland SME businesses in the innovation system.	- Consultative and engagement forums held with industry and community stakeholders	Annually - June	
3.4	Amend the Queensland Development Code to encourage innovation in the building industry.	DIP	Collaboratively plan sustainable and dynamic urban and regional communities	A 36 month work program for investigation and implementation of new measures will be implemented from 1 June 2010.	Workforce will be required to up-skill in the delivery of innovative designs, technologies and concepts in the built form. Educate industry and the community of the benefits associated with new sustainable building features.	- Sustainable development series of amendments to the Queensland Development Code.	Every six months -January and July	
3.5	Make higher education more timely and relevant, and up-skill workers, to meet industry needs.	DET	Strategic Plan - Developing Skills for the Economy	2010-2013	Increase skills/ qualifications required by industry. Increase graduates in priority professions, expand and improve flexibility of, and access to, higher education provision, particularly in regional and outer metropolitan areas.	- Annual Hours Curriculum - Participant numbers - Achievement of project Milestones - DEEWR data on commencements, attainment and participation	Six-monthly Annually – note DEEWR data usually released in October/ November of following year.	

3.6	<p>Build Queensland's research capacity and establish partnerships relevant to industry demand through:</p> <ul style="list-style-type: none"> • the Ecosciences Precinct and Health and Food Sciences Precinct @ Coopers Plains • National Collaborative Research funding of new facilities • Support for the food and agribusiness sector through strategic Government – university research alliances • Business Innovation Hubs Program (Smart Communities) 	DEEDI	<p>DEEDI Service Delivery Standards: Diversify and strengthen Queensland's economy Fresh Approach Initiative supporting the food and agribusiness sector Collaboratively plan sustainable dynamic urban and regional communities</p>	<p>2010/2011</p> <p>2010-2013</p>	<p>Provide new technologies and improved practices to underpin increased innovation in the sector Invest in state-of-the-art research infrastructure to support Queensland research Increase the number of knowledge intensive businesses, number of businesses innovating and associated employment</p>	<ul style="list-style-type: none"> - Report of outputs and outcomes from the research groups in the precincts for the agribusiness sector supported by DEEDI investment - Reports on milestones in NCRIS agreements - On a milestone achievement basis specific to each Smart Community location 	<p>Annually</p> <p>Annually – as per agreements</p>	<p>Linked to implementation of the Fresh Approach initiative (a 2009 election commitment)</p>
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