



NSW BUSINESS SECTOR GROWTH PLAN



NSW Business Sector Growth Plan

September 2010

Copies of this publication can be downloaded from:
www.business.nsw.gov.au/innovation

The NSW Business Sector Growth Plan has been produced by a process that has engaged NSW Government, industry and stakeholder groups.

Disclaimer

While every reasonable effort has been made to ensure that this document is correct at the time of printing, the State of NSW, its agents and employees, disclaim any and all liability to any person in respect of anything or the consequences of anything done or omitted to be done in reliance or upon the whole or any part of this document.

Copyright Notice

In keeping with the NSW Government's commitment to encourage the availability of information, you are welcome to reproduce the material that appears in the NSW Business Sector Growth Plan for personal, in-house or non-commercial use without formal permission or charge. All other rights are reserved. If you wish to reproduce, alter, store or transmit material appearing in the NSW Business Sector Growth Plan for any other purpose, request for formal permission should be directed to: Industry and Investment NSW, GPO Box 5477, Sydney NSW 2001. You are required to acknowledge that the material is provided by the NSW Business Sector Growth Plan or the owner of the copyright.

NSW BUSINESS SECTOR GROWTH PLAN



FOREWORD BY THE NSW PREMIER

“NSW has emerged from the global financial crisis in good economic shape, with strong employment and opportunities for continued growth.”

I want to make sure we are in the best possible position to exploit our competitive business advantages and to maximise jobs and productivity growth over the next decade.

This Business Sector Growth Plan stands along side our integrated land-use and transport plan, setting a strong framework for growing NSW into the future.

The NSW Business Sector Growth Plan has been developed through an unprecedented partnership between Government and business leaders. I would like to thank the many business people across NSW who worked so closely with us on this plan.

Kristina Keneally MP
Premier of NSW
Minister for Redfern Waterloo

FOREWORD BY THE NSW TREASURER, MINISTER FOR STATE AND REGIONAL DEVELOPMENT

“In a changing global economy, this strategy sets out our strategic direction and priorities to achieve business growth and competitiveness over the coming decade.”

By 2020, the NSW economy will be bigger, smarter, greener and global. I commend the NSW Innovation Council for their vision in leading the preparation of this Business Sector Growth Plan and the accompanying foresighting study from Access Economics.

Together we will help drive prosperity in the State and continue our move towards being an innovative, globally connected, creative and knowledge rich economy.



Eric Roozendaal MLC

Treasurer, Minister for State and Regional Development,
Minister for Ports and Waterways, Special Minister of
State and Minister for the Illawarra

FOREWORD BY THE NSW INNOVATION COUNCIL

“This Business Sector Growth Plan outlines actions that will be taken to position the NSW economy for strong growth and global competitiveness through to 2020.”

The NSW Innovation Council was asked by the NSW Premier, Kristina Keneally, to develop a detailed plan to grow the NSW economy by building on our existing strengths, competitive advantage and emerging opportunities.

The NSW Business Sector Growth Plan responds to the challenges and opportunities identified in Access Economics’ *The NSW Economy in 2020—A Foresighting Study*, including:

- A transition to a low carbon economy
- The rapid development of the digital economy
- Demand and competition from emerging and growing economies—China and India
- An ageing and growing population

As the Chair of the NSW Innovation Council I look forward to overseeing the implementation of this plan.



Steven Harker

Chair, NSW Innovation Council
Managing Director and CEO of Morgan Stanley Australia

Vision

Growth

+30%

In 2020 the NSW economy will be more than 30% larger than it is today, driven by growth in highly skilled, high value-added industries.

The NSW industry base will be internationally recognised for its innovation, productivity, knowledge intensity and carbon efficiency.

The NSW Economy will be

Technologically
Advanced

Innovative
and Creative

Low
Carbon

Globally
Competitive

Foundations for Growth

Investment
in Strategic
Infrastructure
and Long Term
Planning

Microeconomic
and
Regulatory
Reform

Highly Skilled
Workforce
and Research
Capability

Strong and
Diversified
Regional
Economies

Sound Fiscal
and Efficient
Legal
Frameworks

Sector Strategies



Finance, Insurance &
Professional Services



Infrastructure
& Construction



Advanced
Manufacturing



Communication
& Info Technology



Retail



Education
& Research



Agri-food



Creative
Industries



Mining



Tourism



Health &
Allied Services

PARTNERING FOR GROWTH

EXECUTIVE SUMMARY

The **NSW Business Sector Growth Plan** outlines the actions and initiatives that the NSW Government together with Industry will undertake to promote NSW's long-term economic growth.

The Business Sector Growth Plan has been created in close partnership between business leaders and the NSW Government. The NSW Innovation Council has led the development of this Plan in consultation with more than 200 business and community leaders in NSW.

Vision

The vision for 2020 is that the NSW economy will be more than 30% larger than it is today, driven by growth in highly skilled, high-value-added industries. The NSW industry base will be internationally recognised for its innovation, productivity, knowledge intensity and carbon efficiency.

The NSW economy in 2020 will be:

- Technologically advanced
- Innovative and creative
- Low carbon, and
- Globally competitive.

The NSW Business Sector Growth Plan incorporates the ideas raised by industry at the NSW Business Forum and responds to the opportunities and challenges identified in an analysis of how the economy will look in 2020 prepared by Access Economics, *The NSW Economy in 2020—A Foresighting Study*.

Foundations for Growth

The NSW Government is building strong foundations for the growth of the NSW economy across all sectors of industry by:

- Providing long-term planning and investment in strategic infrastructure
- Undertaking microeconomic and regulatory reform
- Building on our skilled workforce and research capacity
- Building a strong and diversified regional NSW, and
- Maintaining a sound fiscal base and efficient legal system.

Sector Strategies

Sector specific strategies have been prepared in partnership with industry for each of the following sectors within the NSW economy:

- Finance, Insurance and Professional Services
- Infrastructure and Construction
- Advanced Manufacturing
- Information and Communication Technology
- Retail
- Education and Research
- Agri-food
- Creative Industries
- Mining
- Tourism, and
- Health and Allied Services.

Each sector strategy includes a vision for the growth of the sector to 2020, the competitive advantages of the sector in NSW, the opportunities for growth and the actions the NSW Government will take to support the achievement of the vision.

Partnering for Growth

The NSW Business Sector Growth Plan builds on the *NSW Statement on Innovation* and will be delivered by the NSW Government in partnership with industry. The implementation of the Plan will be overseen by the *NSW Innovation Council* who will regularly report on progress.

CONTENTS

1	Vision—NSW Economy in 2020	1
1.1	Vision—NSW Economy in 2020	2
1.2	A Technologically Advanced Economy	4
1.3	An Innovative and Creative Economy	5
1.4	A Leading Low Carbon Economy	6
1.5	A Globally Competitive Economy	8
2	Foundations for Growth	9
2.1	Providing Long-term Planning and Investment in Strategic Infrastructure	11
2.2	Undertaking Microeconomic and Regulatory Reform	12
2.3	Building on Our Skilled Workforce and Resource Capability	13
2.4	Building a Strong and Diversified Regional NSW	15
2.5	Maintaining a Sound Fiscal Base and Efficient Legal System	16
3	Sector Strategies	19
3.1	Finance, Insurance and Professional Services	20
3.2	Infrastructure and Construction	25
3.3	Advanced Manufacturing	32
3.4	Information and Communication Technology	38
3.5	Retail	44
3.6	Education & Research	50
3.7	Agri-Food	60
3.8	Creative Industries	67
3.9	Mining	73
3.10	Tourism	79
3.11	Health & Allied Services	86

VISION— NSW ECONOMY IN 2020

VISION—NSW ECONOMY IN 2020

IN 2020 THE NSW ECONOMY WILL BE MORE THAN 30% LARGER THAN IT IS TODAY, DRIVEN BY GROWTH IN HIGHLY SKILLED, HIGH VALUE-ADDED INDUSTRIES.

THE NSW INDUSTRY BASE WILL BE INTERNATIONALLY RECOGNISED FOR ITS INNOVATION, PRODUCTIVITY, KNOWLEDGE INTENSITY AND CARBON EFFICIENCY.



VISION—NSW ECONOMY IN 2020

The NSW economy will continue to be the largest economy in Australia and a significant economy in its own right within the rapidly growing Asia-Pacific region.

The NSW economy will be more productive, driven by the strength of its service based economy, particularly knowledge intensive business services, a rising level of skills in the workforce, our engagement with the global economy and increases in innovation and technology application across the economy.

Some key features of the NSW economy in 2020:

- Services industries will account for approximately 85% of industry output. Growth in emerging economies like India and China will fuel a growth in exports in services, including those in accounting, legal, consultancy and education
- Finance and insurance services will remain the largest industry sector within NSW, based on the State's competitive advantages of a highly educated multinational population and Sydney's position as Australia's 'global city'

- Health and aged care services will continue to grow within the NSW economy, driven by increasing complexity, an ageing population and local innovation
- The manufacturing sector will become more globally competitive and more technically advanced, and
- The construction industry's share of the economy will grow with increased infrastructure requirements and demand for new dwellings.

In order to capitalise on significant opportunities and trends identified through the Access Economics *The NSW Economy in 2020— A Foresighting Study*, the NSW economy will also need to be technologically advanced, highly innovative and creative, leading in low carbon approaches and globally competitive.

Steven Harker

Managing Director and CEO, Morgan Stanley Australia & Chair of the NSW Innovation Council

NSW's economic future will continue to be driven by its high value services, skilled workforce, diversity and international partners. Further developing these characteristics will ensure we are positioned for growth, resilience and flexibility.



A TECHNOLOGICALLY ADVANCED ECONOMY

A technologically advanced economy will drive productivity across NSW.

Opportunities are likely to present themselves in the following areas:

Increased productivity in existing business models

Health, education, transport and utilities services will become more efficient and accessible through the increased adoption of technology. This adoption will be supported with government investment in critical infrastructure and the development of new technologies. Sectors such as the financial and professional services that have traditionally been 'early adopters' of technology will continue to drive productivity as technology enables new products, and more targeted marketing approaches, to expand consumer reach.

Access to new consumers

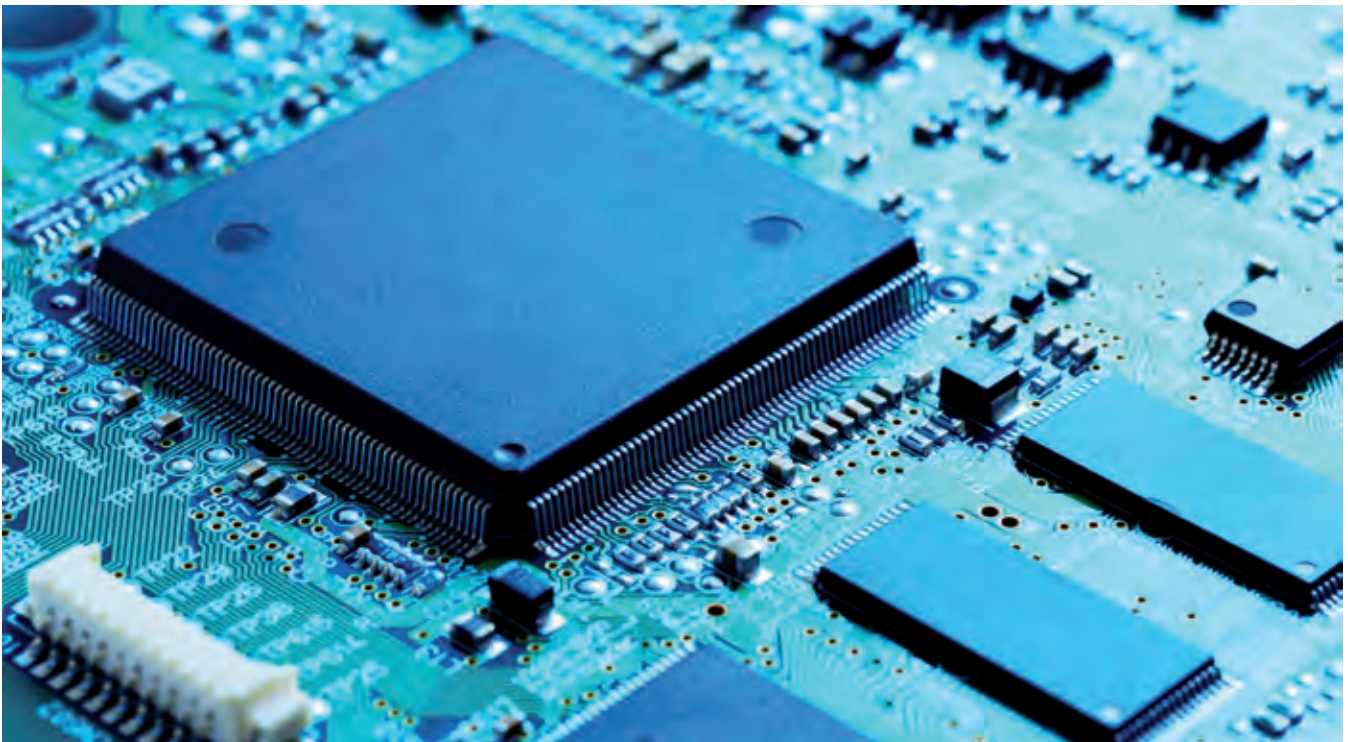
The rollout and adoption of the National Broadband Network will enable people across NSW to purchase online content and products (for example movies, software, travel and financial services) more rapidly and reliably. Supported by new approaches that enhance consumer security and confidence (such as pay-as-you-go credit cards) NSW businesses can expect a broader range of consumers to access on-line products and services, for example, more mature age segments, regional NSW and customers from overseas.

New business models

Multiple new businesses will be required to service the growing use of technology. Examples include, providers of e-health services, consultants to advise on the deployment of technology and developers of new technology applications (including smart phone and m-commerce applications).

NSW Government will work with industry sectors to enhance NSW's position as a technologically advanced economy by:

- Establishing industry, academic and government technology partnerships to collaborate in the development of new technologies
- Investing in research and development of new products, services, marketing and distribution applications in each sector
- Investing in smart infrastructure (e.g. *Smart Grid*, *Smart City* and working with the Australian Government to enable smooth and rapid roll out of the National Broadband Network), and
- Providing training and support to enable the commercialisation of new technologies.



AN INNOVATIVE AND CREATIVE ECONOMY

Innovation and creativity are critical elements in increasing productivity to achieve long term economic growth. They drive the development of new, higher-margin products and services increasing competitiveness, profit and wages, resulting in greater economic prosperity for the community. The capacity of business and government to innovate, and to interact with suppliers, customers and the education and research sector in a dynamic way, will be of critical importance over the next decade.

To enable the NSW economy to meet its potential the NSW Government will:

- Leverage and develop NSW's creative and entrepreneurial capabilities to enhance the competitiveness of priority industry sectors of the NSW economy, such as through the pilot *Design in Manufacture* program which will link leading design companies with small and medium enterprises in specific industry segments such as defence, transport equipment, machinery and heavy equipment manufacturing services
- Introduce programs to increase skills for business and innovation which are aimed at improving small businesses' management and organisational capabilities, including lean manufacturing courses and new training service models to improve training in innovation skills
- Promote the use of intelligent technologies particularly in relation to the provision of health, education, transport and utility services, including through current initiatives such as the *Smart Transport and Roads* and *Smart Grid, Smart Cities* projects
- Strengthen mechanisms to promote cross sectoral collaboration between small and medium enterprises, multinationals, Government and the research sector to drive increasing private sector productivity and innovation in government service delivery through the *Science Leveraging Fund, Research Partnerships Program, TechVouchers, Innovation Pathways Program* and the *ICT Collaboration Program*, and
- Progress smart energy and policy initiatives that will support the best energy investment mix for NSW, including *smart grids, BASIX, NABERS* and renewable energy precincts.

Catherine Livingstone AO

Chairman, Telstra Corporation & Member of the NSW Innovation Council

Opportunities are emerging in a broad range of areas across the economy; our ability to successfully innovate, solve problems and apply new ideas from across the globe will underpin our long-term competitiveness.



NSW GOVERNMENT DETAILED DELIVERY PLANS



DIGITAL ECONOMY STRATEGY



CREATIVE INDUSTRIES (IN DEVELOPMENT)

A LEADING LOW CARBON ECONOMY

The transition to a low carbon economy over the next decade will present opportunities for businesses specialising in carbon reduction technology, consulting services, research and trading. It will drive innovation in all sectors as households and businesses become less emissions intensive. Demand will increase for renewable and lower emission electricity generation technologies and sustainable design and construction.

Opportunities are likely to present themselves in the following areas:

Adoption of lower emissions-intensive energy

The NSW Government is preparing a *Clean Energy Policy*. This will provide opportunities in renewable and lower-emissions energy technology supply, major project development and management, co-generation and clean coal, and the wider adoption of low emission vehicles.

Improvements in energy efficiency

Improving energy efficiency will lower business costs and increase competitiveness. It will also provide business opportunities in the supply of products and services including the design and construction of green buildings, supply and installation of green building products, retrofitting of commercial buildings and industrial plants, services to improve energy efficiency, materials and water recycling and smart grids.

New business opportunities

The low carbon economy also presents a range of additional opportunities for new products and services in well established sectors of the NSW economy. NSW is in a strong position to leverage its legal, accounting, finance, compliance and project management skills to meet the growing demand for renewable energy infrastructure, investment in clean technologies, and emissions trading and reporting. Further opportunities will also arise in other sectors such as agriculture.

The NSW Government is supporting NSW businesses in creating a leading low carbon economy. NSW Government established one of the world's first mandatory greenhouse gas emissions trading schemes, the *Greenhouse Gas Reduction Scheme*. NSW was the first jurisdiction in Australia to set long-term emissions reduction targets, and has a *State Plan* target of a 60% cut in greenhouse emissions by 2050. Specific initiatives include:



NSW GOVERNMENT DETAILED DELIVERY PLANS



CLEAN ENERGY POLICY
(IN DEVELOPMENT)



NSW GREEN SKILLS STRATEGY

Supporting the uptake of renewable energy

The NSW Government has set targets through the *State Plan* to achieve 20% renewable energy consumption by 2020, instituted a *Solar Bonus Scheme*, established Renewable Energy Precincts, supported bids for the *Solar Flagships* program and supports the Australian Solar Institute. The *NSW Renewable Energy Development Program* also contributes to a number of landmark projects, including Macquarie Generation's Solar Plant at the Liddell Power Station, and Geodynamics' commercial hot rock geothermal project in the Hunter. NSW industry is well placed to build on its reputation as a world leader on the development of solar silicon photo voltaic technology.

Taking advantage of existing lower-emissions fuels and cogeneration

The NSW Government is supporting natural gas supply and pipeline projects across NSW as well as continuing to support research and use of biofuels and cogeneration. This includes Delta Electricity's trial of the use of carbon-neutral mallee eucalypts to co-fire its Wallerawang Power Station, and the development of the proposed cogeneration plant at the Norske Skog newsprint mill in Albury, and gathering information on the location of suitable bioenergy feedstocks in NSW.

Developing carbon capture and sequestration technologies

The NSW Government provides support to the *Clean Coal Fund* which finances R&D, commercialisation and deployment of these technologies.

Reduce the energy intensity of commercial, industrial, residential and government buildings

For example, the NSW Government developed and manages the National Australian Built Environment Rating System (NABERS), a national initiative for rating the environmental performance of existing buildings. NABERS provides an accepted standard that encourages the uptake by building owners and tenants of energy efficient products and renewable energy.

Promote efficiency in products and operations

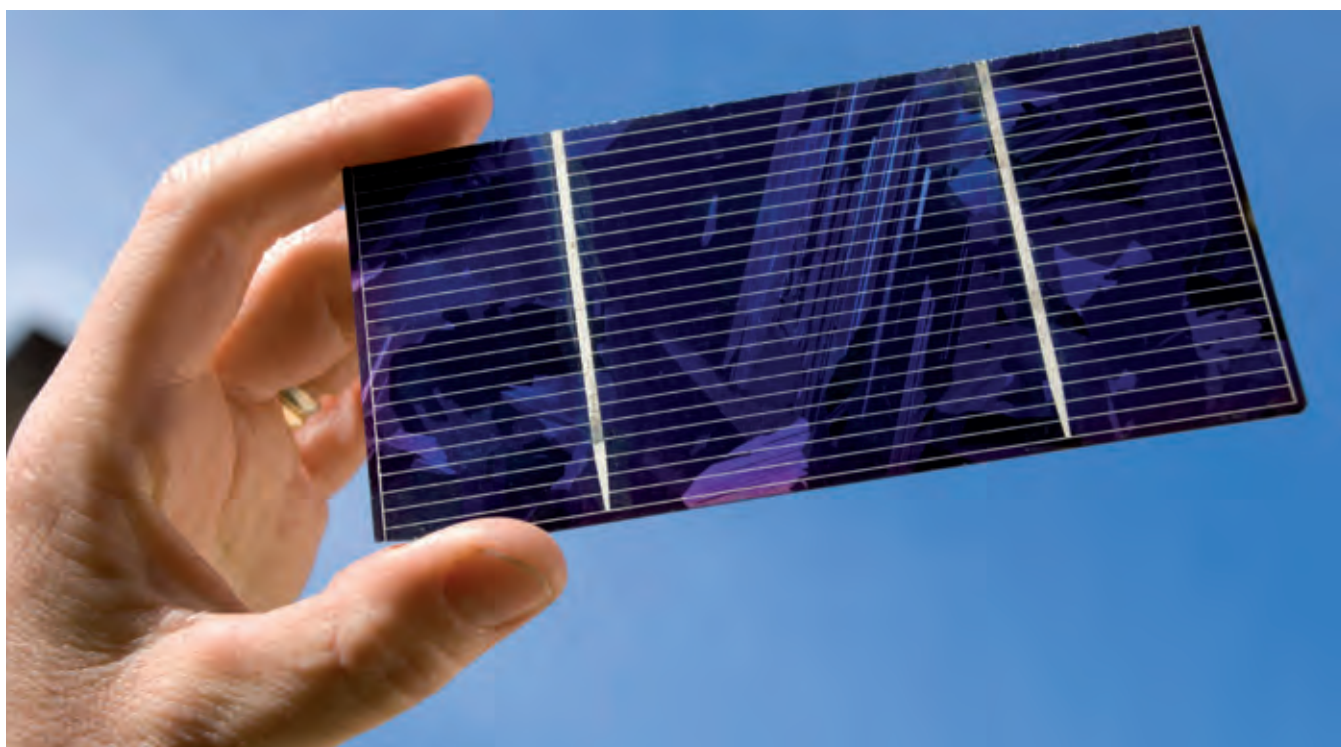
The NSW Government operates a range of measures to assist businesses reduce their energy use and business costs, including the \$137 million *NSW Energy Efficiency Strategy*, the *Energy Savings Scheme* and *Sustainability Advantage*.

Develop energy management systems

NSW industry, especially the ICT industry, is well placed to develop these products and services. Smart grid pilots in NSW, including Australia's commercial scale smart grid pilot *Smart Grid*, *Smart City* being established in NSW, provide potential test beds to develop and test these systems for deployment across NSW.

Leveraging NSW's existing strengths

Having established one of the world's first mandatory emissions trading schemes, the NSW Government remains committed to developing Sydney as a carbon market hub. It is also identifying and assisting NSW industry to take advantage of new opportunities for growth such as by rolling out the \$20 million *NSW Green Skills Strategy*, which is a component of the *NSW Energy Efficiency Strategy*, and implementing the *Green Skills Business Incentives Scheme*.



A GLOBALLY COMPETITIVE ECONOMY

Globalisation presents strong growth opportunities including access to new markets, foreign investment and to the world's best practice and knowledge. NSW is well positioned to build a globally competitive economy, recognised as a great place to do business.

Growth in the middle classes of emerging economies of China and India will bring demand for new higher-value goods and services especially in education, health, professional services, finance and tourism. Benefits will also be pronounced in mining and related industries such as construction and utilities. Agricultural exports to emerging economies are also expected to rise.

The NSW Government will work to strengthen our global profile and attract investment, promoting NSW and Sydney as a destination of choice for multinational organisations.

The NSW Government will:

- Work with key partners such as the Greater Sydney Partnership, Events New South Wales, Business Events Sydney and the Asia-Business Council to build the Sydney and NSW brand
- Achieve new trade and investment for NSW, through programs such as *Global Growth* to support innovative NSW companies to achieve their export potential
- Support initiatives to maintain and grow the level of international engagement in NSW research and education, including attracting international students and researchers to NSW, promoting research collaborations between NSW and overseas organisations, support for international conferences in NSW, and travel scholarships for local research students
- Build and engage with global networks and partnerships to access opportunities and markets through a coordinated approach
- Leverage significant international events such as *G'Day USA*, *Australialive* (in the UK), market visits and missions to maximise industry growth and business outcomes for NSW
- Continue international engagement through NSW Government's network of international offices in growth markets—Guangzhou and Shanghai, China; Mumbai, India; and Abu Dhabi, UAE, and
- Continue expansion of our presence and influence in established international markets.

Catherine Livingstone AO

Chairman, Telstra Corporation & Member of the NSW Innovation Council

Our businesses need to compete and position themselves in an increasingly globally connected economy. To do this we will educate creatively and extensively, innovate aggressively and collaborate strongly.



FOUNDATIONS FOR GROWTH

FOUNDATIONS FOR GROWTH

Foundations for growth form the fundamental building blocks of a competitive economy and are a core function of the NSW Government. The NSW Government is supporting the growth of all sectors of the economy by:

- Providing long-term planning and investment in strategic infrastructure
- Undertaking microeconomic and regulatory reform
- Building on our skilled workforce and research capacity
- Building a strong and diversified regional NSW, and
- Maintaining a sound fiscal base and efficient legal system.

By building these strong foundations we are establishing an economy in NSW that is both resilient and flexible. The NSW Government will also work to make sure we are well positioned to respond to any unforeseen events such as the recent global financial crisis.



PROVIDING LONG-TERM PLANNING AND INVESTMENT IN STRATEGIC INFRASTRUCTURE

Effective planning is critical to providing the foundation for long-term economic growth of the State. Efficient infrastructure provision and its utilisation have a significant effect on the State's productivity and export competitiveness. The priorities for NSW will be to maximise the benefits of strategic investment by delivering on long-term planning priorities, increasing infrastructure investment and improving operational efficiency.

The NSW Government will:

- Implement a new *Sydney Metropolitan Strategy*, which will integrate urban land use and transport planning to 2036
- Implement the commitments made in the NSW Government's *Metropolitan Transport Plan*, a fully funded \$50.2 billion plan to improve transport services in Sydney
- Develop a *Freight Strategy for NSW*
- Develop *Regional Cities Transport Strategies* for Parramatta, Liverpool and Penrith
- Develop *Regional Transport Strategies* across the state, beginning with the Hunter, Illawarra, Central Coast and Murray
- Deliver our infrastructure program, comprising \$62.2 billion in infrastructure expenditure over the four years to 2013–14
- Develop financial, business and creative precincts including Barangaroo and White Bay
- Work with the Australian Government to facilitate the rollout of the National Broadband Network across NSW and its uptake to improve NSW businesses' productivity and innovative capacity and access to new markets
- Work with the tertiary education sector, the Australian Government and private partners to secure education and research infrastructure investments in NSW, including capital developments, and
- Continue investment in developing smart infrastructure technology, including for example the *Smart Transport and Roads* project, *Smart Grids*, *Smart City*, and *Smart Village*.



NSW GOVERNMENT DETAILED DELIVERY PLANS



METROPOLITAN
TRANSPORT PLAN



FREIGHT STRATEGY
(IN DEVELOPMENT)



REGIONAL TRANSPORT
STRATEGIES
(IN DEVELOPMENT)



TOWARDS 2036
METROPOLITAN
STRATEGY

UNDERTAKING MICROECONOMIC AND REGULATORY REFORM

NSW Government is supporting economic growth and competitiveness through micro economic and regulatory reform, in essence we are making it easier to do business in NSW.

The NSW Government is cutting red tape. Already we have introduced red tape reforms that will save business and communities \$338 million, and are on track to meet our target of \$500 million by June 2011.

Red tape reduction is included as a requirement in all Directors General performance contracts. In 2009 procurement policy was updated to streamline Government procurement processes, and simplified contracts.

The NSW Government is speeding up the planning system. We have set and substantially met new benchmarks for faster decision making on planning applications. At the end of June 2010, 70 per cent of major projects were finalised within three months, a further 20 per cent finalised within five months and most of the remainder finalised within eight months.

In addition, the NSW Government has invested:

- \$3 million a year to engage project managers to ensure efficient and timely delivery of major projects
- \$2.4 million in 2009–10 to help councils speed up development assessments and rezonings
- \$1.5 million per annum to boost the supply of employment land, and
- We have also established Joint Regional Planning Panels which commenced 1 July 2009. Regional Panels are providing for a more transparent and robust decision making process through a combination of independent expert panel members and local knowledge.

The NSW Government will:

- Maintain a strong commitment to promoting competition, minimising compliance burden and continually improving the quality of regulation
- Reduce red-tape costs by \$500 million by June 2011. Significant improvements to date have been in the areas of planning approvals simplification, and specific industry reviews, and
- Continue engagement in delivery of COAG's reform commitments for a Seamless National Economy.



NSW GOVERNMENT DETAILED DELIVERY PLANS



BRO ANNUAL REPORT



COAG SEAMLESS
NATIONAL ECONOMY

BUILDING ON OUR SKILLED WORKFORCE AND RESEARCH CAPABILITY

The education and research sector plays a pivotal role in addressing the skills needs of NSW industry. The NSW Government will build the skills base of the State's workforce to take advantage of the economic opportunities that will arise over the next decade. The NSW Government will ensure that the education and research sector is closely aligned with the needs of the NSW economy and community.

Boosting skills and education attainment has economic benefits for industry as well as for the individual, as people with post-school qualifications have higher rates of workforce participation, lower rates of underemployment, and are more likely to be working fulltime compared to people without a post-school qualification.

The NSW Government will:

- Promote life-long learning and strengthening partnerships with industry to provide the skills our workforce needs
- Improve the articulation between the vocational and higher education institutions, facilitating easier access for people to obtain relevant training
- Strengthen literacy and numeracy capabilities from an early age
- Meet the needs of our knowledge-based economy including key growth sectors over the next decade, such as financial and professional services, and healthcare
- Build research excellence that supports industry sectors' growth and productivity improvements, through research investment attraction and related initiatives, and
- Increase the attainment levels of students, in particular increasing levels of higher education of people from low socio-economic backgrounds.

The resources sector's demand for skills will increasingly impact on those industries competing for similar skills but with less ability to pay. This will require other industries to develop innovative workforce development policies and planning in order to attract and retain workers with these skills.

Mary O'Kane

NSW Chief Scientist & Scientific Engineer & Member of the NSW Innovation Council

The most important thing we can do to secure our economic future is to provide all NSW citizens with a world-class education.



NSW GOVERNMENT DETAILED DELIVERY PLANS



TOWARDS 2030:
PLANNING FOR OUR
CHANGING POPULATION



NSW TERTIARY
EDUCATION PLAN



NSW KNOWLEDGE
STATEMENT

BUILDING ON OUR SKILLED WORKFORCE AND RESEARCH CAPABILITY

The key initiatives of the NSW Government include:

- Deliver the *NSW Tertiary Education Plan*, the *NSW Knowledge Statement* and the *Education and Research Sector Strategy* which aim to align the tertiary education sector with the State's priorities for economic and social development (for instance, increasing participation, supporting innovation-led growth and regional development, and developing the State's research and development capabilities)
- Develop a 2020 NSW workforce skills strategy
- Implement *Towards 2030: Planning for our changing population*, to position NSW to provide services for its ageing population, and to effectively utilise the skills and talents of older people in the economy
- Hold an annual Business University Government Forum to explore issues and opportunities for better alignment of university education and research activity with Government and industry priorities
- Develop and trial pilot programs to improve innovation skills in the creative and logistics sectors currently being progressed by the Board of Vocational Education and Training and the Department of Education and Training
- Implement regional initiatives responding to local skills needs in partnership with industry, such as the *Muswellbrook Mining Skills Centre*, a partnership between the local TAFE and mining companies to deliver training to local mining apprentices
- Continue our commitment to improve teacher quality under the *Smart Schools National Partnerships Agreement on Improving Teacher Quality* and enhancing the training of graduates
- Support NSW bids for research and education infrastructure available through Australian Government programs, including the *Education Investment Fund*
- Maintain the *NSW Knowledge Fund* as a catalyst for attracting funding for significant research and education initiatives, and
- Establish multilateral research agreements, such as that leading to the establishment of the *Fraunhofer Living Lab* at NICTA in NSW.

The NSW Government will work with the school education and university sector to address the ongoing shortage in supply of secondary school advanced mathematics and science teachers. This will ensure that our state is able to produce students with the required mathematics and science skills, interest and ability to pursue careers in knowledge-intensive professions.



BUILDING A STRONG AND DIVERSIFIED REGIONAL NSW

Opportunities for growing the economies in regional NSW include exporting high-value food and beverage products to Asia's emerging middle classes, and taking advantage of emerging opportunities in the mining sector, such as in the areas of clean coal technology and coal seam gas. With increasing emphasis on the importance of securing water availability, efficiency-enhancing investments in water delivery infrastructure are likely to provide opportunities for regional NSW.

The diverse communities and landscapes in NSW, from coral reefs to snow topped mountains, rainforest to desert, offer significant opportunities for further tourism sector growth.

Regional Business Growth Plans have been developed in partnership with Regional Development Australia to grow the economies of 13 regions within NSW. Each plan outlines actions designed to address barriers to business investment and to stimulate local economic growth. The plans focus on strategies for sustainable growth in the region, identifying infrastructure, land use and planning needs as well as skills, industry and business development issues. Some examples of future growth sectors in regional NSW include creative industries, advanced manufacturing and defence, ICT, renewable energy, and services.

The NSW Government will:

- Invest in regional funds such as the \$3 million extensions to the *Illawarra* and *Hunter Advantage Funds* and programs specifically designed to meet the needs of regional businesses and communities (such as the \$52

million *Local Infrastructure Support Fund*) support the development of hubs and clusters around the State, consistent with *Regional Planning Strategies* and *Regional Transport Strategies*

- Implement the *NSW Regional Innovation Strategy* which aims to build the capacity of local businesses to be more competitive through innovation. Recommendations include enhancing innovation-related skills, creating networking and knowledge transfer opportunities, and leveraging off the potential of broadband
- Develop the framework outlined in the *NSW Knowledge Statement* which sets out the Government's aim to continue work to address inequitable educational attainment outcomes in our diverse geographic regions and communities and improve access to jobs and training in partnership with our education providers
- Assist regional business to enter new markets through a network of Export Advisors
- Invest in the education and research infrastructure of regional universities and research centres such as the Sheep and Poultry Cooperative Research Centres (CRCs), both headquartered at the University of New England, the EH Graham Centre at Charles Sturt University, the SMART Infrastructure Facility at the University of Wollongong, and the ARC Centre of Excellence for Geotechnical Science and Engineering which will be headquartered at the University of Newcastle
- Deliver regional tourism initiatives and promotion campaigns
- Promote investment in renewable energy, including establishing six wind precincts, and
- Administer and provide operational support for irrigation modernisation activities in cooperation with the Australian Government (such as through the *Water for the Future* program).



NSW GOVERNMENT DETAILED DELIVERY PLANS



13 REGIONAL BUSINESS
GROWTH PLANS

MAINTAINING A SOUND FISCAL BASE AND EFFICIENT LEGAL SYSTEM

The NSW Government will continue to guarantee a sound fiscal base by delivering budgets that will maintain the State's AAA credit rating and provide value for money for the NSW taxpayer.

The AAA credit rating is an important signal that NSW Government finances are being well managed, ensuring that NSW remains a strong destination for foreign investment.

The NSW Government will also work to maintain a world class legal framework which supports industry and economic growth and underpins confidence and business investment in the State.

The NSW Government will:

- Maintain a AAA credit rating from both Moody's and Standard & Poor's credit rating agencies. NSW has maintained the highest AAA foreign currency long-term credit rating from Standard & Poor's since February 2003
- Promote Sydney as a global centre of excellence in the Asia-Pacific region for both financial and professional services
- Promote the Sydney-based Australian International Disputes Centre. Access to alternative dispute resolution is a critical element of global business activity that provides cost effective dispute resolution. The Australian International Disputes Centre is a joint venture between industry, and the Australian and NSW Governments, and
- Cut payroll tax twice in the 2010–11 financial year, contributing to savings of \$4 billion for NSW businesses and boosting the State's economy:
 - From 1 July 2010, payroll tax was cut from 5.65 per cent to 5.5 per cent
 - From 1 January 2011, the NSW payroll tax rate will be cut to 5.45 per cent
 - The payroll tax threshold was increased to \$658,000 from 1 July 2010, meaning any business with a payroll below this level does not pay payroll tax.



NSW GOVERNMENT DETAILED DELIVERY PLANS



NSW BUDGET



NSW'S SIGNIFICANT COMPETITIVE ADVANTAGES

A diversified, sophisticated industry structure. NSW contributes the largest state share of national output not only in services (34%) but also in manufacturing (32%).

Our position as the dominant centre in the country for a range of key service sectors including financial and insurance services, professional, scientific and technical services, information media and telecommunications industries, as well as the tourism-related accommodation and food services, and arts and recreation services industries.

The export of leading edge technologies in advanced manufacturing, and particular strengths in food and beverage manufacturing, defence, metal manufacturing, electrical and electronic equipment manufacturing, professional and scientific equipment manufacturing, and publishing.

A highly skilled and multilingual population. Almost 60% or 2.6 million of NSW residents have a post-school qualification—the highest proportion of any state.

Over 1.3 million NSW residents speak a language other than English at home, which is over 40% of the Australian total.

A dynamic, highly skilled, globally competitive and growing financial services sector.

NSW accounts for 44% of all people employed in finance and insurance services in Australia, while it accounts for more than 60% of the nation's business expenditure on research and development in the field.

Sydney is ranked in the top 10 financial centres in the world—with particular strengths in its people, business environment and infrastructure. It also has a significant cluster of carbon market services and Australia's only emissions trading scheme to position Sydney as a centre for carbon market services in the Asia-Pacific.

Being home to eleven universities, five of which are in the top 500 in the world. There are 20 Australian Research Council Centres of Excellence and Cooperative Research Centres (CRCs) also located here, as are CSIRO facilities, National Information and Communications Technology Australia (NICTA) centre of excellence, the Australian Nuclear Science and Technology Organisation (ANSTO), National Measurement Institute and the Defence Science Technology Organisation.

Seven major medical schools and four of Australia's major teaching hospitals. There are also a number of high quality medical research precincts in locations such as Westmead, Central and Eastern Sydney, Newcastle and Wollongong.

Vast deposits of black coal. In 2007-08, \$10.3 billion of saleable black coal was produced or 37% of the national total. NSW is home to the world's largest export coal port in Newcastle. Other important mineral commodities include copper and gold.

Significant agricultural production, food processing and export sector.

SECTOR STRATEGIES



FINANCE, INSURANCE & PROFESSIONAL SERVICES

VISION

Build on NSW's global reputation as a vibrant, well regulated centre for services excellence to achieve a doubling in NSW finance, insurance and professional services sector exports by 2020.

Finance, Insurance and Professional Services is by far the largest sector in the NSW economy, contributing around \$80 billion to the NSW economy (or 24% of NSW's Total Industry Value Added in 2009-10).

Financial Services and Insurance accounted for \$52.9 billion, or 16.1% of total industry value added, and Professional Services \$27.4 billion or 8.3%.

In 2008-09, NSW exported \$3.7 billion in finance, insurance and professional services representing 6.1% of total NSW exports.

NSW COMPETITIVE ADVANTAGES

Robust economy

The resilience of the Australian economy and the finance, insurance and professional services sectors in particular, provides a distinct advantage in the global sourcing and retention of capital and talent. Maintenance of the NSW's AAA credit rating means that the State's sovereign risk is low, and attractive to potential investors.

Attractive regulatory environment

The Australian financial sector is recognised internationally as being among the best regulated in the world. A strong regulatory framework, first class supervisors, and prudent commercial decision-making have ensured the resilience of Australia's financial system during the global financial crisis. Sydney is the home base of key regulators including the Reserve Bank, Australian Prudential Regulatory Authority, Australian Securities and Investment Commission, and more recently to the International Disputes Centre, a joint venture between industry, and the Australian and NSW Governments.

Strong and large financial services sector

Australia has arguably the most efficient and competitive 'full service' financial sector in the Asia-Pacific region. The City of London's 2010 Global Financial Centres Index ranks the Sydney financial services centre equal ninth in the world, and the 4th in Asia. The Australian market is the first major financial market to open each day, presenting follow-the-sun investment opportunities.

Highly skilled, multi-lingual workforce

NSW's workforce is highly qualified, with a rich pool of talent for finance and professional services firms in Sydney. More than 1.1 million people of working age hold a university degree and over 98,000 current students (almost 30 per cent of NSW students) specialise in management and commerce. One in three (1.2 million) Sydney residents speak a language other than English.

Innovative technologies—high skill/high value outputs

Financial analytics and tools developed in NSW are used around the world. Technology companies and organisations headquartered in NSW and serving global financial institutions, markets and stock exchanges include IRESS for pre-trade analytics, SMARTS for post trade analytics and market surveillance, SIRCA as a provider of finance related data and e-research services, and the Capital Markets Cooperative Research Centre which is developing new capital market technologies.

Professional, scientific and technical services strength

NSW has a strong professional, scientific and technical services sector, which has seen robust annual employment growth, averaging nearly 4 per cent per annum over the last five years to 2009–10. This sector is responsible for driving significant innovation, productivity and efficiency across the economy, through creating and applying world class approaches to management, research and technology.

Sydney is Australia's global gateway

NSW financial and professional service companies are well positioned to service the Asia-Pacific region and other developing global markets. Sydney is serviced by almost double the number of direct international flights each week than any other Australian city.

OPPORTUNITIES FOR GROWTH

Expanding exports

The NSW finance, insurance and professional services sector has the potential to develop into one of the most important exporters for Australia over the coming decade, given the prospective growth in emerging Asia. The export of these services from NSW will also continue to expand at a steady pace, in part leveraged off Australia's reputation as a stable country from which to conduct business in the region and Sydney's position as a global city.

Islamic finance

Islamic finance is one of the fastest growing segments in the financial services industry globally, with asset value estimates up to US\$1 trillion. NSW is working with the other States and the Australian Government to identify and remove regulatory and taxation impediments to Islamic finance.

Carbon finance and emission reduction

NSW has an existing talent pool that will support Sydney in developing new financial, legal and advisory tools for businesses adopting and trading carbon abatement options. Demand is also expected to grow for advisory services on sourcing emissions permits from regulated markets, advice on technological improvements for emissions reductions, and systems for consistent monitoring and reporting emissions output and abatement performance.

Global middle-office functions

Sydney is attractive to businesses seeking to reduce costs of their high-value middle office operations that typically occur in expensive centres such as London, New York or Hong Kong. Key strengths for Sydney include areas such as foreign exchange, equity and bond trading and superannuation services through international marketing strategies.

Emerging economies

There will be increasing demands from maturing economies across Asia for legal, accounting and management consultancy services.

Developing Sydney as a global centre of excellence

A significant opportunity exists to strengthen the positioning and development of Sydney as a centre of excellence in the Asia-Pacific region for both financial & professional services.



ACTIONS TO SUPPORT GROWTH

1. Develop finance and professional services precinct at Barangaroo

Support the development and marketing of Barangaroo as a finance and professional services precinct by working closely with the Barangaroo Delivery Authority and its private sector partners to promote the development to international investors.

The development will:

- Promote the establishment and growth of new investment through global operating centres and exports of financial services from Sydney to increase diversification from the domestic base
- Provide a distinct physical location to house and provide specific facilities for new businesses to flourish
- Attract international attention and marketing with a landmark development
- Support the creation of skilled employment in sustainable niches where Sydney has a competitive advantage in finance, insurance and professional services, and
- Be climate positive and carbon neutral by exporting more water and energy than it uses and generating zero waste.

John Stuckey

Former Managing Partner of McKinsey and Company

NSW and Sydney especially is the capital of professional services in Australia and this will continue. Accountants, lawyers, engineers, consultants and others rely on a growing corporate sector, especially financial services, communications, property and infrastructure. Strong growth in these sectors will assure strong demand for professional services. On the supply side, government can help by helping to stimulate the provision of tertiary education opportunities for aspiring young professionals.

2. Increase the number of international firms locating regional offices in Sydney

The NSW Government is working with industry to:

- Encourage international organisations to locate their global and Asia Pacific regional functions in NSW. For example, Industry & Investment NSW is actively working to attract Chinese and Indian banks, insurance companies and fund managers to set up in Sydney, which will also encourage these financial institutions' respective Chinese and Indian clients to invest in NSW
- Position Sydney globally and promote its key capabilities. The *Greater Sydney Partnership* initiative is a key plank in this activity
- Identify and address issues affecting Australia's competitiveness as a financial centre and work with the Australian Government to address them
- Develop initiatives under the *Sydney-Shanghai Memorandum of Understanding (MoU) on Financial Services*. These include:
 - annual Shanghai/Sydney Financial Centre Symposium to be held in Sydney and Shanghai by rotation
 - annual joint research paper on key Asian financial services issues relevant to the growth of Shanghai and Sydney as financial centres, and
 - annual financial services visits and personnel exchanges between Shanghai and Sydney.
- Establish a Sydney Finance Centre Committee to:
 - plan and oversee the implementation of initiatives under the Shanghai/Sydney Financial Centres MoU, and
 - drive NSW's involvement and liaison with the Australian Government pursuant to the *Johnson Report*.

3. Grow Sydney's talent pool in finance, insurance and professional services

Work with NSW universities to develop advanced skills and capability

The NSW Government, recognising the need for advanced skills in the finance, insurance and professional services sector, will continue to work to support the development of an institute undertaking high value research and education in finance and related fields. This will be developed in partnership with NSW universities and industry, leveraging Commonwealth mechanisms such as attracting the Australian Government's proposed Centre for International Finance and Regulation.

Ongoing review and assessment of finance, insurance and professional services workforce needs

Through the NSW Innovation Council, the NSW Government will consider mechanisms for a permanent process to review and assess Finance, Insurance and Professional Services workforce needs. Such a mechanism will involve universities, TAFE, industry and government.

Identify and support priority skills for State visa support

The NSW Government will identify and advise the Australian Government of skill shortages, including within the finance, insurance and professional services sectors. The NSW Government will prioritise its support for visa applications those applicants that will provide necessary skills.

4. Develop Sydney as a centre of excellence in Islamic finance

The NSW Government is working with the Australian Treasury to address the tax and regulatory impediments to create a level playing field for Islamic finance, as identified in the *Johnson Report into Australia as a Financial Centre* and subsequently adopted in the Australian Government's May 2010 Budget.

Addressing possible impediments to Islamic finance in NSW

The NSW Government will assist both the Australian Government's Board of Taxation and Treasury reviews to ensure that taxes and regulations do not inhibit the expansion of Islamic finance products. Concurrently the NSW Government will review its regulations to ensure that no regulatory impediments to Islamic finance exist at the State level. The NSW Government will respond to both reviews once the Board of Taxation review is complete—currently scheduled for June 2011.

Positioning Sydney as a centre of excellence in Islamic finance

Along with addressing the tax and regulatory issues mentioned above, the NSW Government will: continue to work with Austrade and Dubai Export Development Corporation (and others from the Middle East region and Malaysia) to develop investment opportunities, including bringing Islamic finance trade and investment missions to Sydney; encourage and facilitate the first corporate and sovereign Islamic bond (sukuk) issuances in Australia; encourage and facilitate the establishment of Islamic finance studies at NSW based universities; and develop NSW specific Islamic finance indices.

5. Develop Sydney as a hub of emissions trading and reporting

The NSW Government will support industry initiatives to retain and develop the existing skilled talent pool to ensure that Sydney remains internationally competitive and is well positioned to take advantage of Australian Government initiatives when they are implemented. NSW Government continues to operate one of the world's first mandatory emissions trading schemes, which will continue until a national scheme is established, and remains committed to developing Sydney as a carbon market hub. The NSW Government has worked with the *Sydney Carbon Market Taskforce* to develop strategic actions to establish Sydney as a centre of emissions trading and reporting.

6. Position Sydney as a centre of finance innovation and regional leadership

The NSW Government provides financial support for innovation and research, such as sponsoring a Superannuation Chair at the University of Technology, Sydney and to the Capital Markets Cooperative Research Centre which works to design and deploy technology and services that enhance market integrity by identifying instances of insider trading, market manipulation and money laundering. The *NSW Digital Economy Strategy* will grow the interface between ICT and financial and professional services.

7. Promote the growth and development of suburban and regional centres to support Sydney's status as a global financial and professional services hub

Promote the growth and development of other business locations to support and strengthen Sydney's status and profile as a global financial and professional services hub including:

- *Homebush Bay*—the 2000 Olympics infrastructure has enabled the development of substantial business, retail and residential infrastructure in this region. Groups such as the Commonwealth Bank have located substantial centres in this region
- *North Shore/North Ryde Business Corridor*—locations such as St Leonards, Chatswood and North Ryde have attracted significant corporate developments taking advantage of their proximity to the Sydney CBD and key education and research centres such as Macquarie University
- *Illawarra*—The Finance, Insurance and Professional Services strategy will promote the opportunities identified by the Advantage Wollongong Knowledge Services Strategy which concentrates on three key growth sectors that already have a substantial footprint in Wollongong: Business Services, ICT and Financial Services, which employ over 4,000 people across Wollongong, and
- *Hunter/Central Coast*—This region has also seen substantial growth in Finance, Insurance and Professional Services sectors and has attracted local and international companies to locate centres of excellence in this region.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS FINANCE, INSURANCE AND PROFESSIONAL SERVICES



Claire Pamenter
Senior Manager

Investment Attraction
State & Regional Development and Tourism Division
Industry and Investment NSW

📞 02 9338 6953

✉️ claire.pamenter@business.nsw.gov.au



INFRASTRUCTURE & CONSTRUCTION

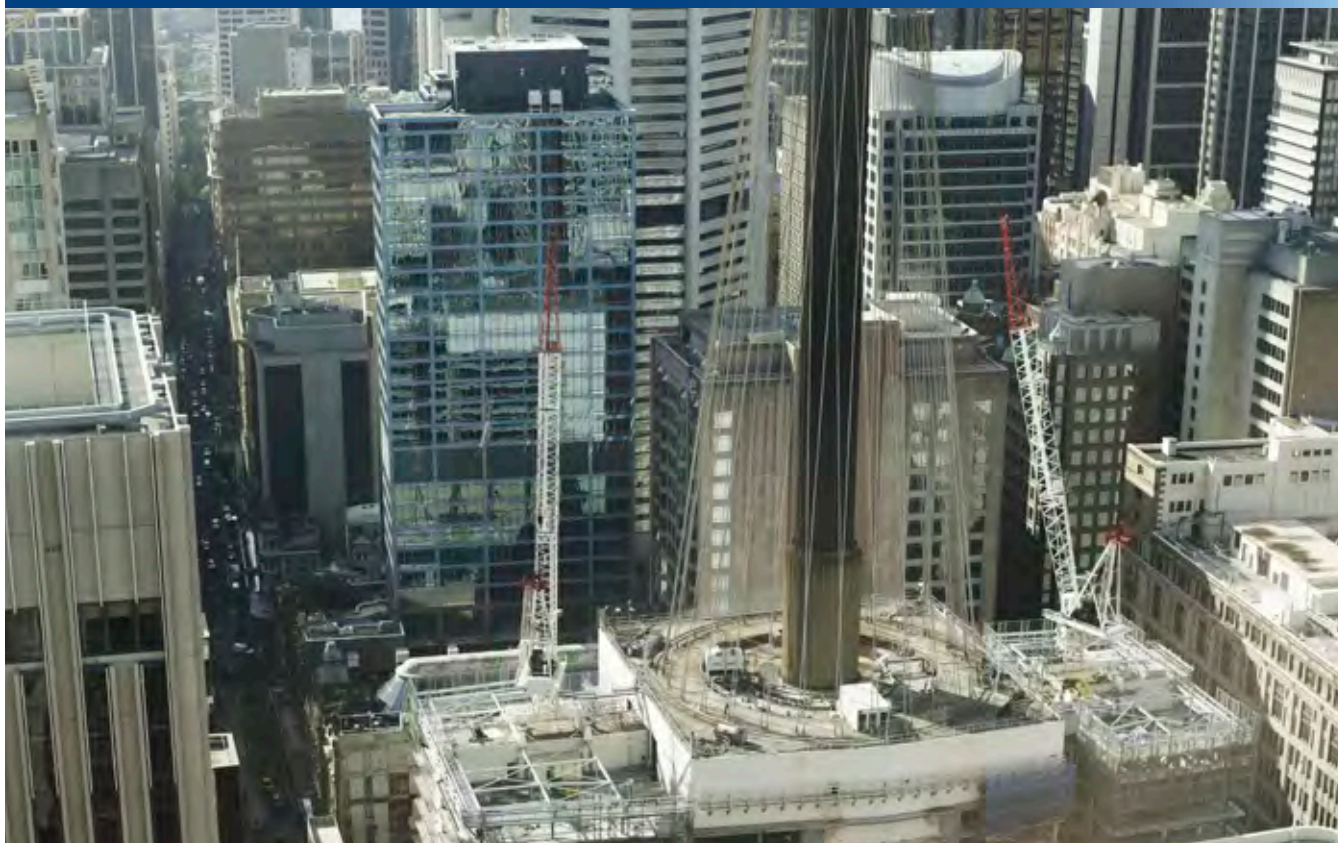
VISION

The NSW infrastructure and construction sector will grow strongly, driven by private and Government investment in major projects, sustainable construction and export opportunities.

In 2009–10 the NSW construction sector represents \$24.5 billion, or 7.5% of total industry value added for NSW. This is projected to grow by almost 55% to 2019–20, one of the highest growth rates of any industry.

The construction sector's share of the NSW economy (as measured by total industry value added) is projected to increase to 8.8% in 2019–20. Strongest growth is forecast for the residential construction sub-sector (60.9%), followed by engineering construction (52.6%) and non-residential construction (39.5%).

In 2009–10 the construction sector (including services) employed 287,000 people in NSW, accounting for 8.4% of the State's total employment. Employment in the sector is projected to grow at an annual average rate of 2.2% in the 10 years to 2020, faster than the rest of the economy.



NSW COMPETITIVE ADVANTAGES

Global leaders headquartered in NSW

Many of the top commercial builders in Australia have corporate (global) or national head offices in NSW. These include: AbiGroup Ltd, Baulderstone Hornibrook, Brookfield, Mirvac Group, Multiplex Constructions, Laing O'Rourke, Leighton Group, Lend Lease, Stockland, Transfield Services (Aust) Pty Ltd, United Group Ltd, Westfield Group and Worley Parsons Ltd. Most are active internationally, with subsidiaries and joint ventures that operate throughout the world.

These companies have strong experience and capabilities and are well positioned to continue to take advantage of growth in the sector both nationally and within the Asia Pacific region. Similarly, capabilities in sustainable building design will mean that NSW is well placed to take a leading position in this growing market that incorporates residential, commercial, industrial, retail and social construction.

Green building capabilities

According to the Green Building Council of Australia, the green building market in Australia is estimated to be worth \$21 billion and encompasses a broad range of professions such as designers, architects, consultants, builders and tradespeople. There are 345 Green Building Council of Australia member companies and 1,543 Green Star Accredited Professionals operating in NSW, representing 46 per cent and 33 per cent of the respective national totals.

The gross value of green projects that are planned and built across all sectors in NSW is over \$6 billion. This places NSW highest on a state-based analysis, accounting for approximately one-third of the current total market value of green projects in Australia.

The current development of Barangaroo represents one of the world's first climate-positive precincts and is providing a global showcase of NSW's green building capabilities.

Strong skills base

NSW has a strong skills base from which to grow. In 2008, nearly 7,800 students were studying Architecture and Building related courses across NSW universities, representing the highest number in Australia or 32 per cent of all students in this field of education. Architecture and Urban Building is offered across seven of NSW's eleven universities. In the vocational education sector, a further 38,000 students were enrolled on architecture and building courses in NSW in 2009.

Mature environment for Public-Private Partnerships

NSW and Australia provide a secure environment for Public-Private Partnerships. A recent OECD report on Public-Private Partnerships ranked Australia first by maturity based on country risk (political, economic, financial, legal and regulatory risks) together with completed deals as a percentage of GDP.

Since 2001, about \$9.8 billion of new public infrastructure has, or is being delivered as a Public-Private Partnership.

Tony Shepherd

Chairman, Transfield Services

New South Wales traditionally has led the nation in the innovative and timely development of infrastructure. From the underground railway and Sydney Harbour Bridge in the 1930's to the Sydney Harbour Tunnel in the 1990's to the Olympic facilities and new infrastructure of the 2000's. The challenge for this generation is to build the transport, communications, energy and water infrastructure which will reinforce our position as the nation's leader.

OPPORTUNITIES FOR GROWTH**Ongoing need for infrastructure developments**

Infrastructure investments in the energy, transport, communications and water sectors contribute to almost all economic activities and play a vitally important role in productivity and export competitiveness.

Efficient transport and freight movements are a cornerstone of our economy. Sydney, with its seaports and airports, is a key hub for interstate and international passenger and freight movements along the eastern seaboard. Sea ports along the NSW coast, including Port Kembla and Newcastle, are important to the long-term economic prosperity of both the State overall, and the regional NSW economies that support them.

Over the next decade key priorities for the NSW Government will include easing urban congestion and movement of passengers over a range of transport options as well as facilitating freight movement, including plans for new intermodal terminals, enhancing metropolitan Sydney's ring road system, and ensuring the efficient operation of our air and sea ports.

Growing construction demand

Strong immigration and a growing population will continue to drive demand for housing, infrastructure, retail premises and commercial buildings. The NSW Department of Planning expects that around 390,000 new dwellings may be required to accommodate the higher population over the next 10 years.

In addition to this demand for new dwellings and commercial and environmentally friendly buildings, the State's construction businesses will benefit from increased demand for health and aged care buildings. Additional opportunities may present themselves to export services in infrastructure design and construction.

Improving the energy efficiency of buildings

Improving the energy efficiency of commercial, industrial, residential and government buildings is a key means to achieving a lower carbon economy. It is a potential driver of new business opportunities in the construction and building maintenance industries, as well as encouraging new market entrants with particular expertise, including integrated energy savings product suppliers and installers such as the Mark Group Australia.

There is an opportunity to develop leading edge solutions to the environmental challenges while integrating new ICT technologies throughout building design. Non-residential construction will also incorporate techniques aimed at producing more sustainable and environmentally friendly offices and buildings. A number of Australian office blocks have already received a six-star energy rating, with future developments likely to increasingly incorporate energy-saving technology.

ACTIONS TO SUPPORT GROWTH

1. Long-term planning for growth

In February 2010, the NSW Government released the *Metropolitan Transport Plan: Connecting the City of Cities*, a fully funded \$50.2 billion plan to improve transport services in Sydney. The *Metropolitan Transport Plan* links Sydney's land use planning with its transport network to ensure sustainable growth of the city and the NSW economy.

The NSW Government is undertaking its 5 year review of the *Metropolitan Strategy*. In recognition of the importance of providing good transport connections in areas of population and business growth, the *Metropolitan Strategy* will consider and discuss transport priorities.

To be released in late 2010, the *Metropolitan Strategy* will drive public sector infrastructure investment decisions and provide certainty for private sector construction investment decisions.

The NSW Government is also currently preparing the NSW Freight Strategy as well as a suite of Regional Transport Strategies, starting with the Hunter, Central Coast, Illawarra and Murray regions.

The NSW Government is working with the Australian Government in a joint study on Aviation Capacity for the Sydney region.

2. Speeding up the planning system

NSW Government is speeding up the planning system and has introduced significant planning reforms since 2006, including increasing zoned land on the fringe of Sydney; streamlining development assessment processes e.g. *Housing Code*; reforming State and local development contributions; and introducing the *Affordable Housing State Environmental Planning Policy*.

The NSW Government has set and met new benchmarks for faster decision making on planning applications. At the end of June 2010, 70 per cent of major projects were finalised within three months, a further 20 per cent finalised within five months and most of the remainder finalised within eight months.

In addition, the NSW Government has invested:

- \$3 million a year to engage project managers to ensure efficient and timely delivery of major projects
- \$2.4 million in 2009–10 to help councils speed up development assessments and rezonings, and
- \$1.5 million per annum to boost the supply of employment land.

The NSW Government has also established Joint Regional Planning Panels to provide for a more transparent and robust decision making process through a combination of independent expert panel members and local knowledge. In their first year these Panels cut nearly 50 per cent of the time taken to determine a development application compared to the time taken in 2008–09.

3. Investing in infrastructure

The NSW Government is investing \$62.2 billion in infrastructure over the four years to 2013–14. Investments include:

- \$3.9 billion in the electricity sector, including programs of work for the distribution and transmission networks and at power stations
- \$2.1 billion for rail projects, including \$304 million for work on the Rail Clearways program, \$278 million for the South West Rail Link and \$145 million toward the acquisition of rail carriages
- \$1.1 billion for social housing, including the commencement of approximately 1,400 dwellings and the completion of approximately 5,250 dwellings under the Australian Government's *Nation Building—Economic Stimulus Plan* and NSW's ongoing social housing supply program
- \$915 million by Sydney Water and Hunter Water for water and sewerage projects
- \$346 million for port projects, including \$169 million towards the construction of a third container terminal at Port Botany
- \$2.8 billion for roads, including \$810 million to continue work on the Pacific Highway north of Hexham
- \$345 million for work on the Hume Highway and \$340 million to continue work on the Hunter Expressway
- \$2 billion for Education and Training, including \$1.2 billion for Primary Schools and Secondary Schools under the Building the Education Revolution program; \$800 million for other projects including 54 major school construction projects, 33 major TAFE construction projects, and school and TAFE minor works, such as security fencing and upgrades of toilets, sewers, roofs and major information technology projects
- \$918 million by NSW Health for investment in hospital upgrades, medical equipment, health technology programs, information and communication technology, regional cancer centres, improved mental health facilities, ambulance infrastructure and other new health projects; major redevelopment projects at Liverpool Hospital, Nepean



Hospital, Orange/Bloomfield Hospital, Royal North Shore Hospital; and seven cancer care centres around the state

- \$167 million on commuter car parks to deliver 7,000 additional car spaces
- \$145 million on 200 new buses for the State Transit Authority and private bus operators across Metropolitan and Outer Metropolitan Sydney
- \$160 million for custodial services infrastructure, including a new facility at Nowra and increasing inmate capacity by 250 at Cessnock
- \$79 million to expand the range of accommodation and support models available to people with a disability, and
- \$70 million for planning, construction and refurbishment of police stations at 20 locations.

Following the release of the *Metropolitan Transport Plan* in February 2010, the NSW Government has provided updated funding submissions to Infrastructure Australia and is developing the 25 year *Metropolitan Strategy*. The NSW Government will continue to work closely with Infrastructure Australia to ensure that any new projects comply with Infrastructure Australia guidelines and criteria. This includes key rail links, freight infrastructure and major road upgrades.

4. Supporting smart infrastructure, technologies and innovation

Smart Grid

In addition to upgrading utility networks, the NSW Government is working to improve the way they work. Specific actions include:

- *Smart Village*: EnergyAustralia and Sydney Water have an established 'Smart Village' testbed in Newington to test world leading energy and water management products and services, and

- *Smart Grid, Smart City*: Energy Australia was the successful bidder for this \$100 million Australian Government program that will use advanced communication and metering technologies to design and deliver a more efficient and robust electricity network.

Smart Transport

NSW Government funds NSW based capacity to develop and deploy smart infrastructure systems, including:

- The National ICT Australia (NICTA) Centre of Excellence. The NSW Government will increase its current \$25 million support for NICTA by an additional \$9 million
- \$400,000 to establish the Fraunhofer Project Group at NICTA—a NSW node of Europe's largest applied research organisation, the Fraunhofer Institute, directed at industry partnered research in transport and logistics, embedded systems and software engineering
- \$10 million through RailCorp towards establishing the \$62 million SMART Infrastructure Facility at the University of Wollongong—to perform advanced modelling, research and teaching for integrated planning and development of infrastructure assets, and
- Investment through the Roads and Traffic Authority in collaboration with NICTA, in the *Smart Transport and Roads project*—developing and deploying advanced traffic information and congestion management technologies in NSW and internationally.

Supporting innovation and other smart technologies

In addition, the NSW Government is supporting innovation in the industry by actions such as:

- The Centre of Excellence for Autonomous Systems at Sydney University—for development of industrial robotics and autonomous systems in mining, transport, construction, aerospace, agriculture, and health

- Providing Science Leveraging Fund support for the ARC Centre of Excellence for Geotechnical Science and Engineering which aims to provide engineers with tools that will assist in improving the safety and cost effective design and construction of major transport and energy infrastructure
- Assisting innovative NSW companies to internationalise through participation in events such as the *Shanghai Expo Building and Construction Workshop*, *InterAirport Beijing*, *The Big 5 2010* (UAE), *Green Building Congress 2010* (Chennai India) and *Project Qatar 2010* (Doha), and
- Support for national events, such as *Designbuild*, Australia's premier building and construction event, to be held in Sydney in May 2011.

The NSW Government is also working with the Australian Government to facilitate the rollout of the National Broadband Network across NSW and its uptake to improve NSW businesses' productivity and innovative capacity and access to new markets.

5. Sustainable construction

Promote and leverage NSW's green credentials

The NSW Government will work with industry to promote and leverage NSW industry's global reputation for sustainable construction. It will showcase NSW's strengths by developing one of the world's first climate-positive precincts at Barangaroo. The development will incorporate a range of cutting edge environmental measures that will provide an opportunity for the local construction industry to showcase its capabilities.

Enhancing efficiency and sustainability

Current NSW initiatives include:

- Setting a target of 4,000 GWh of annual electricity savings through NSW energy efficiency programs by 2014
- NSW administration for the national initiative to rating the environmental performance of existing buildings, *National Australian Built Environment Rating System (NABERS)*
- *Energy Savings Scheme*, a legislated scheme that requires energy retailers to pursue energy efficiency measures in households and businesses
- Rollout of *Sustainability Advantage*, a modular and member-based program to use resources more efficiently and develop appropriate environmental strategies
- Support for Energy Efficiency for Small Business
- Development of the *Green Leasing Guide*
- Rollout of the NSW Government *Sustainability Policy* and associated targets for government owned and leased buildings, and
- Support for business, government and households to use water and energy more efficiently through *Energy Savings Action Plans*, under the *Climate Change Fund*.

6. Managing growth in freight

The NSW Government is developing a 25 year *Freight Strategy* for NSW to manage the growing freight task. The *Freight Strategy* will include work to identify future requirements to meet expected freight growth. It will incorporate all elements of freight supply chains, including the distribution of freight to intermodal terminals by both road and rail.

7. Removing barriers to investment in infrastructure and service delivery

Establishing national Public-Private Partnership (PPP) guidelines

NSW Government has recently assisted Infrastructure Australia in developing the *National PPP Policy and Guidelines Package*. This will facilitate harmonisation of PPP procurement processes nationally, encourage consistency and achieve efficiency for market participants. The NSW Government will work to ensure that PPP procurement process is as efficient as possible for market participants.

Improving infrastructure approval processes

The NSW Government in coordination with the Australian Government and other States and Territories is working towards improvements in planning approvals and capital city strategic planning systems:

- In July 2009 COAG agreed to reforms to major infrastructure approvals processes which aim to achieve greater uniformity and efficiency in planning, environmental and other approval processes for major national infrastructure, and
- In December 2009 COAG agreed to national criteria for capital city strategic planning systems. COAG has also agreed that by 1 January 2012 all States will have plans in place that meet the criteria, and noted that the Australian Government will link future infrastructure funding decisions to meeting these criteria.

These intergovernmental commitments are in addition to significant NSW planning reforms introduced since 2006.

Increased competition in the water industry

The NSW Government has passed the *Water Industry Competition Act 2006* and its supporting regulations. The legislation will encourage competition in the water industry and foster innovative recycling projects and dynamic efficiency in the provision of water and wastewater services—for example, establishing a new licensing regime for private sector providers of reticulated drinking water, recycled water and sewerage services.

Improving NSW's electricity distribution network

In July 2010, NSW Government's Better Regulation Office released its final report into a review of electricity distribution network contestable services. The review will result in a stronger accreditation scheme, greater transparency when work is deemed non-contestable and a tougher approach to compliance and enforcement. The reform will reduce costs and improve industry efficiency, while continuing to ensure safety and reliability on NSW's electricity networks.

8. Increasing the supply of skilled labour

Supporting apprenticeships

In 2009, the NSW Government released the revised *Training Management Guidelines* to support a new commitment to create 4,000 apprenticeships over four years (across all industries). The Guidelines apply to contractors working on government construction projects valued at over \$1 million and specify an apprenticeship employment ratio of four to one.

Under the NSW Government's *Supporting Our Young People* package, we will create 2,000 pre-apprenticeships in 2010–11 in a range of trade and occupational areas, including construction. Courses will include work placement and mentoring. Partnerships will be established between employers and training organisations to maximise potential for employment on successful completion of the course. Most courses will commence by the end of October 2010.

Funding is available for 28,000 new apprenticeships and traineeships across all industries over four years as part of an additional 175,000 training opportunities provided under the *NSW Productivity Places Program*.

Skills for a low carbon economy

Current NSW initiatives to support the skills and infrastructure necessary to access opportunities arising from increased importance of sustainability include:

- Rolling out the \$20 million *NSW Green Skills Strategy*, which is a component of the *NSW Energy Efficiency Strategy*
- Implementing the *Green Skills Business Incentives Scheme*, and
- Supporting the work of the *Green Skills Taskforce*, which provides input to the implementation of the NSW Government's Green Skills agenda.

Supporting Aboriginal participation

Specific actions are being taken to increase Aboriginal participation in the workforce. A revised Aboriginal Participation in Construction model has been developed to improve workforce diversity in the construction and related industries by facilitating the development of Aboriginal enterprises. The model will encourage government contractors to provide Aboriginal people with apprenticeships, on-the-job skills training and career opportunities for those first entering the industry. The model has already been successfully applied to two construction projects, in Cessnock and Nowra.

Tertiary Education Plan and NSW Knowledge Statement

The NSW Government has developed the *Tertiary Education Plan* which will play an important role in better aligning economic and social priorities for the State and the strategic interests and capabilities of our tertiary sector. Together with the *NSW Knowledge Statement*, which provides an overarching vision for building the knowledge, skills and innovation capabilities of the State, these initiatives will help the construction sector acquire the necessary skills and knowledge to adjust to the emerging challenges and opportunities over the next 10 years.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS INFRASTRUCTURE AND CONSTRUCTION

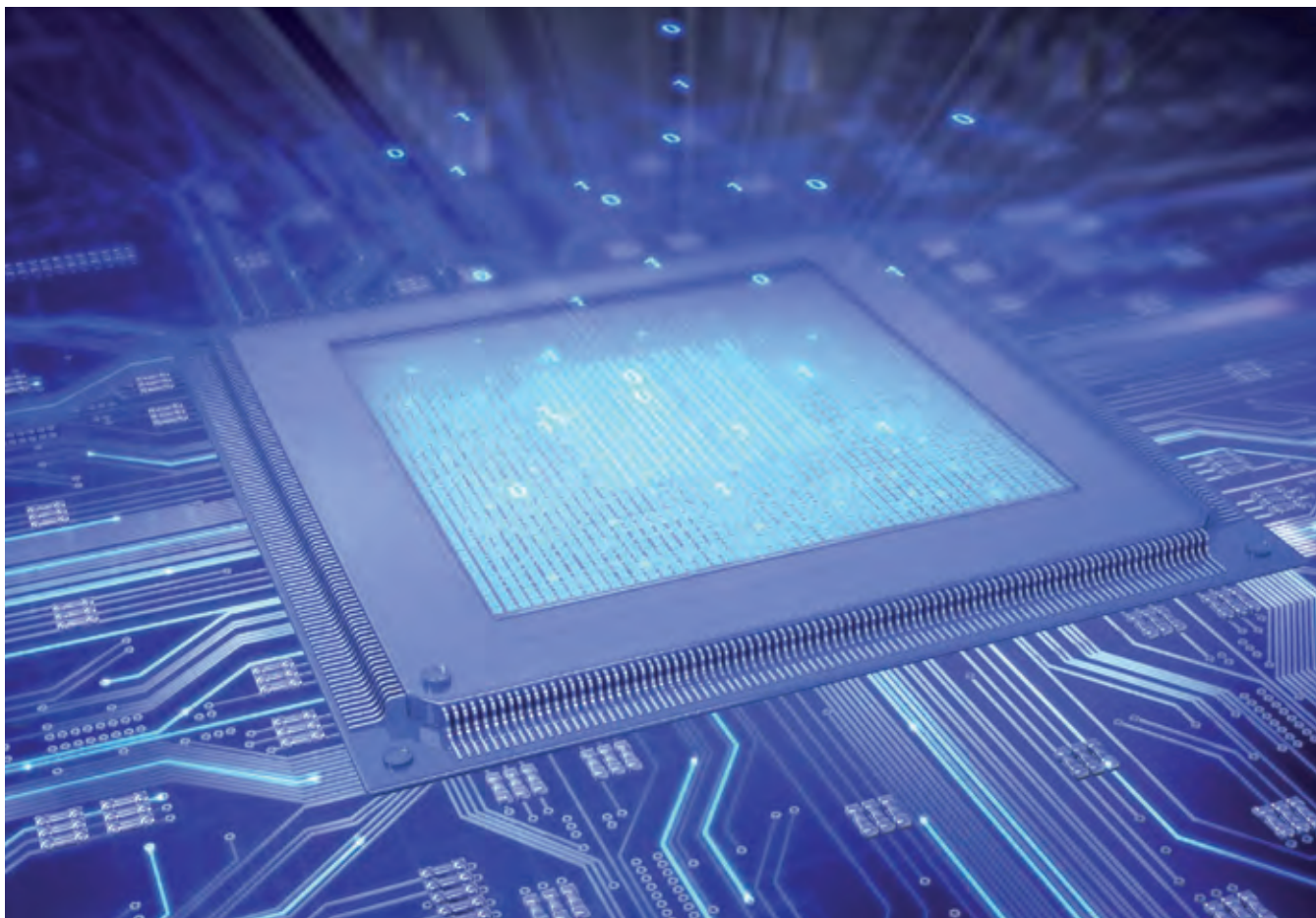


Dianne Leeson
Assistant Director General

Major Projects and Governance
General Government Coordination
Department of Premier & Cabinet

☎ 02 9228 3107

✉ dianne.leeson@dpc.nsw.gov.au



ADVANCED MANUFACTURING

VISION

Productivity in the NSW Manufacturing sector will be improved through innovation, quality design and active supplier collaboration, strengthening NSW's position as a leader in advanced manufacturing solutions.

Manufacturing contributed \$32.8 billion in 2010, or 10% to total industry value added in NSW in 2010, and is forecast to grow by 19% by 2020 (to \$38.9 billion). NSW manufacturing exports were valued at \$11.7 billion in 2008-09, representing 19.4% of total NSW merchandise and services exports.

Manufacturing is the State's third largest employer, accounting for approximately 300,000 employees. It has a higher than average rate of full-time employment.

NSW COMPETITIVE ADVANTAGES

Market leaders in a range of industries

The NSW manufacturing industry includes a number of world leading firms in primary manufacture, food and beverage manufacture, medical devices, defence and heavy industry including transport equipment and equipment for mining operations.

Medical device manufacturers include companies such as, ResMed and Cochlear who have expertise in instrumentation, electronics and engineering, with successful applications in hearing implant technology and sleep apnoea.

A highly skilled workforce

NSW boasts a skilled manufacturing workforce, with an increasingly high average skill level, leading to more value added per employee. For example, NSW manufacturers are experienced in the application of advanced information technologies and lean manufacturing, techniques that enable continuous productivity improvements.

Strong design and development capabilities

NSW is a provider of training and employment for marketers, engineers and designers, including software and systems designers. In addition to manufacturing contributions, designers are adding significant value through adjunct services including upgrading, servicing and support of high technology equipment.

Diverse and demanding consumers

NSW manufacturers have a proven track record of understanding and responding to a sophisticated, culturally diverse and rapidly maturing customer base. NSW consumers are early adopters of new technology, environmentally aware, and demand a high level of performance.

Global competitiveness

NSW manufacturing enjoys supply lines across the globe, facilitated by the confident use of electronic business-to-business communications. Exposure to a global pool of ideas and information enables continual product improvement and drives increased competitiveness.

OPPORTUNITIES FOR GROWTH

Climate change abatement, adaptation and resource depletion

Managing the consequences of climate change abatement and adaptation policies and resource depletion will drive demand for innovation in areas such as agricultural methods and machinery, transport and vehicle design, more efficient appliances, buildings and materials and housing.

National defence capability and expenditure

NSW is aiming to secure at least 30 per cent of Australia's in-country defence spending and new defence industry jobs by 2019 which will have a strong flow on effect for the manufacturing sector.

Changing demographics

A maturing population is driving changing patterns of consumer demand (towards lifestyle, health and recreation products and products to assist the elderly); shorter product lifetimes and more emphasis on product development and marketing.

Growth in the infrastructure and construction sector

The NSW manufacturing sector will benefit strongly from servicing and supplying the infrastructure and construction sector which will experience growth derived from strong investment in major infrastructure, continued expansion in residential housing and growth in the demand for sustainable construction.

Rapidly developing economies, including China and India

Australian manufacturers are well located and have the cultural diversity to better understand the needs of emerging economies. It is anticipated that Australian manufacturers will increasingly use this knowledge to design and develop products locally, while importing components that cannot be manufactured competitively here.

Information and communications technology

ICT will directly provide new recreation and entertainment options and markets for manufactured products. ICT will also continue to deliver enabling advantages across many industry sectors related to information dissemination and technical developments on business systems, product development, workforce skills, and productivity capacities. The roll out of the National Broadband Network (NBN) is expected to facilitate this capability and to provide new markets for manufacturers. The NBN will also provide significant productivity benefits for manufacturing firms in NSW; particularly those in regional areas and those who need to use communication technology to collaborate remotely with partners, suppliers and customers.

Integration into global supply chains

Products designed and manufactured in New South Wales will increasingly be exported as components of global supply chains, across a range of manufacturing sectors including medical devices, defence, electronics, environmental, transport equipment, health care and niche markets.

Mark Goodsell

NSW Director Australian Industry Group

New South Wales has a vibrant and innovative manufacturing sector that faces numerous challenges but also has a range of positive choices and growth opportunities available to it.

The improving performance of the manufacturing sector as it continues its path of recovery from the downturn shows that innovative businesses are able to compete in terms of cost and quality to attract investment and provide jobs to meet the demands of a growing market.

ACTIONS TO SUPPORT GROWTH

1. Infrastructure and construction investment

Infrastructure investment

The NSW Government's \$62.2 billion investment in infrastructure over the four years to 2013–14 will contribute to demand for manufactured outputs.

Major investments include:

- The electricity sector, including programs of work for the distribution and transmission networks and at power stations
- Transport and freight infrastructure. Distribution costs and access will be improved with the completion of projects such as the *Rail Clearways program*, the South West Rail Link and the acquisition of rail carriages, as well as intermodal facilities and major arterial road upgrades, and
- Sydney Water and Hunter Water projects.

Following the release of the *Metropolitan Transport Plan* in February 2010, the NSW Government has provided updated funding submissions to Infrastructure Australia and is developing the 25 year *Metropolitan Strategy*. The NSW Government will continue to work closely with Infrastructure Australia to, ensure that any new projects comply with Infrastructure Australia guidelines and criteria.

Procurement

The NSW Government is supporting local small and medium enterprises to supply Government markets. Through its *Local Jobs First Plan*, the NSW Government has formalised a system that encourages local firms to deal with Government either directly or through prime suppliers. Provision of information on procurement opportunities in advance will be further enhanced to help industry prepare for supply opportunities directly and through lead tenderers.

2. Growing the NSW Defence and related high technology industry

Investment attraction

The NSW Government is working to:

- *Establish a Macquarie Park Defence Technology Hub*—The NSW Government will provide a parcel of Government land at Macquarie Park in Sydney to develop a defence high technology related business hub. This four hectare site will build upon existing defence capabilities in the heart of Australia's technology corridor located in the North Ryde area
- *Attract more defence projects*—The NSW Government's *Major Investment Attraction Scheme (MIAS)* was established in 2009 to help attract major investments and large numbers of jobs to NSW. Up to \$25 million is available from the *MIAS* to attract and support high quality projects in the defence and related high tech industries, and
- *Establish the NSW Office of Defence*—The NSW Government will establish a one-stop shop to facilitate and drive defence investment opportunities across the state.

Defence Industry Advisory Council

The NSW Government is committed to significantly growing the State's defence industry to support and generate jobs and economic growth in NSW. The NSW Defence Industry Advisory Council has been formed to help NSW secure at least 30 per cent of Australia's in-country defence spending by 2019.

The NSW defence industry strategy focuses on targeting major projects and sustainment opportunities and creating longer-term opportunities by developing defence capability hubs in areas aligned to both the State's industrial strengths and future opportunities, including manufacturing, logistics, electronics, ICT, business services and other areas relevant to Australian defence needs.

3. Supporting environmental solutions

To support the adoption of sustainable technologies, the NSW Government has also introduced a range of initiatives including the \$700 million *Climate Change Fund*, which was established in July 2007 to help business, households, schools, communities and government save water, energy and greenhouse gas emissions. Programs funded include the *NSW Energy Efficiency Strategy* which aims to help businesses and families be more energy efficient;

and programs to encourage wider take-up of cleaner, greener technologies (such as the \$30 million *Public Facilities Programs*). The NSW Government also has other initiatives, such as the *Energy Savings Scheme*, that reward companies who independently pursue energy efficiency programs.

In addition, the NSW Government has supported bids for major Australian Government infrastructure programs including the *Solar Flagships Program* and *Smart Grid, Smart City* scheme.

4. Support for Innovation

Support for commercialisation

The NSW Government has supported NSW organisations seeking to commercialise innovative technologies through the *Innovation Pathways Program*. The Program has two main components, one focuses on developing skills and capabilities, through workshops and mentoring, to assist a company to commercialise their technology. The second component provides matching grants up to \$25,000 to assist companies raise capital and accelerate the commercial uptake of their technology. The Program complements existing Australian Government initiatives (including the R&D Tax Credit and *Commercialisation Australia*) and the *Australian Technology Showcase*.

Design in manufacture

The Government will pilot a *Design in Manufacture* program to support design and innovation for smaller/medium firms seeking to develop exceptional products. The program will provide a subsidised service for small and medium enterprises by leading design companies in industries such as medical devices, defence, transport equipment, machinery and heavy equipment manufacturing.

Supporting lean manufacturing and collaboration

The NSW Government continues to:

- Provide targeted assistance through training in lean production techniques to manufacturing businesses. These activities have been identified as priorities in the Regional Business Growth Plans, and
- Assist in the development of clusters of manufacturing firms to aid networking and collaboration, focusing on advanced manufacturing, including machinery and equipment (including heavy engineering, energy generation and distribution, transport equipment), defence and medical devices and related healthcare. These include support for, and working with, regional NSW clusters and networks such as the Shoalhaven Defence Industry Hub, and businesses in the Hunter.

TechVouchers

The *TechVouchers* program provides NSW small and medium enterprises with funding to access public research infrastructure and technical expertise, to undertake collaborative projects with public research organisations and service providers. The program also provides funding to universities and other public research organisations to streamline access by companies.

5. Industry development

Supplier development

The Government will work with the industry to assist in the development of supply chains with particular emphasis on development of NSW based suppliers, especially suppliers to original equipment manufacturers (i.e. tier 3 and tier 4 suppliers). This will be progressed through:

- Working with the Australian Government's *Supplier Advocate* program through the *Industry Capability Network* to support local suppliers in their engagement with large manufacturers. This will also ensure that the economic development benefits from the NSW Government's *Local Jobs First Plan* are realised, and
- The enhanced availability of timely, quality information on markets, technology and manufacturing processes. The development of suppliers will be supported by collaboration with peer suppliers, academic and technology institutions and governments through the Business University Government forum, with access to facilities to develop prototypes and share information and experience on production technologies.

Skills and workforce development

With increasing specialisation in the sector, the Government will assist industry to develop specialised skills in the workforce through on-the-job learning initiatives involving training providers, employers and large manufacturers.

Skills formation will be supported through the formation of industry clusters that deliver a variety of career development opportunities for workers that in turn become a supply of highly skilled personnel for the industry. This approach will meet the expectations of a highly skilled workforce that is looking for a range of experiences including mobile career transition points into and out of traditional work roles. Meeting the expectations of the workforce of the future will support industry, deliver high-paying jobs and help industry and workers to deal effectively with economic peaks and troughs.

These initiatives are complemented by the *Tertiary Education Plan* which will support our move towards being a 'clever state' by encouraging lifelong learning; addressing skills shortages in knowledge-intensive fields such as engineering; promote rapid technology commercialisation; and increase research and development.

Occupation health and safety

The NSW Government is working with the Australian Government through *Safe Work Australia* to develop a nationally harmonised legislative and regulatory framework for workplace safety and workers compensation.

Attracting foreign investment

The NSW Government is also working to attract overseas investment to grow the high value added manufacturing sector in NSW.

NSW Manufacturing Council

The NSW Manufacturing Council will continue to advise the NSW Government on issues impacting on manufacturing in NSW. With its membership comprising representatives from the business sector, the university sector and the unions, the Council will continue to provide a regular communication link between the manufacturing industry, trade unions and Government.

NSW Manufacturing Week

NSW Manufacturing Week will continue to be supported as an ongoing series of forums, seminars and site visits across NSW that provide valuable information to further strengthen the State's manufacturing sector.

Communications strategy

The NSW Government will actively communicate emerging opportunities for NSW manufacturing to enable firms to focus their business operations on opportunities to develop goods, services and markets domestically and internationally.

The communication strategy will also provide information to students and the community on the range of jobs in the contemporary NSW manufacturing sector. This will include portraying the use of leading-edge technology, integration with other supplier services especially in design, continuous improvement and problem solving initiatives.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS ADVANCED MANUFACTURING



Anne Glover

Director

Investment Attraction
State & Regional Development and Tourism Division
Industry and Investment NSW

☎ 02 9338 6774

✉ anne.glover@business.nsw.gov.au



INFORMATION & COMMUNICATION TECHNOLOGY

VISION

The NSW ICT sector will drive innovation and productivity improvements throughout the NSW economy by enabling it to take advantage of the acceleration of the transition to an information economy.

The NSW Information and Communication Technology (ICT) sector is expected to account for around 4.8% of industry value added to the NSW economy in 2010 in value added terms, and is projected to increase to 4.9% of the NSW economy by 2020.

The ICT sector is a composite sector. It comprises:

- 43.3% Information Media and Telecoms*
- 32.5% Other Communications*
- 20.9% Wholesale Trade*
- 3.3% Manufacturing*

NSW has the largest ICT industry in Australia, accounting for 43% of ICT businesses and 40% of industry value added output in Australia. Over 60% of Australia's ICT regional headquarters and operations centres are based in Sydney.

Rob Fitzpatrick

Director, Commercialisation & Markets, NICTA

ICT underpins all sectors of the economy and has the potential to liberate sustained comparative advantages for our State. Investing to build skills, accelerate innovation and deliver results will ensure the vibrancy of NSW.

In 2009–10, approximately 157,000 people were employed in the ICT industry, representing 4.6% of total employment in NSW. Key areas include computer system design and related services, wholesale trade, information media and telecommunications. By 2020, it is expected that the NSW ICT sector will employ 183,000 people.

Software and applications programmers account for almost 18% of all ICT jobs in the state. Graphic and web designers and ICT support technicians make up about 10% each of NSW ICT jobs. This is followed by ICT managers (9%), database and systems administrators and ICT security specialists (9%) and electronics trades workers (8%).

The multimedia and web developers' occupation group has recorded one of the highest increases in annual average growth in the five years to 2009 compared to the five years to 2004, highlighting the growth of the internet and web applications as a business tool. NSW has a higher concentration of this occupation group among its ICT workforce than Australia as a whole. The presence in NSW of strong and sophisticated professional, technical and scientific services, creative, and finance and insurance industry also provides a competitive advantage to local ICT business and systems analysts and ICT sales professionals.

NSW COMPETITIVE ADVANTAGE**Sydney is a major business hub**

NSW enjoys a relatively high share of Australia's ICT businesses. Sydney has been chosen as the Australian, Australasian and/or Asia Pacific Headquarters for a significant number of foreign and local multi-national companies.

The physical infrastructure for ICT is concentrated in Sydney and includes competitive telecommunications service provision. Nine of the ten landings of international high capacity optic fibre cables in Australia are in Sydney, providing access to the US, Europe and Asia, as well as an expanding market in data centres.

Education and research

The presence in Sydney of the *National Information and Communications Technology Research Centre of Excellence* as well as five national centres of excellence and two cooperative research centres in ICT-related research fields, forms an essential element of the diversity of the ICT sector. Private R&D also flourishes in NSW, with foreign multi-nationals locating their research facilities here. Spin-off companies originating from these organisations provide local employment and often gain global reputations that put NSW 'on the map' for ICT.

Our higher education system and strong vocational training institutions have supported the development of a highly skilled ICT workforce. In 2008, for example, there were over 13,000 students studying information technology courses at the 11 universities in NSW. In addition, a further 14,400 students were studying information technology at NSW TAFE Colleges and through other vocational education and training providers in 2009. Through the *Tertiary Education Plan* and funding from the *Major Industry Attraction Scheme*, mechanisms are being put in place to increase attraction and training of high level ICT professionals in NSW.

A world competitive industry

NSW dominates Australia's telecommunication, computer and information services exports. In 2008–09, NSW exports of telecommunication, computer and information services were valued at \$1.1 billion, representing over 51 per cent of the national total.

The strength and diversity of the NSW economy supports a wide range of ICT businesses. While perhaps a significant majority of ICT SMEs specialise in providing their services exclusively within their geographic region, there are many, examples of small and medium sized firms focused strongly on export for growth. These export focused firms are almost all innovators with heavy investment in intellectual property and many are achieving global significance within their niches.

NSW has a large number of firms with competitive strengths in specialist niches in the ICT industry including in the areas of security solutions, banking and finance solutions, digital media and content, health and education, wireless communications, smart internet based technologies, robotics and autonomous systems, medical devices, mining applications and engineering design.



OPPORTUNITIES FOR GROWTH

Servicing the domestic economy and exports

The main growth within the domestic ICT industry will be in providing services to support domestic businesses, government and households. NSW companies will continue to thrive and export successfully to world markets in niche areas, reflecting innovation, design and service intensity in production. As now, these will be supported by a strong research and skills base, graduating from academic institutions of global standing, and include e-security, e-health, and digital media and content.

Rollout of high speed broadband

Within NSW and the broader national economy, the rollout of the National Broadband Network (NBN) offers considerable potential to accelerate the development of innovative applications centred on greater 'connectivity'.

The rollout of the NBN will provide opportunities in the construction and operation of the infrastructure and supporting ICT applications. In addition to these direct opportunities, the NBN will also indirectly benefit the sector by driving ICT related productivity increases throughout the broader economy. Modelling work in Access Economic's 2020 Foresighting Study shows that the transport, utilities, property and health care sectors in NSW will receive a very high productivity benefit from the NBN. Other sectors such as education, accommodation, finance and retail will also receive a high benefit.

Through its capacity to develop and/or deploy technologies and to provide services, the State's ICT sector is well placed to help businesses in these other sectors as well as households make the most from the NBN. Considerable potential exists to accelerate the development of innovative applications centred on greater 'connectivity'.

The 2020 Foresighting Study also points to the export opportunities for NSW businesses from emerging Asian economies. As these economies develop, they will demand more goods and services from NSW, including ICT products. The rollout of the NBN will also provide a platform for these programs and emerging technologies, by stimulating global attention and interest, and facilitating the distribution of the ICT sector's services.

Innovative technologies —high skill/high value outputs

Products developed in NSW, such as financial analytics and tools, are used globally. There will be new opportunities for technology companies to continue the success of organisations such as IRESS and SMARTS in selling high value and innovative products to local and global institutions.

Intelligent technologies

The emergence of intelligent technologies is seen as both a way of solving some of the challenges we will face and as a key driver of economic growth for the State and industry over the next ten years.

The NSW Government will increasingly use these smart technologies in the delivery of public services such as education, health, transport and utilities. Similarly many industries, such as the logistics sector, will increasingly utilise these technologies to improve productivity. The State's ICT sector will benefit from the development and deployment of these technologies.

Digital content

The acceleration of the information economy creates increased demand for content for new digital platforms. The existing critical mass in film, digital media, music and design in NSW means that it is well positioned to capitalise on this growing demand.

ACTIONS TO SUPPORT GROWTH

1. Promoting Sydney's ICT capabilities

The NSW Government will promote Sydney's ICT capabilities internationally particularly in conjunction with Austrade and the NSW Government's overseas offices. The NSW Government's \$110 million *Major Investment Attraction Scheme* (over 4 years) and \$5 million per annum *Industries Assistance Fund* provides funding for industries wanting to locate in NSW. Under this Scheme, the NSW Government has established the *Digital Economy Strategy* which will support the development of the ICT sector through:

- Establishing a NSW Centre for Broadband Innovation via a collaboration with research and industry partners aimed at solving specific research problems in the delivery of services by broadband
- An *ICT Collaborative Solutions Program*, supporting and encouraging innovation and collaboration between SMEs and multinationals, large Australian corporates and Government in the NSW market. The focus will be solving difficult problems related to the changing business models created by ubiquitous high speed broadband and to fast track the delivery of solutions to the global market
- \$0.5 million per annum for three years funding for a 'Digital Sydney' initiative which will facilitate collaboration between the ICT and Creative Sectors and expansion of the digital media market place in NSW
- *Digital Media Initiative*, which will invest in digital content, building on existing NSW strength in film, television and digital animation. Projects could be stand-alone digital concepts, could exploit the digital potential of film and television concepts (beyond mere repurposing), or could involve 'serious games' working through cross sectoral collaborations, and
- Expanding CeBIT Australia via a partner country program to embed Sydney as the ICT capital of Australia and a key ICT centre in the Asia Pacific region (\$1 million per annum for three years).

2. Supporting centres of excellence

- Increasing investment in the National ICT Australia (NICTA) centre of excellence. The NSW Government will increase its current \$25 million support for NICTA by an additional \$9 million, and
- Support through the NSW Government's *Science Leveraging Fund* for NSW based research and collaboration infrastructure including:
 - Centre of Excellence for Quantum Computation and Communication Technology
 - Centre of Excellence for Ultrahigh Bandwidth Devices for Optical Systems
 - Centre of Excellence for Autonomous Systems
 - Centre of Excellence for All-Sky Astrophysics
 - Centre of Excellence for Climate System Science
 - Smart Services Cooperative Research Centre
 - Capital Markets Cooperative research Centre
 - The NSW peak eResearch body, Intersect
 - Australian National Fabrication Facility, which has three of the seven university-based nanotechnology research 'nodes' located in NSW and accessible by industry.

3. Increasing ICT training and skills

The NSW Government will implement a range of actions that recognise the importance of ICT skills in the State. These actions will address the challenges of skills growth for the sector through:

- The NSW Government's *Connected Classrooms* initiative which expands technology-based learning in public schools through interactive whiteboards and video-conferencing. The NSW Government has also invested \$16 million for teacher laptops to support the Australian Government's *Digital Education Revolution* program
- Increasing ICT skills training, including traineeships and apprenticeships through State Training Services, TAFE and private registered training organisations
- Building capacity in the NSW ICT industry through:
 - *Innovation Pathways Program*
 - *Tech Vouchers Program*
 - Australian Technology Showcase
 - Business advisory services
 - Business mentoring programs
 - Innovation advisory services

- The Australian Government's immigration policy, which also encourages skilled immigration to Australia through a variety of programs. For example, the skilled immigration visa 457 is regarded as a significant contributor to the Australian economy. Overall, 890 applications were supported by the NSW Government in 2009–10, across all industry sectors, and
- The NSW Government will continue to work with the Australian Government to ensure that the provision of ICT skills remains a priority in the development of the new national curriculum.

The NSW Government will, in collaboration with industry, universities and research institutions:

- Work to increase interest in ICT learning and as a result, increase the take-up of ICT courses at an undergraduate level
- Encourage careers and research in ICT by offering additional PhD scholarship support to attract the best PhDs students pa (\$300,000 pa for 3 years), and
- Attract to NSW world class ICT academics by endowing 2 chairs in ICT specialisations (\$1,000,000 pa for 3 years).

The NSW Government has developed the *Tertiary Education Plan* which will play an important role in better aligning economic and social priorities for the State and the strategic interests and capabilities of our tertiary sector.

Together with the *NSW Knowledge Statement*, which provides an overarching vision for building the knowledge, skills and innovation capabilities of the State, these initiatives will help the ICT industry adjust to the emerging challenges and opportunities over the next ten years.

4. Take advantage of investment and research opportunities

The NSW Government is attracting international organisations particularly high value research and development activities such as software services or R&D institutions or collaborations focusing on the digital economy through:

- Leveraging investment funding to major industry connected research bodies such as NICTA, the Smart Services and Capital Markets CRCs, and
- Providing \$400,000 towards establishing a NSW presence of Europe's largest applied research organisation, the Fraunhofer Institute, with the creation of a Fraunhofer Project Group at NICTA to undertake joint research work to solve hard problems in transport and logistics.

The NSW Government is currently exploring a number of initiatives designed to encourage collaboration among research partners, multinational companies and SMEs to solve ICT-specific problems in broadband service delivery and which maximises economic and social benefits to NSW and will provide:

- \$2 million per annum for three years for an ICT Collaborative Solutions Program to support collaboration between SMEs and multinationals, and
- Small to medium NSW businesses (SMEs) with up to \$15,000 funding to access world leading research available through the State's public sector research organisations. This is part of the \$1.4 million TechVouchers program.

5. Supporting smart infrastructure and technologies

The ICT industry and research organisations are well placed to benefit and develop new products and services from the NSW Government's support for the development of intelligent (or smart) technologies through such initiatives as:

- *Smart Grid, Smart City.* Energy Australia was the successful bidder for this \$100 million Australian Government program that will use advanced communication and metering technologies to design and deliver a more efficient and robust electricity network
- *Smart Village.* EnergyAustralia and Sydney Water have an established 'Smart Village' testbed in Newington to test world leading energy and water management products and services
- \$10 million through RailCorp towards establishing the \$62 million SMART Infrastructure Facility at the University of Wollongong—to perform advanced modelling, research and teaching for integrated planning and development of infrastructure assets, and
- Investment through the Roads and Traffic Authority in collaboration with NICTA, in the Smart Transport and Roads (STaR) project—developing and deploying advanced traffic information and congestion management technologies in NSW and internationally.

6. NBN Taskforce

The NSW Government has established a cross-government and industry taskforce to prepare the State for the rollout of the National Broadband Network. Work of the Taskforce includes:

- Working with NBN Co to maximise the economic and social benefits to the NSW economy
- Identifying priority areas for broadband rollout in NSW
- Working with key stakeholders to ensure that NSW has the necessary skills base for rollout, uptake and application
- Working to set up 'testbeds' to research and test the next generation of applications and content for business, home and government service delivery that will be delivered over the NBN, and
- Showcasing the successes of the NSW ICT industry and promoting the opportunities provided by the NBN.

7. Innovative broadband applications trial in Western Sydney

As an outcome of the work of the NBN Taskforce, the NSW Government is supporting an innovative broadband applications trial involving over 40 households at Middleton Grange near Liverpool in Sydney. The trial is piloting new generation applications in the areas of education, energy consumption, health and disability care and home entertainment. The project involves eight partners including the NSW Government Chief Information Office, ABC Television, NICTA, Consult Point, Smart Services CRC, OptiComm, Integral Energy, NSW Department of Education and Training and AARNet.

The new applications being trialled include: a smart metering system that will allow families and businesses to track their energy consumption in real time and adjust energy use accordingly; a simple touch screen communications system to help people unable to access more common ways to communicate; a virtual world learning environment for school students using web cameras, computers and live video interaction; and high-definition internet TV to allow people to access and watch programs from the internet on television at any time.

8. Data Centre Reform

The *Data Centre Reform* addresses NSW Government's growing demand for data storage and computing capacity. More efficient data centre facilities will mean the NSW Government will use less electricity cutting both costs and CO₂ emissions.

The *Data Centre Reform* program delivers: additional data centre capacity; reduced cost of operations and future capital investment; improved reliability, security, capacity of the State's ICT infrastructure; increased opportunities for consolidation of applications and data across government; and demonstrated environmental leadership through minimising the ongoing environmental impact of NSW Government's data centre operations.

Two new fit for purpose data centres are currently being established in Sydney and the other in the Illawarra.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS INFORMATION AND COMMUNICATION TECHNOLOGY



Warwick Glenn
Executive Director

Investment Attraction
State & Regional Development and Tourism Division
Industry & Investment NSW

☎ 02 9338 6634

✉ warwick.glenn@business.nsw.gov.au



RETAIL

VISION

A larger, more diverse, dynamic and profitable NSW retail sector that is technologically sophisticated and internationally competitive.

The retail sector accounted for \$17.2 billion, or 5.2%, of total industry value added in 2009-10, and is forecast to grow by 22% over the next decade.

Several large players currently dominate the NSW retail landscape, with tens of thousands of small and medium businesses injecting a constant stream of innovation, vitality and diversity into the sector.

Food retailing has consistently been the biggest driver of growth in the NSW retailing industry. In 2009-10, food retailing turnover was valued at \$29.4 billion, representing 40% of the total value of all retail turnover in NSW and 31% of food retailing turnover in Australia.

In 2009, approximately 359,000 people were employed in retail trade in NSW, accounting for the second largest proportion (10.5%) of employment in all industries in the state.

NSW COMPETITIVE ADVANTAGES

Globally attractive destination

Sydney is regarded as a sophisticated international destination. It has been ranked as one of the top retail cities in the world behind cities like New York and Paris and as the highest in Australia. Sydney offers a unique retail experience in terms of its high concentration of premium international fashion brands.

Sydney and NSW are increasingly attracting major international retailers of fashion, 'big box' home décor and innovative retail business models and formats.

Hub for international tourism

Sydney is Australia's most popular gateway for international tourists, who spend around a third (34 per cent) of their expenditure on retail. In 2009, NSW received 2.7 million international visitors, 52 per cent of the total international visitors to Australia.

Strong domestic demand

Domestically, NSW has Australia's largest population and an above-average weekly income which promotes strong demand in the retail sector.

Strong infrastructure

The State has well developed retail and supply chain infrastructure, including major shopping centres, distribution facilities and logistical support in metropolitan and regional areas. The NSW Government's forthcoming freight strategy will support improved supply chain performance through outlining the plans to manage expected freight growth.

Proximity to financing and related services

Sydney is a major global financial centre, commanding credibility, prestige and access to finance among corporate investors in the retail sector. The wide variety of languages spoken in Sydney also makes it attractive to locate regional retail headquarters.

OPPORTUNITIES FOR GROWTH

Demand growth

The projected population and economic growth within NSW over the next decade will provide opportunity for expansion and diversification of the retail sector.

Establishment of new retail centres

Growth in retail developments will be led by the two major domestic players, Woolworths and Wesfarmers. In Deloitte's January 2010 ranking of the top 250 global retail companies in the world, Woolworths is ranked at 26 and Wesfarmers at 28. These companies operate in a diverse range of retailing segments including supermarkets, discount department stores, liquor, hardware, fuel and convenience retailing and gaming. In particular, both companies have announced the roll out of 'big box' warehouses to target the Do-It-Yourself (DIY) market.

Other participants including Metcash (IGA and Franklins), Costco, Aldi and Ikea also have significant expansion plans across NSW.

The development of city and regional shopping destinations stimulates growth in international, interstate and local tourism resulting in increased retail sales.

Changing consumer demands

Over the next decade it is expected that the pattern of consumer demand will change, reflecting new consumer preferences and an extended range of products, such as a greater focus on environmentally friendly products, DIY and a preference for local suppliers. NSW is in a good position to leverage off this changing demand.



Innovative uses of ICT

Innovative practices and advancements in ICT will be an essential part of the retail business model over the next decade. As retailers become more focused on the individual needs of customers, businesses will need to adopt innovative technology in order to increase their customer insight and deliver a more personalised online dialogue.

The roll out of the National Broadband Network will facilitate an increase in e-commerce both locally and globally. Analysis by IBM shows that Australian consumers want more online interaction with retailers. Australia's e-commerce marketplace is predicted to increase over the next four years from \$12 billion in 2010 to \$18 billion by the end of 2014.

The demand for e-commerce is even greater in growth markets. Consumers in India, China and Brazil, are almost twice as willing to use multiple technologies for shopping. Technological advancements will allow NSW businesses to offer their products globally by providing multi channel methods to access. ICT will therefore provide NSW retailers with methods to improve their export sales.

Increased automation and efficiency

Efficiencies in the retail supply chain will be created by the continuing adoption of automated warehousing and order picking technologies. These will maximise the ability of retailers to deliver products in full and on time, to maintain optimal stock holdings and maximise distribution efficiencies.

ACTIONS TO SUPPORT GROWTH

1. Planning for growth

The NSW Government is planning for industry growth. It has recently identified a further 3500 hectares of proposed employment land for future rezoning. This includes around 2800 hectares in Sydney's North West and South West Growth Centres.

Within Sydney there is in excess of 15000 hectares of zoned employment land with approx. 4500 hectares of vacant land available for development.

The NSW Government has recently approved:

- The concept plan and project application for the 104 hectare Warner Industrial Park. Located in the Wyong Employment Zone, this proposal has a capital value of \$276 million and is expected to provide capacity for 3,200 jobs, and
- The concept plan and application to redevelop the former Hoxton Park Aerodrome site in Sydney's south west for employment purposes. With a capital value of \$182 million, this proposal is expected to support more than 2,500 jobs. The concept plan includes 50 hectares of employment lands for warehouses, distribution centres and light industry.

As these sites are developed, NSW Government will rezone more land for employment purposes.

2. Attracting and expediting retail investment

The NSW Government is working with the State's major retailers as well as incoming investors to attract and expedite retail projects in NSW. The NSW Government has supported major retailers to locate in NSW, including: Costco establishing in Auburn creating over 300 jobs, Ikea Headquarters in Tempe, supporting 300 construction jobs and 270 full time and 180 part time operational jobs, and Mirvac's construction of distribution centres for Big W and Dick Smith at Hoxton Park creating over 2,000 jobs. When completed, Big W's distribution centre will service 40 per cent of its Australian market, while Dick Smith's distribution centre will provide the capacity to service 100 per cent of its Australian market.

NSW Government has also established a \$110 million *Major Investment Attraction Scheme* to attract large projects that would not otherwise come to the State.

3. Reducing payroll tax

The NSW Government is cutting payroll tax twice in the 2010–11 financial year, contributing to savings of \$4 billion for NSW businesses and boosting the State's economy.

- From 1 July 2010, payroll tax was cut from 5.65 per cent to 5.5 per cent, and
- From 1 January 2011, the NSW payroll tax rate will be cut to 5.45 per cent.

From 1 July 2010 the payroll tax threshold was increased to \$658,000, meaning any business with a payroll below this level does not pay payroll tax.

4. Removing barriers to competition

Following a 2009 review by the Better Regulation Office and the Department of Planning on the impacts of the planning system on economic growth and competition, the NSW Government is considering ways to increase opportunities for competition by allowing more types of shops into centres that currently only permit 'neighbourhood shops'.

The draft *Competition State Environmental Planning Policy* (SEPP) was exhibited for public comment to 26 August 2010. The NSW Government's Department of Planning is currently considering submissions. The policy aims to promote economic growth and competition and is intended to ensure that the planning system cannot be used to hinder competition between individual businesses, and is expected to place downward pressure on prices.



5. Reducing costs through improved freight infrastructure

The NSW Government is developing its plan to manage the growing freight task with the creation of a 25 year freight strategy for NSW. The strategy will incorporate all elements of freight supply chains, including the distribution of freight to and from future intermodal terminals and the efficient operation of our road and rail network, airports and seaports. This will help reduce transport costs for retailers.

The industry will be encouraged to subscribe to logistics best practice through initiatives like the Australian Logistics Council's *Retail Logistics Supply Chain Code of Conduct and Guidelines*.

6. Promoting electronic and mobile commerce

The NSW Government will work with retail industry associations, the NSW Business Chamber and AusIndustry through its small business online program to develop tailored programs to help small and medium enterprises in the retail industry to embrace the opportunities provided by e-commerce.

Key features include:

- Promotion of the benefits of on-line and other multi-channel selling methods to cater for different businesses
- Providing training for small and medium enterprises to develop technical skills in ICT and e-commerce to take advantage of the NBN and other advances in digital and ICT technologies (e.g. self-service kiosks and m-commerce applications) and uptake of e-tail opportunities
 - This training will be provided through the extension of existing programs such as the Industry Training Programs of the NSW Department of Education and Training and the Industry & Investment NSW *Small Business September* program, and
- Assistance in the development of regulation that will provide retailers with confidence about on-line security and the ability to deal with online threats to business and the consumer.

7. Attracting retail tourism revenue

The NSW Government, is developing a *Retail Tourism Strategy*. This strategy will work with the retail sector to enhance the connection between tourism, and the events industry and the retail sector.

Industry bodies, city and regional communities will work with the NSW Government to develop retail hubs for tourists.

8. Supporting growth in exports

The NSW Government is supporting growth in exports through its international offices, export advisors and the *Global Growth program* as well as assisting small and medium enterprises in the retail sector, especially in food, fashion and franchising, to establish and increase exports. Export advice is among a wide range of on-line advisory services for small and medium enterprises offered via the Government's *Smallbiz* website.

9. Building and promoting environmentally sustainable retail practices

The NSW Government will work with the retail industry to:

- Support the work of retailers who are already actively pursuing environmentally sustainable retail practices
- Identify and remove barriers to sustainable retail
- Establish and review supply chains to minimise carbon footprints
- Adopt efficient freight practices such as load consolidation and backhaul opportunities
- Reduce the impact of packaging and waste on the environment
- Use renewable energy, co-generation and increase energy efficiency, including increased use of rail transport and compressed natural gas powered, fuel efficient vehicles
- Increase the take-up of the NABERS and green building retail energy and water efficiency rating tools, and suggest inclusion of the retail sector in the next version of the Australian Government's *Green Buildings Fund*
- Create awareness of best international environmental practices by attracting leading experts and organising sustainability roundtables with industry
- Help trials of night-time deliveries in consultation with selected Councils and agencies, so as to reduce peak period traffic and congestion, and
- Implement environmental initiatives with the assistance of the *Sustainability Advantage* funding program.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS RETAIL



Warwick Glenn

Executive Director

Investment Attraction
State & Regional Development and Tourism Division
Industry & Investment NSW

☎ 02 9338 6634

✉ warwick.glenn@business.nsw.gov.au



EDUCATION & RESEARCH

VISION

To establish NSW as a knowledge intensive economy, characterised by a highly educated and skilled workforce, and a vibrant and high-impact research sector: an economy that is globally recognised for its knowledge creation and innovation capabilities, and its ability to support emerging challenges facing NSW Government and industry.

The NSW education and research sectors are pivotal for unlocking the State's intellectual capital, as well as strengthening the competitiveness, productivity and innovative capacity of our State.

The NSW education and research sectors will contribute an estimated \$18.2 billion in value added to the NSW economy in 2009-2010, and account for 7.1% of total State employment. This contribution to value added is expected to grow by 17.5% (to \$21.3 billion) by 2020.

The initiatives in this sector strategy support the targets set by the Government under the *2010 NSW State Plan*, which include measures to:

- Facilitate an increase in the level of gross expenditure on research and development (GERD) in NSW by at least 12% on average per annum until 2016, and
- Support students in reaching their full potential at school, engage them in learning for longer and improve their access to jobs and training.

NSW COMPETITIVE ADVANTAGES

Skilled workforce with significant education capacity

NSW has a highly skilled and educated population. More than 2.6 million, or 57 per cent of all working-age residents in the State, have a post-school qualification—the highest proportion of any Australian state. Over 1.1 million working-age people in NSW hold a bachelor or higher degree.

In 2009–10 schooling, vocational education and training, and higher education accounted for 6.2 per cent of total State employment. The tertiary education sector comprises 27 per cent of the State's education sector.

In 2008, our higher education providers produced over 80,000 graduates—the highest proportion of any Australian State. This included nearly 3,500 IT graduates, almost 3,800 graduates in engineering and related technologies, over 4,800 graduates from the natural and physical sciences, considerable health graduates (9,200), and over 27,200 graduates in management and commerce (including 14,000 international completions). Forty two per cent of all graduates in 2008 completed postgraduate degrees.

A significant exporter of education services

NSW has a strong international education sector. Education related services are the State's second largest export earner, after coal, and the State's largest services export, providing about \$6 billion into the NSW economy in 2008–09.

As at May 2010, there were 169,875 international student enrolments in NSW. Of total Australian enrolments, NSW had the largest proportion of international students enrolled in the Australian tertiary education sector, with international students vocational and higher education enrolments in NSW accounting for 38 per cent of total Australian tertiary education enrolments.

Universities: a key sector of the NSW knowledge economy

The State is home to eleven universities, supplying over 80,000 graduates a year. These graduates work in all sectors of the economy, but with particular impact in education, health, finance, construction and engineering, and business services industries.

In 2009, the State's universities had combined operating revenues of \$6.1 billion, corresponding to just under 1.5 per cent of the GSP. They are a key exporter of education services, generating an estimated \$1.1 billion in annual export income for the wider state economy.

Universities are the State's main mechanism for discovering new knowledge and for diffusing global knowledge into local economies. NSW universities account for 30 per cent of Australian and 0.7 per cent of global scientific publications—a share they have sustained for over a decade despite dramatic growth in public research outputs from Asia.

Over the ten years from 1997 to 2006, NSW universities raised over \$3.8 billion in external research investment, including over \$1.8 billion from the Australian Government and other national competitive grant programs and over \$1.3 billion in research investment from industry, international, and community partners.

International positioning in research and development

Major research activity in NSW occurs in industry, universities, public sector research organisations and private non-profit organisations.

There are 19 Australian Research Council Centres of Excellence and Cooperative Research Centres (CRCs) located here, as well as Commonwealth Scientific and Industrial Research Organisation (CSIRO) facilities, the National Information and Communications Technology Australia (NICTA) Centre of Excellence, the Australian Nuclear Science and Technology Organisation (ANSTO), the National Measurement Institute and the Defence Science Technology Organisation (DSTO).

Evidence of the internationally regarded quality of research in NSW universities emerges from the Shanghai Jiao Tong Ranking of world universities, where NSW has five universities in the top four hundred, these being the Universities of Sydney and New South Wales, Macquarie University, the Universities of Newcastle and Wollongong.

Research intensive business sector

NSW has the largest research sector in Australia, with around \$6.2 billion expended on research and development in 2006–07. In 2007–08, businesses in NSW spent more on research and development than in any

other state, totalling over \$4.3 billion, with the largest expenditure being in manufacturing (\$1.1 billion), financial and insurance services (\$0.9 billion) and professional, scientific & technical services (\$0.7 billion). More money was also expended on research in NSW higher education organisations, than in any other State, amounting to approximately \$2.0 billion in 2008.

A health focussed medical research sector

NSW has seen significant investments in research capacity and infrastructure that leads to improved health outcomes, and is driving towards a system that supports both a bench-to-bedside, and bedside-to-bench approach to research. Investments through the Cancer Institute NSW, the Sax Institute, the Population Health Research Network, the Centre for Health Record Linkage, as well as other research networks including the Spinal Cord Injury Network, and the Cardiovascular Research Network, all target application of clinical research in the health system.

For example, recognising the challenges associated with preventing and treating cancer, the NSW Government established the Cancer Institute NSW. The Institute has a strong focus on supporting and building research capacity, and putting in place mechanisms to translate research into patient outcomes.

Strategic government investment in research and development

The NSW Government has provided scientific and medical research funding and facilitation support to develop high quality research consortia and collaborations to leverage substantial investment into NSW in areas of State priority. \$38.4 million has been invested to date by the NSW Government through the *Science Leveraging Fund*, which has helped build more than \$409 million in research capacity and partnered investment from the Australian Government and other sources.

Recent successful leveraged outcomes for NSW researchers include the 2011 Australian Research Council Centres of Excellence round, which saw eight NSW headquartered bids succeed out of a total of thirteen nationally, attracting \$150 million in funding from the Australian Government.

In addition, world-class research is undertaken by NSW Government departments and institutions. The Primary Industries division of Industry & Investment NSW, is undertaking more than 900 projects in collaboration with the Australian Government, Cooperative Research Centres and industry groups.

Significant State Government science, research and development investment occurs through the Australian Museum, Cancer Institute NSW, the Department of Environment and Climate Change and Water, the Royal Botanic Gardens, Taronga Zoo, Powerhouse Museum, the NSW Institute of Sport, and the State's public hospitals.

OPPORTUNITIES FOR GROWTH

The productivity and competitiveness of all industry sectors in the NSW economy is dependent upon their ability to access high quality education, training and research outputs.

Growing requirement for business research and training

Over the 10 years from 1997–98 to 2007–08, business investment in R&D activity nationwide has increased from 0.7 per cent to 1.2 per cent of GDP. Since 2002–03, the amount invested by businesses in R&D has exceeded that invested in public sector R&D. This reflects:

- Growing business research intensity and the requirement for research and research services
- An ongoing shift to knowledge intensive services, and
- Activity associated with the mining boom.

The increase in business R&D is also associated with an increase in business investment in university R&D. In 2006, business investment in Australian university R&D was 6.1 per cent of total university R&D expenditure, up from 2.2 per cent in 1990, and now comparable to the OECD level of 6.2 per cent.

Increasing the impact of medical research

Growing the scale of research activity, and enhancing its reach into clinical practice and health service delivery, are key to growing the impact of health and medical research. Driving an integrated model of research and practice can be achieved by promoting a partnership arrangement where researchers located in universities, medical research institutes, private industry, hospitals and community organisations work with clinicians, affecting a bench-to-bedside and bedside-to-bench approach.

Community benefits arise from improved patient outcomes from new treatments and preventative regimes. Economic benefits arise from efficiencies, the development of pharmaceutical and medical device products for export, and the opportunity of attracting more funding and resources to the system through philanthropy and research grants.



Partnered investment in research and development and skills development

The development of an accessible skills and research base will require partnership between the education and research sector, Government, and business. Such a partnership will also support innovation in other industries where research and skills have high impacts, such as advanced manufacturing, food and agri-business, finance and professional services, health and allied services, ICT, the creative industries, mining and energy, robotics, defence, medical devices, chronic and communicable diseases.

International funding programs also present opportunities to attract funding to NSW and to build capacity and reputation and also enhance our ability to be fast adapters and adopters of knowledge that is created elsewhere.

The NSW Government has identified priority areas under the Research Partnerships Program and through programs such as the Science Leveraging Fund, where it will build research strengths. These include healthcare, school education, finance, climate change adaptation, clean coal, smart grids and renewable energy.

The NSW Government is developing opportunities to attract private investment in knowledge intensive clusters. These include medical research precincts, of which there are eight identified in NSW, with expertise across a range of clinical disciplines including cancer, cardiovascular disease, neuroscience and mental health, diabetes, paediatrics, metabolic diseases, and population health.

The NSW Government is also driving other clusters, including the high technology Defence Hub at Macquarie Park, the clean energy cluster in the Hunter and the Barangaroo multi-use finance and professional services precinct.

Increasing participation in education and the workforce

While female participation rates have increased over the past decade, the current female participation rate (of 56.1 per cent) is still well below the male participation rate of 70.4 per cent. In addition, women are still under-represented in a broad range of careers, with low levels of domestic female enrolment in higher education in Engineering (14.9 per cent), Information Technology (18.2 per cent) and Architecture and Building (36.6 per cent).

As a key employer in the state, the NSW Government recognises its need take a lead role in increasing female participation in the workforce, and in encouraging the participation of women in a broader range of higher education courses.

The NSW Government, through the *State Plan*, is seeking to address this issue by:

- Helping more women participate in public sector employment through the *Making the Public Sector Work Better for Women 2008–2012 Strategy*
- Improving access to flexible working arrangements
- Encouraging the private sector to improve access to part time work
- Supporting women in business through the *Women in Business Mentor Program* and *Regional Women in Business* programs, and
- Working to increase women's representation in leadership.

Improvements in information technology and broadband access

Education providers and students will benefit from the introduction of smart infrastructure brought about through roll-out of a faster broadband network that reaches more NSW businesses, homes and organisations. They will be required to provide, and have the skills necessary to implement, the opportunities and applications arising in an increasingly broadband and technology-enabled economy. The opportunities for global collaboration between researchers and businesses will increase.

The introduction of smart and connected infrastructure, as well as responding to increasing global competition, will require the State's workforce to acquire skills that are strongly integrated across diverse disciplines and which can be updated through an education system that supports ongoing lifelong learning.

Philanthropy

The NSW research sector has been the recipient of a growing level of bequests from foundations, families and individuals in recent years. Funding from these sources has contributed strongly to building the state's research capacity at centres including the Kinghorn Cancer Centre, Lowy Cancer Centre, Victor Chang Cardiac Research Institute, the Poche Centre, and the Sydney Institute of Marine Science. Scope for further growth is possible through stronger engagement with philanthropic donors, and a better understanding of their goals and drivers.

Improvements in education and skills through national policy settings for education and training

Following the *Bradley Review of Higher Education*, national and state targets have been set to increase senior school, vocational education and training and higher education participation and attainment.

To be implemented through a range of national partnerships under the Council of Australian Governments (COAG), and the Australian Government's higher education reform agenda, the targets stipulate that:

By 2015:

- 90 per cent of young people aged 20–24 will be achieving Year 12 (or a Certificate II qualification or higher).

By 2020:

- The gap for Indigenous students achieving Year 12 (or equivalent), will be at least halved
- The population of 20 to 64 year olds without Certificate III (or higher) qualifications will be halved

- The number of higher qualification completions (Diploma and Advanced Diploma) will be doubled, and
- 20 per cent of higher education enrolments at undergraduate level will be of people from low socioeconomic backgrounds.

By 2025:

- 40 per cent of all 25 to 34 years olds will hold a qualification at bachelor level or above.

In addition to these measures, the NSW Government has predicted that the State will require approximately 44.4 per cent of its 25–34 year old population to have a bachelor degree (or higher) by 2025, in order to meet industry demand for higher education graduates. Accordingly, the NSW Government has increased its target for bachelor level completions for all 25 to 34 year olds to at least 44 per cent by 2025.

Increasing the number of international students

Emerging economies are an expanding source of demand for the services of the education sector. Over the past five years, revenue from overseas students has increased by 56 per cent.

According to Access Economics, international student demand for education services is expected to continue to provide a significant source of income for the NSW economy in the coming decade.

Opportunities exist to grow the number of international students through continued international marketing of NSW education sector, establishment of accommodation for international students, and tourism initiatives targeted to enhance the education experience of both long and short stay international students and their families.

ACTIONS TO SUPPORT GROWTH

The NSW Government is committed to building a clever state, by supporting and growing our educational and research capacities to create a strong knowledge-intensive economy and a brighter future for the people of NSW. To this end, the NSW Government has developed and recently released the *Knowledge Statement* and the *NSW Tertiary Education Plan*.

The *Knowledge Statement* sets out an overarching vision to create a state where knowledge, creativity and innovation drive economic growth. It promotes building NSW's research excellence and concentrations, increasing collaborations between NSW researchers and industry, and investing in people and partnerships which increase skills, and drive creativity and innovation.

The *NSW Tertiary Education Plan* outlines strategies to raise participation and attainment in tertiary education and ensure that NSW higher education and vocational education and training institutions continue to deliver a highly skilled workforce that meets industry skills needs to 2020, and enhances NSW's long-term competitive position.

1. Ongoing engagement with the university and business sector

The NSW Government has instigated a range of initiatives to better engage with the business community and the higher education and research sector. These include:

- A series of one-on-one meetings with each of the state's universities to identify:
 - elements of university strategic plans and partnership opportunities that can be promoted by the NSW Government
 - specific issues to be communicated to the Australian Government in light of current higher education reforms
 - priorities for alignment of university contribution to the NSW economy and mechanisms that can be taken in partnership to address these at both national and state level, and
- The Business University Government Forum: an annual meeting that brings together leading figures from the business community, government, and the university sector to address issues of mutual interest. At the 2010 Forum, the topic of discussion was 'Workforce of the Future', some of the outcomes of which have fed into this Business Sector Growth Plan.

2. Developing education and training programs to ensure a highly educated and skilled workforce which meets industry skills needs

The NSW Government, through the Department of Education and Training, and the Board of Vocational Education and Training (BVET), continues to take a key role in working with NSW industry and businesses to identify industry skills needs, through an industry skills plan, and to develop strategically targeted educational programs.

The BVET is currently in the process of developing the *NSW Strategic Skills Plan for 2011–13* ('*Skills Plan*').

The *Skills Plan* will identify the qualifications and skill development actions that will make NSW more competitive, including a stringent and creative examination of obstacles and opportunities impacting on NSW's capacity to move to higher level skills and an innovative knowledge economy.

As such, the *Skills Plan* will look at short to medium term skills priorities for industry, regional development and to meet community needs. It will support strategies to improve partnerships and collaboration between vocational education and higher education providers.

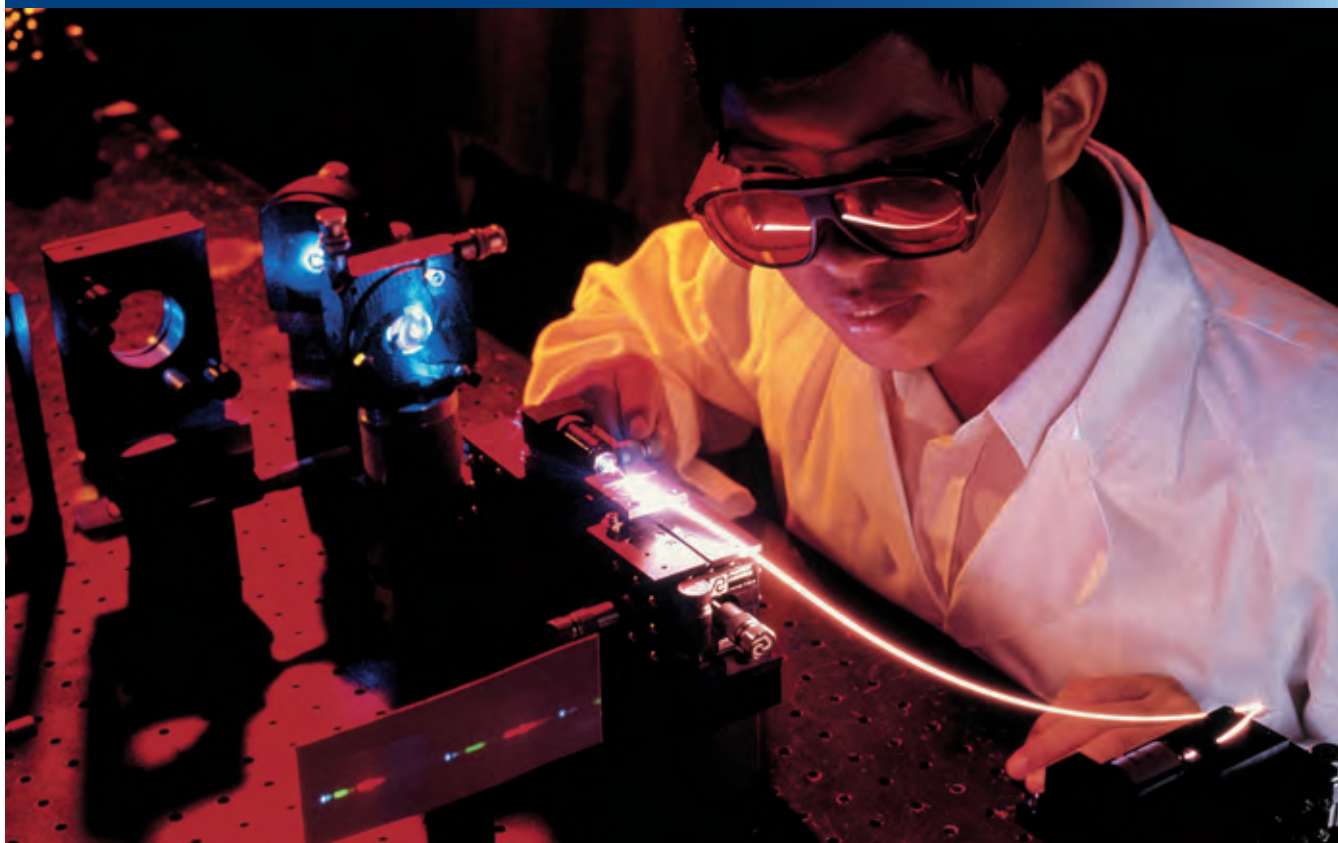
The *Skills Plan* will focus primarily on the workforce needs of NSW industry. However, as highlighted under the *NSW Tertiary Education Plan*, there is also a growing need to address skills shortages that the education sector faces, in its own right.

As stated in the *NSW Tertiary Education Plan*, the NSW Government will continue to examine measures to:

- Increase the supply of science and mathematics teachers, and
- Address the shortage in technically qualified teachers, particularly in engineering, information and communications technologies (ICT), green industries and healthcare.

The NSW Government will also examine a range of measures to:

- Address the ageing of the higher education workforce, including strategies to retain and attract researchers and academics into the workforce, by developing enhanced pathways which facilitate greater mobility between professional staff in the higher education, government and industry sectors, and



- Improve professional development for academics and training professionals in the vocational education and higher education sector. Specifically, given the rapid increase in scientific and technological developments, and the requirement to incorporate environmentally sustainable technologies and techniques into the teaching of a number of trade professions, the NSW Government will continue to develop and implement measures to ensure that training qualifications of its vocational and education providers remain highly relevant and internationally competitive.

3. Improved articulation and enhanced pathways between NSW schools, vocational education and higher education providers

The NSW Government recognises that improving pathways between school, vocational and higher education is a key to addressing and meeting the State's skills needs, particularly in areas of skills shortage.

The *NSW Tertiary Education Plan* outlines a range of initiatives to improve articulation between vocational education and higher education courses. The BVET will be developing such strategies as part of the development of the *NSW Strategic Skills Plan for 2011–13*, to be finalised at the end of 2010.

In addition, the NSW Government will work with businesses, and vocational and higher education providers to explore additional mechanisms to improve education and training outcomes, which produces work-ready professionals.

In particular, the NSW Government will continue to promote the development of courses that prepare graduates more successfully for employment, while meeting the highest academic and professional standards.

A number of NSW universities currently include work-integrated learning components within their degree programs, in order to better integrate learning and its application in the workplace.

These initiatives are playing a key role in producing work-ready professionals by equipping graduates with academic knowledge, as well as relevant research-based and work-integrated learning—in the form of clinical rotations, cooperative education, industry attachments, professional work placements, service learning, internships, research, teaching practicum placements, and work abroad.

The NSW Government will also work with industry and universities to develop new pathways and opportunities for industry employees to spend time in the university setting, including through enrolment in research degrees, and also for university academics to spend time in industry. This is expected to improve both education and research outcomes—by broadening the range of skills of both industry practitioners, as well as academics involved in teaching and research.

4. Address shortages in secondary school advanced mathematics and science teachers, which impact on graduate shortages in knowledge-intensive fields

In line with its commitments under the *Smart Schools National Partnership for Improving Teacher Quality*, the NSW Government is committed to attracting more graduates into the teaching profession, particularly in areas of potential workforce shortages such as mathematics and science.

The DET is currently offering maths and science scholarships on a competitive basis for final year maths and science university students to encourage them to complete diplomas of education. Twenty scholarships were offered and accepted in 2010.

DET has also awarded 12 *Incentive Scholarships* to undergraduates in their final year of a teaching degree in mathematics and science, who are willing to teach in targeted geographic or demographic areas of workforce need in the state.

In addition to these measures, the NSW Government will continue to work with the higher education providers, industry, the NSW school education system and the Australian Government on measures to increase the numbers of graduates in science, mathematics, and engineering.

This will be done through the Australian Government/university funding agreements and through initiatives that:

- Provide up-skilling for primary school and retired teachers with relevant skills
- Ensure universities are well placed to offer mathematics/science related training
- Improve teacher quality through improved engagement with higher education providers, and
- Increase primary and secondary school student interest in mathematics and science.

5. Attract an increasing proportion of international students to NSW

NSW has the largest proportion of international students in Australia. More than 76,500 overseas students were enrolled in higher education in 2008, comprising 23 per cent of all higher education students in the state. This represents an increase of 6.3 per cent from 2007.

The NSW Government will continue to:

- Work with the Australian Government to ensure visa conditions do not adversely impact on international student demand
- Develop measures to target and strengthen the international student base from Asian markets through marketing and other measures, as well as broaden and diversify the international student base beyond the Asian markets to improve the long-term sustainability of the industry
- Work with the Premier's Council on International Education and the Australian Government to improve the quality of the experience for international students on- and off-campus and in preparing them for subsequent employment in Australia if that is what they seek
- Attract a higher proportion of research higher degree students to help build Australia's future research and academic workforce
- Work to build international research collaborations and research networks (including the recruitment of high quality research students as part of this initiative), and
- Assist universities to market NSW research degree opportunities overseas.

Mary O'Kane

NSW Chief Scientist & Scientific Engineer & Member of the NSW Innovation Council

Productivity growth is impossible without creativity, education AND a strong sense of enquiry. That is why NSW aims to have education and research systems that rate among the best in the world.

6. Build the research skills base: invest in and use infrastructure

The NSW Government provides significant support for NSW research and education infrastructure bids, submitted under a range of Australian Government programs, including the *Education Investment Fund*.

In addition to the *Science Leveraging Fund*, *Medical Research Support Program*, and the *Capacity Building and Infrastructure Grant Program*, the NSW Government has established the *Knowledge Fund* to operate as a seed fund in partnership with universities. This fund will allow universities to more effectively realise the asset value of the state owned land they occupy and to leverage Commonwealth Government and other investment for large scale capital developments. Key strategies are to:

- Build capacity in State priority areas notably clean coal, clean energy, environment and water, finance, manufacturing including electronic devices and defence, as well as health and medical research
- Work in partnership across NSW Government agencies to address research infrastructure needs and attract investment from philanthropy, Commonwealth Government and international funding opportunities
- Assist researchers in the public and private sector to access unique research facilities available in other States or overseas
- Use the capabilities of NSW universities, NICTA and the CSIRO to build and partner in application of technology in strategic projects
- Partner with industry and provide better access to research infrastructure and expertise, through the *TechVouchers* initiative
- Support the development of research consortia in areas of NSW Government priority, through the *Research Partnerships Program*
- Work with the research sector to identify student attitudes to research careers, including through sociological investigations
- Noting the recent work of the Federation of Australian Scientific and Technological Societies, the NSW Government will seek to examine how the analysis applies to NSW and look at specific set of actions to support women entering and progressing through science and research career paths
- Focussing on environmental benefits from research and its translation, and
- Improve the efficiency of water use, assists the adaptation of the agricultural sector to climate change, and increasing productivity.

7. Enhancing connectivity and collaboration

In order to take advantage of the opportunities arising from increasing broadband capacity, e-research and informatics platforms the Government will support initiatives that increase the connectivity of researchers, industry and international partners and which:

- Build on the State's Open Government Information access initiatives to make public information and data accessible to industry and the community
- Implement new web-based services that help organisations to maximise the research and education opportunities enabled through the role out of faster broadband infrastructure
- Develop networks that bring together researchers with business and Government end-users,
- Drive global connections and collaborations through dedicated trade missions
- Build health and medical research sector links with clinical practitioners and commercialisation organisations and investor
- Leverage the Commonwealth Government's *International Science Linkages* program to build research cooperation targeted at NSW priority area, and
- Support companies and researchers to attract venture capital for commercialisation.

8. Meeting end-user needs in health and medical research

The NSW Government, through the Office for Science and Medical Research in Industry and Investment NSW will continue to drive the translation of health and medical research discoveries and in line with national health reform, will:

- Take a leadership role in discussions with the Australian Government on full funding for research, including a cross-portfolio and cross-jurisdictional approach
- Help meet the funding gap for the indirect costs of research for high quality medical research organisations working in priority health areas through the *Medical Research Support* program
- Facilitate cooperation between health and medical research occurring in universities, independent Medical Research Institutes, hospitals, non-government organisations, with a view to significantly increasing the level incidence of research being translated into practice
- Support efforts to grow the level of clinical trials activity in the state
- Build research capacity in personalised medicine, building up international linkages to take advantage of global developments

- Ensure capital and other investments support translation and fast adoption of research, and
- Continue to support development of commercial strength in the life science and medical devices sector.

9. Philanthropic activity

NSW will harness strategic advice and leadership through the NSW Innovation Council and the NSW Chief Scientist and Scientific Engineer in order to:

- Establish designated role in government to manage pathways and cross-sector opportunities and support efforts of agencies, including Government, higher education and NGOs
- Promote capabilities of NSW research to attract philanthropic investment, and
- Raise the level of recognition/reward for high level philanthropic donations (eg establishment of philanthropy awards and dinners).

10. Developing global excellence and research concentration

In order to build globally connected critical mass, capacity and application the NSW Government will:

- Connect our Centres of Excellence with other funding and schemes and focus on securing commercial and other practical applications from research
- Attract Cooperative Research Centres to NSW and link to Centres of Excellence in significant areas such as materials science, ageing and energy, and
- Use the concentrations that are built to leverage international funding programs (eg. US National Science Foundation, Department of Energy, National Institutes for Health, European Union Framework, as well as programs in China, Japan and India); attract Australian Government research funds from a broader range of portfolios and agencies, beyond Education and Innovation, to include Energy, Climate Change and Communications; and attract corporate research funds, in particular where it supports research with outcomes of industry-wide benefit, or with considerable community spill-overs.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS EDUCATION & RESEARCH



Leslie Loble

Deputy Director General

Strategic Planning and Regulation
Department of Education & Training

☎ 02 9561 8148

✉ leslie.loble@det.nsw.edu.au



AGRI-FOOD

VISION

To build NSW's position as a leading high-value, innovation and export-driven agri-food State, and as a leader in addressing national and global issues of sustainability, food security and human health and nutrition.

The agri-food sector consists of domestic and exporting primary producers, manufacturers and packagers of food and beverage products, from raw materials to finished products for the foodservice and retail segments. In 2009-10 the sector is estimated to contribute \$14.4 billion, or 4.4% of total value added for NSW. The main components are food processing, accounting for \$6.5 billion, and crops and livestock, accounting for \$6.7 billion.

In 2008-09 NSW food exports totalled around \$4.2 billion, of which processed exports represented around \$3.0 billion and unprocessed exports \$1.2 billion. Major current markets are Japan, the USA, New Zealand, South Korea and the UK. Over the last decade food exports have increased by an average of 5% per annum.

Catherine Livingstone AO

Chairman, Telstra Corporation & Member of the NSW Innovation Council

Vibrant regional businesses are critical for the survival of regional communities. The long-term competitiveness of these businesses will rely on their ability to access and use modern infrastructure, technologies and skills.

There are around 38,000 farm-based businesses and 1,400 fishing businesses in NSW, the vast majority being small, family-owned enterprises, though there is growing interest in farming from the corporate sector. NSW has around 2,000 food-processing companies, ranging dramatically in size, including a large number of multi-national food operators, who have based their Australian operations here.

Growth is driven by food retailing, with a turnover of \$29 billion, representing 40% of the total value of all retail turnover in NSW. The foodservice segment (covering restaurants, cafes, hotels, bars and catering) is also growing rapidly, and now accounts for over 30% of domestic food sales.

Approximately 146,300 people are directly employed in the NSW agri-food industry, with 81,600 of these involved in agricultural food production (down on traditional numbers due to the extended drought), 3,200 in fishing and aquaculture, and 61,500 in food processing. Hundreds of thousands of additional jobs are generated in the agri-food value chain, including farm input suppliers, transport and logistics providers, export trade, food wholesaling (21,600 jobs), food retailing (114,400 jobs), and cafes, restaurants and other food and beverage services (211,100 jobs).

The agri-food industry is crucial to the economic well being of rural and regional NSW. Almost all agricultural food production, fishing and aquaculture operations take place in rural/regional NSW, while around 40% of food processing businesses are located in rural/regional areas.

NSW COMPETITIVE ADVANTAGES

Diversity of environment

NSW has a great diversity of natural environments and agricultural production systems, which enables its farmers to grow a wide range of high quality, low cost produce. This provides NSW-based food processors with significant competitive advantages across the full spectrum of product categories, including; meat, dairy, horticulture, seafood, grains/cereals/bakery, edible oils, beverages and specialty foods.

Globally counter-seasonal

NSW horticultural producers are ideally positioned to supply counter-seasonal markets in Asia, Europe and North America during the Northern Hemisphere winter months.

'Clean and green' reputation

NSW has a 'clean and green' image that is internationally recognised. Stringent quarantine policies and sound biosecurity management practices allow NSW produce to be grown free of many pests and diseases found in other parts of the world. Our relatively low population density and strict environmental controls protect the farming sector from many of the contaminants commonly found in heavily industrialised, densely populated countries.

World-leading food safety standards

NSW has a fully integrated food safety regulatory system. Administered by the NSW Food Authority, this system underpins the safe supply of food to both domestic and export markets, by providing high level, science based food safety information and access to leading edge expertise.

Access to growing markets

NSW is close to some of the largest and fastest growing food markets in the world, including Japan, China, India, South Korea and other markets in the Asia Pacific region. NSW agri-food companies have also established a growing presence in more distant markets such as the Middle East, the United Kingdom and North America. Many of our key agri-food export markets have bilateral free trade agreements either in place (for example, New Zealand, the USA, ASEAN) or under active negotiation (China, South Korea, and Japan).

Multi-cultural linkages

NSW's diverse multicultural society is a significant source of competitive advantage for its agri-food industry. This diversity has exposed NSW food businesses to different cuisines, flavours, ingredients, techniques and practices. It has provided the catalyst for the development of industries such as wine, olive oil and Asian vegetables, and continues to inspire new product development. It also provides business links into many of our most prospective agri-food export markets.

World-class training and research facilities

In 2007–08, NSW food processing companies spent \$153 million on R&D—the highest amount for any state. This was \$7.4 million (or 5 per cent) higher than for 2006–07, and \$33.4 million (or 28 per cent) higher than in 2005–06. NSW companies accounted for 39 per cent of Australian R&D in food processing in 2007–08.

NSW hosts some of Australia's best agri-food R&D and training institutions, including Industry & Investment NSW's integrated network of 28 research stations, centres of excellence and institutes; universities; CSIRO's Food Science Australia; BRI (formerly the Bread Research Institute); Tocal Agricultural College; and TAFE NSW, which provides a wide range of nationally-accredited training courses through its ten institutes and 130 metropolitan and regional campuses. Recent innovations include disease and insect resistant plant species, novel seed production technologies and salt and drought resistant plants. Other ongoing areas of research include improving quality and yield in meat, wine grapes and pulse crops, such as chickpeas, which deliver both human health and environmental gains.

OPPORTUNITIES FOR GROWTH

World population and income growth

Global population growth, increasing affluence, urbanisation and 'Westernisation' of consumer tastes in developing countries will significantly increase the demand for animal based protein (i.e. meat, dairy, seafood) and quality processed foods, opening up new export opportunities for NSW agri-food companies.

Increasing consolidation

Technological improvements in production, processing, packaging and transport/logistics are enabling larger local and multi national agri-food companies to reduce their costs by consolidating and centralising their production facilities. With its large, affluent population, excellent transport and distribution infrastructure and strategic location on the eastern seaboard, NSW is the best placed Australian State to attract these facilities.

There are also opportunities for NSW agri-food companies to engage in and become part of multinational corporations' global supply chains.

Consumer trends

With their international reputation for quality and innovation, backed by robust traceability/certification systems, NSW agri-food companies are well placed to leverage consumer trends such as:

- *Desire for reliably safe food:* consumer concerns about food safety have been heightened in recent times by globally reported BSE scares in the UK and Japan, and by the melamine dairy substitution scandal in China. The advent of internet based social networking has meant that food safety scares and contamination scandals are swiftly reported around the world
- *Ethical consumerism:* consumers are increasingly interested in how food is produced and processed, and the associated impacts on the environment, animal welfare and human rights. Examples include the growth in consumers sourcing food close to home; free range and organic products and Fair Trade products
- *Indulgence:* consumers, particularly those with higher disposable incomes, are showing a propensity to purchase higher quality, higher priced, gourmet items (e.g. premium ice cream, boutique beer, regionally branded wine), and
- *Health, nutrition and functionality:* consumers increasingly expect the foods they consume to provide health benefits beyond basic nutrition, whether by removing 'bad' elements (e.g. saturated fats, sugar, salt) or adding 'desirable' elements (e.g. calcium, folate, omega 3).



The future for smaller companies in particular, may lie in developing higher value products targeted at the above customer requirements, where scale economies are less critical and price is not the key factor in determining demand.

The NSW Government will support further innovation by striving to achieve national food labelling laws and policy that helps meet community and industry needs in respect of future food trends.

Links between health and nutrition

Besides the consumer interest in functional foods, public health authorities are also focussing on the strong links between health and nutrition, with a view to improving health outcomes and reducing costs (for example, through the mandatory fortification of bread with folate). There is enormous potential for agri-food products that help address health issues such as obesity (particularly childhood obesity), diabetes, celiac disease, heart disease, allergies, some forms of cancer, and alcohol abuse.

Culturally certified foods

The worldwide demand for halal and kosher foods is growing, and offers significant opportunities for certified suppliers.

Role of novel technologies

New areas of opportunity are emerging through the development of novel agri-food production, processing, packaging and handling technologies, including:

- *Genetic modification (GM)*, which can provide benefits for both the producer (for example, through improved drought or salt tolerance, reduced herbicide and pesticide costs, or increased productivity) and the end consumer (for example, through increased nutritive value, enhanced flavour, or improved quality). At the same time, there is an apparent consumer preference for non-GM products, which proponents of this technology will need to address if the full commercial benefits are to be realised,
- *Nano-technology*, which offers the potential to deliver significant improvements in quality and functionality of various foods, and also in reducing production and processing costs,
- *New processing technologies* (for example, irradiation, high pressure processing, low energy electron beam processing, and pulsed electric field processing), which improve food safety while also maintaining product quality compared to conventional techniques such as pasteurisation and depuration, and
- *Temperature logging and smart control technologies*, which are improving the performance of the cool chain to ensure that products are delivered in premium condition.

With its strengths across the full range of product categories, its strategic geographic location, strong R&D capabilities, highly-trained workforce, and robust regulatory framework, NSW has the potential to capitalise further on the above growth opportunities.

ACTIONS TO SUPPORT GROWTH

1. Position NSW as a global leader in agri-food sustainability, food security and human health and nutrition

Food Security and Sustainability Partnership Program—building research and innovation capabilities and collaboration

The NSW Government's *Food Security and Sustainability Partnership Program* will build on the State's core agricultural research and innovation capabilities and partnerships, to position this State as a leader in addressing the major challenge of our time: how to feed a growing world population with fewer resources. The program will be implemented through Government, university and industry supported alliances, including the EH Graham Centre at Wagga Wagga, and the Primary Industries Innovation Centre on the Northern Tablelands.

Nutrition and Health Alliance—providing agri-food solutions to human health issues

The NSW Government's *Nutrition and Health Alliance* will link research providers and users to develop agricultural system and food based solutions to major public health issues such as obesity, diabetes, mental illness and allergies. It will draw together the significant research capabilities within Government, key universities and research institutions (including the University of Wollongong's Smart Food Centre, the University of Sydney's Centre for Obesity, Diabetes and Cardiovascular Disease, and the University of Western Sydney's Centre for Advanced Food Research) to eliminate duplication and promote collaboration.

2. Develop domestic and global market opportunities

'NSW On a Plate'—promoting regional agri-food companies and agri-tourism

The NSW Government will drive a promotional and capability building initiative, *NSW On a Plate*. This is designed to stimulate sales by smaller, regional food and wine companies, and encourage culinary tourism. It encompasses a range of showcasing, business matching, capacity building and selling initiatives, including:

- Regional food and wine tours
- Domestic trade exhibitions including *Fine Food Australia* and the *Organic Expo*
- Consumer events including the *Sydney International Food Festival*, *NSW Wine Week*, regional flagship events, farmers markets and food and wine trails
- Publications such as *NSW Wines Uncovered*
- Media/publicity/PR activities, and
- Management development seminars and workshops.

NSW Food Chain to Asia—promoting agri-food exports to growing Asian markets

The NSW Government will progress the *NSW Food Chain to Asia* export strategy. This is designed to substantially increase exports of fresh and processed food, and food-related technologies, systems and expertise, to the burgeoning markets of North, South-East and South Asia. The Government is assisting small and medium enterprises in the agri-food sector to establish and increase exports in key markets through its international offices, Export Advisors and the Global Growth program. Key promotional activities include:

- Participation in major, cross-regional trade exhibitions such as the *Shanghai World Expo*, *HOFEX* and *Food and Hotel Asia*
- Tailored food and wine trade missions/market visits
- Inbound buyer visits
- In-store promotions with selected international retail and foodservice partners, and
- An updated, expanded *NSW Food Exporters Directory*, to be available from September 2010.

3. Attract new investment

NSW—Australia's agri-food leader: promoting NSW as an agri-food business location

The NSW Government will progress a *NSW—Australia's agri-food leader* initiative. This investment attraction and positioning strategy will present NSW as the logical location for national and multinational corporations looking to establish, expand or relocate their operations to Australia. It incorporates international investment attraction activities; matching of investment opportunities with national and international investors; and identification of relocation opportunities for metropolitan companies and tailored assistance packages for specific major clients.



Blueprint for agri-food precincts initiative—growing agri-food production

The NSW Government will explore the scope for an agri-food precinct initiative to support food production in NSW food bowls in peri-urban and regional areas. This may include pre-emptive identification of suitable land and streamlined regulatory approaches that address urban encroachment and land use conflict pressures. Initial regions being targeted are the Sydney Basin/Hawkesbury and the Northern Rivers.

4. Increase innovation, workforce and skills development

Excellence in agricultural and food processing technologies—accessing world's best practice technologies

The NSW Government will help the State's agri-food companies remain abreast of world leading technologies, equipment and systems, as a means of improving productivity, reducing costs, increasing eco-efficiency and strengthening long-term competitiveness. It will work with key industry and research partners to provide companies with access to leading technologies, through information days and site visits; technical exhibitions, showcase and conferences, study tours and missions and business matching through the Australian Technology Showcase.

The Government will also explore the feasibility of a *Centre of Excellence in Food Processing Technologies*, with suitable government and industry partners.

Building the Regional Agri-food Skills Pipeline—developing the skills and workforce to underpin agri-food industry development in regional NSW

The NSW Government will roll out a *Building the Regional Agri-food Skills Pipeline* initiative to help regions identify and address their agri-food skills and workforce requirements. This will be undertaken in partnership with bodies such as AgriFood Skills Australia and Regional Development Australia, and will be modelled on a pilot project being progressed in northwest NSW. It will lead to the development and implementation of a comprehensive agri-food skills plan for key regions, that:

- Provides young people and groups with only a marginal attachment to the labour force with information about job and career opportunities in the agri-food industry
- Expands skills recognition programs to allow existing agri-food workers to gain formal accreditation for their skills
- Establishes an 'agri-food skills demand calendar' as a basis for coordinating labour supply and demand for seasonal jobs
- Delivers a training and professional development program to teach business owners how to become an employer of choice
- Promotes regional living and employment opportunities at events such as the *NSW Country and Regional Living Expo*, and
- Builds on training and capacity development programs already in place for agricultural businesses.



The NSW Knowledge Statement

The agri-food sector will benefit from the implementation of the *NSW Knowledge Statement* through its focus on addressing inequitable educational attainment outcomes in our regions; increasing research and development; and support of research excellence and training in areas where we face significant challenges such as climate change, energy and sustainability.

Filling the gap—strengthening regional agri-food supply chains

The NSW Government will consider proposals by existing transport companies to strengthen the viability of regional supply chains. Funding is available for specific solutions under Industry & Investment NSW's *Business Cluster Program*, to assist the development of logistic solutions and build regional efficient supply chain capacity by sharing freight/logistics facilities and services and by using centralised metropolitan and urban distribution centres.

Improving supply chain infrastructure—managing the agri-food freight task

The NSW Government is developing a plan to manage the State's growing freight task, with the creation of a 25-year freight strategy. This will help reduce transport costs for agri-food producers, processors and retailers. The strategy will incorporate all elements of freight supply chains, including the distribution of freight to and from future intermodal terminals and the efficient operation of our road and rail networks, airports and seaports.

5. Provide leadership and strategic direction

NSW Agri-food Leaders Forum—providing strategic direction in NSW

A *NSW Agri-food Leaders Forum*, reporting to the Premier and senior Ministers, will provide direction to the overall 2020 NSW agri-food sector growth plan. It will act as an interface and reporting mechanism for a range of other government/industry bodies that focus on specific sub-sectors, and ensure that all stakeholders have an opportunity to contribute to the development and implementation of the growth plan.

National food plan—providing strategic direction at a national level

The NSW Government supports the concept of an overarching national food plan, and will work with industry and government stakeholders to develop and implement such a plan.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS AGRI-FOOD



George Davey
Deputy Director General

Primary Industries Division,
Industry and Investment NSW

☎ 02 8289 3944

✉ george.davey@industry.nsw.gov.au



CREATIVE INDUSTRIES

VISION

NSW is well established as a global centre for creative businesses and that the industry plays an integral part in enhancing the competitiveness of the NSW economy.

Creative industries are a composite industry that incorporates a wide range of sub-sectors such as design, music, advertising, architecture, publishing, visual and performing arts, IT software and digital and screen content (film and television). The creative industries produce both social and economic benefits and are expected to represent around 4% of the NSW economy in 2020.

The creative industries have a high percentage of sole traders and micro enterprises. However, Sydney is also home to many of the larger and better resourced media and publishing companies, providing a unique advantage in Australia.

NSW has the largest creative industries economy in Australia, accounting for over 37% of all creative industry employment in Australia and NSW dominates most sub-sectors.

Creative activity drives the development of new products and services across a range of industries. Creative businesses lead in the adoption and retention of new ideas and technologies, which then percolate to other sectors. Strong positioning of the creative industries will play a significant role in underpinning the NSW knowledge economy, and its global reputation and performance.



NSW COMPETITIVE ADVANTAGES

Pool of creative talent and skills

NSW has the greatest market share of creative industries in Australia, with a large pool of skilled workers across all segments of the industry clustered in and around Sydney. Particular areas of expertise include strong advertising, animation and screen production, with increasing global links to world class games developers.

National media hub

Sydney is the leading centre for new media and creative digital content developments. It is the base for companies such as Fairfax, PBL, the ABC, SBS and the commercial television and radio networks. Sydney is also home to several of the world's top post-production, digital and visual effects companies and internationally recognised production and post-production companies including Omnilab, KMM, Animal Logic and FremantleMedia (Australia).

Creative capital

NSW and Sydney are home to a number of nationally and internationally renowned performance venues (including the iconic Sydney Opera House), museums, galleries, educational facilities and other national cultural bodies built on decades of Government and philanthropic investment. Many of Australia's major performing arts companies are also located here and Sydney captures 45 per cent of total attendances and 50 per cent of national revenue for music and theatre productions. Most recently the Australian Government's Creative Industries Innovation Centre was established in partnership with the University of Technology, Sydney.

International reputation

As a leading centre for music, publishing, performing and visual arts, NSW creative companies have enviable national and international reputations. For example, NSW has a global reputation for innovation in architecture, based on iconic building development such as the Beijing Aquatic Centre.

Greg Smith

Director, Animal Logic & Member of the NSW Innovation Council

Far from being marginal or discretionary, the Creative Industries play a central and stimulatory role in successful and thriving 21st century developed economies. They are a magnet for inquiry, knowledge, innovation, wealth creation, global attention and social wellbeing. The trick for success is to let them run towards the future, rather than constrain them by past assumptions and protocols.



OPPORTUNITIES FOR GROWTH

An older, wealthier population

Growth opportunities will arise from servicing an increasingly older and wealthier population with a greater appetite for creative outputs.

Climate change

With an increased desire for lower emissions, opportunities will open for the architecture and industrial design sub-sectors, as they face increasing demand for environmentally sustainable and innovation-intensive services. These businesses will also benefit from increased demand for their services from Asia.

Design as a driver throughout the economy

Design is critical to the growth of the non-creative industries, (manufacturing, construction, retail etc) with the majority of *high performing* non-creative companies using design in process and product development.

Growing demand for content

The growth in the information economy; driven by roll-out of new communication devices, broadband and social media creates increased demand for content for these new digital platforms. NSW's existing strengths in film, digital media, music, and design means that it is well placed to capitalise on these opportunities.

High speed broadband and the information economy

Through investment in communications infrastructure with the National Broadband Network, creative industries will be better equipped to collaborate, develop content and distribute their services both domestically and internationally.

Regional diversification

Creative industries can contribute to sustainable regional development. Hot spots for creative development have already been established in regions such as the Northern Rivers and Newcastle. In addition, the NBN rollout will better enable regional markets to participate in the buying and selling of creative content.

ACTIONS TO SUPPORT GROWTH

1. Drive and champion creative industries

The NSW Government will expand the Creative Industries Development Unit within Industry & Investment NSW. The Unit will work closely with Communities NSW, the Greater Sydney Partnership and with the Creative Industries Innovation Centre (hosted by the University of Technology, Sydney) and will:

- Support NSW Government creative industries policy development
- Drive key components of the NSW Digital Economy Strategy, in cooperation with the ICT Industry Development Unit
- Coordinate private and public activities to support the development of the industry, including access to current Industry & Investment NSW industry development programs (such as *Innovation Pathways*, *TechVouchers*, *Small Business Development and Training*, and *Small Business September*)
- Encourage and facilitate private sector investment in NSW, and
- Promote Sydney as a regional centre of the creative industries.

The Unit will be led by a Senior Creative Facilitator whose role will be to work with business and Government to deliver the above objectives. The position's first major task will be to develop a business plan that directs greater coordination across the sector, increased industry leadership of the sector and promotes linkages between Creative businesses, institutions internationally. The Facilitator will report on progress through the NSW Innovation Council. An appointment will be made in 2010.

Communities NSW and Industry & Investment NSW will undertake a cultural audit of Sydney and NSW. This will benchmark Sydney's cultural and creative capacity and degree of integration against other global creative capitals that share Sydney's mix of attributes as a business and media centre. The audit will investigate both the supply side of cultural production (infrastructure and outputs) and demand (participation and consumption). It will inform new mechanisms for coordination, guide future Government and business investment, and secure NSW as a global creative centre.

2. Growing the creative industries through the Digital Economy Strategy

- Develop *Digital Sydney*. The NSW Government has provided \$0.5 million per annum for three years for a '*Digital Sydney*' initiative which will market and promote Sydney as hub for digital companies, promote collaboration between the ICT and creative sectors and expand the digital media market place in NSW
 - An Advisory Panel has been established to help drive the activities and outcomes of the *Digital Sydney* project. The early milestones are to be focused around branding Sydney as a world centre of the knowledge economy and using, among other initiatives, the success stories of Sydney's digital industries.
- The NSW Government is attracting international organisations particularly high value research and development activities such as software services or R&D institutions or partnerships with multinationals focusing on the digital economy
- *Digital Media Initiative*, which will invest in digital content, building on existing NSW strength in film, television, games and digital animation. Projects could be stand alone digital concepts, could exploit the digital potential of film and television concepts (beyond mere repurposing), or could involve 'serious games' working through cross sectoral collaborations
- Establishing a *NSW Centre for Broadband Innovation* via a collaboration with research and industry partners aimed at solving specific research problems in the delivery of services by broadband, and
- An *ICT Collaborative Solutions Program*, supporting and encouraging innovation and collaboration between SMEs and multinationals, large Australian corporates or Government in the NSW market to solve difficult problems related to the changing business models created by ubiquitous high speed broadband and to fast track the delivery of solutions to the global market.



3. Nurture and grow creative industries

The NSW Government will provide targeted assistance and business development support for creative businesses including:

- An enhanced commitment to screen production. The NSW Government has recently announced \$20 million in screen incentives to attract large-scale production to NSW. An additional \$5 million has also been allocated to increase Screen NSW's *Production Investment Fund* to support local productions
- Financial and advisory support for small creative businesses to support innovation and growth (including the *smallbiz* website, *Small Business September*, *TechVouchers* and the *Innovation Pathways Program*)
- Building capacity in the NSW creative industries through:
 - *Innovation Pathways Program*
 - *Australian Technology Showcase*
 - Business advisory services
 - Business mentoring programs
 - Innovation advisory services
- The NSW Government also provides private small to medium NSW businesses with up to \$15,000 funding to access world leading research available through the State's public sector research organisations. This is part of the \$1.4 million *TechVouchers* program, and
- Incentives for partnerships between large companies and emerging companies for creative businesses operating in the ICT sector.

4. Develop creative precincts

Sydney is developing significant creative precincts around our cultural institutions and leveraging the potential of Arts NSW portfolio of properties. These will be a magnet for investment, attract business and add substantially to the tourism value of the city. They include:

- A major performing arts precinct at Walsh Bay and gateway to Sydney's creative heart (Wharf 4/5, Sydney Theatre and Pier 2/3)
- Ultimo as a centre for design and digital communications (ABC, Powerhouse Museum, TAFE NSW—Sydney Institute, Ultimo College, University of Technology, Sydney and the Creative Industries Innovation Centre)
- North Eveleigh (CarriageWorks) as a centre for contemporary arts and creative industries, and
- Sydney's Inner West as a network of flexible creative spaces for the small to medium creative sector, sharing resources and promoting collaboration.

Specific regional initiatives to develop networks and creative spaces and stimulate sustainable regional economic activity include:

- Industry assistance and support available to creative businesses through Industry & Investment NSW's network of regional offices. In partnership with Regional Development Australia and the Australian Government's *Enterprise Connect* initiative, the NSW Government will continue to support the development of clusters of creative businesses as well as provide targeted assistance. For example, under the *Northern Rivers Regional Business Growth Plan*, the NSW Government is supporting the implementation by the Northern Rivers Creative Industries consortium of the Arts and Creative Industries Strategy 2009

- The development of the Broken Hill Film Studio, jointly funded by the NSW Government in partnership with the Broken Hill Council, to benefit the creative sector in Far West NSW, and
- Further expansion of Arts NSW's *Empty Spaces* program and network of Creative Enterprise Hubs. The Hubs utilise temporary business spaces in metropolitan and regional areas to support emerging talent to establish businesses in regional areas.

5. Leveraging Design for Innovation and Industry Development

The Government will fund a pilot *Design in Manufacturing* program that will support design and innovation linked with good market knowledge to drive business and jobs growth of leading manufacturing companies. This program will make available a subsidised design service for small and medium enterprises to link with leading design companies with specific industry segments such as defence, transport equipment and machinery and heavy equipment manufacturing sectors.

Sydney Design Week will be enhanced, in conjunction with Small Business September (run by Industry & Investment NSW), to promote and increase the use of design by small businesses and raise awareness of Sydney as a design capital. The Government will expand the industry and community program to businesses and designers across metropolitan and regional NSW.

6. Support Training and Skills Development within Creative Industries

Create a Sydney Business/Education Creative Crescent focussed on the emerging creative industries from Moore Park to Ultimo. The opportunity exists to better link tertiary education providers (eg TAFE NSW—Sydney Institute, Ultimo College, University of Technology Sydney) with businesses and institutions with a focus on design and digital content. In order to reduce the 'job ready' gap between training, higher education and employment a new training services model will be developed to provide comprehensive learning opportunities for businesses and individuals through a mix of networked tertiary education providers. A scoping study is currently being undertaken by UTS for the NSW Department of Education and Training.

Amongst other things, the *NSW Knowledge Statement* addresses shortages of workers in vital knowledge-intensive fields, a number of which form the creative industries sector.

7. Promote Sydney and NSW as a global centre for creativity

The NSW Government will promote Sydney's creative industry capabilities internationally, particularly in conjunction with Austrade and NSW Government's overseas offices.

The NSW Government will also align investment in major events and cultural tourism and will develop international market relationships with leading creative capitals including Shanghai, Tokyo, London, New York and Paris. Further involvement in national and international symposiums and trade events (eg *Australian Performing Arts Market*, *London Design Week*, *Venice Architectural Biennale*) will be investigated.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS CREATIVE INDUSTRIES



Mary Darwell
Executive Director

Arts NSW
Communities NSW

☎ 02 9228 5809

✉ mary.darwell@communities.nsw.gov.au



MINING

VISION

The NSW mining and mineral processing industry will support the development of the NSW economy and industries by helping to sustain the viability of regional communities and infrastructure, community responsible development and doubling of coal exports.

The minerals industry, comprising both mining and minerals processing, is a vital contributor to the NSW economy. The minerals industry accounts for 5.9% of NSW total industry value added in 2010, with the mining sector accounting for 3.1%. By 2020, the minerals industry will account for 6.9%, of which mining's share will be 3.9%. The sector is the largest merchandise exporter in the state.

Mining and minerals processing is a significant direct and indirect employer in NSW, with coal mining employees earning up to twice the NSW average weekly wage. Approximately, 70,000 people are employed in the mining and minerals processing industry; 32,000 people in mining operations and 38,000 in minerals processing, particularly in iron and steel making. Overall, around 310,000 NSW jobs are supported by the minerals industry.

Some NSW regions are highly reliant on mining for employment opportunities, particularly the Far West, the Hunter and the Illawarra, which all have over one fifth of their employment supported by mining and mineral processing.

NSW'S COMPETITIVE ADVANTAGES

High levels of coal production

Coal production is the largest mining activity in NSW, representing 85 per cent of the value of all minerals produced in the State in 2008–09. Nearly all of the coal in NSW is sourced from the Sydney and Gunnedah Basins. The largest production is from the Hunter Basin, which produces over 62 per cent of NSW coal.

Proximity of coal assets to infrastructure and transport

NSW coal resources are located in areas close to infrastructure and ports. For example, the Hunter region has established itself as one of Australia's most significant mining regions as a result of the resource base and the rail network that enables coal to be moved to the Port of Newcastle—the largest coal export port in the world. The Hunter region's coal resource has also enabled the development of low cost, highly productive open-cut coal mines.

The NSW Government's exploration activities over the last decade have generated high quality geological data which has led to important discoveries including:

- MacPhillamy's gold discovery south east of Orange
- Coonarah conventional gas field by Eastern Star (Gunnedah Basin)
- Willaroo-1 oil discovery by Orion Petroleum (Bowen/Surat Basin), and
- Riflebird/Kingfisher gas/condensate discovery by Metgasco (Clarence–Moreton Basin).

These exploration activities have also resulted in a significant increase in exploration by private companies in the Thomson Orogen and the Koonenberry Fold Belts that have led to some promising finds.

The recent development of new mines, particularly the Cadia deposits in central west NSW has resulted in NSW becoming Australia's second largest gold producer. In 2008–09 it represents 13 per cent of the country's gold production. In addition, NSW is the third largest copper producer in Australia.

Strong minerals processing industry

The NSW minerals processing industry is worth over \$5 billion and consists of steel, aluminium, electrolytic manganese dioxide (used in alkaline and button cell batteries), refractories and cement operations.

OPPORTUNITIES FOR GROWTH

Further exploration

Australia is widely recognised as one of the more prospective countries for minerals and petroleum resources. In 2009, \$950 million was spent on nonferrous exploration (excluding uranium) in Australia. This represented 13 per cent of total world exploration expenditure (Metals Economics Group, 2010).

In New South Wales over the past five years, minerals exploration licences have increased by 28 per cent from 724 to 937 and petroleum exploration licences have increased from 40 per cent from 45 to 63.

Vast areas of NSW remain to be explored and their mineral potential better understood, with large areas of potentially prospective rocks hidden under sand and cover rocks. In particular, areas such as the Thomson Orogen in north western NSW and the Koonenberry Belt in western NSW have substantial potential for new minerals discoveries.

While coal mining in NSW commenced over 200 years ago there remain substantial undeveloped coal resources particularly in the Hunter, Western Coalfield and Gunnedah Basin.

Open cut mining has dominated the Hunter Valley however as open cut resources are depleted and mining moves into recovering more deeply buried resources mining will progressively move to developing underground resources in the Hunter Valley.

Development of these resources as well as expansion to existing mines are expected to see coal production in the Hunter region almost double over the next 10 years to around 200 Mt pa.

Export markets

Over the next 10 years it is expected that mining will account for a larger share of the NSW economy, mainly due to increased coal exports to Asia, especially China.

China's energy needs for both coking and thermal coal will be met by recent and planned investment in coal export infrastructure capacity. Port Waratah Coal Services Ltd has recently expanded throughput capacity at the Newcastle Port through the commissioning of a third coal loader, with a fourth planned. These developments are estimated to increase coal loading capacity from an estimated 117 Mt in 2010 to 211 Mt in 2020. This will allow for extra exports that will, be equivalent to around 4.3 per cent of NSW's economic output.

Alternative technologies

While the transition to a low carbon economy is likely to see a shift towards cleaner energy technology in domestic electricity generation over the next few decades, the extent of this shift will not be known for a decade because the viability of carbon capture and storage technologies will not be known until closer to 2020.

Currently NSW derives 14.1 per cent of its energy needs from natural gas, which is a lower carbon intensive source of energy than coal. Its increased use, including the development of a NSW coal seam methane industry, will have the potential to support electricity generation and manufacturing, especially in the Hunter region.

The successful location of suitable storage sites and the development and commercialisation of technology options will improve the long-term prospects for the NSW coal industry.

Nikki Williams

Chief Executive, NSW Minerals Council

The minerals sector is the engine room of the NSW economy. It will contribute \$1.77 billion to the State's Budget in 2010/11 and an estimated \$6.8 billion over the next four years. That is double the total from the previous four years, free and clear of wages, infrastructure, community support programs and investment in mining regions as well as the corporate taxes paid to the Federal Government. Those returns to the people of NSW help to provide essential services such as schools, police and hospitals across the State.



ACTIONS TO SUPPORT GROWTH

1. Infrastructure

Port capacity

Coal export capacity at the Port of Newcastle, already the largest coal export port in the world, could exceed 200Mtpa with plans approved by the NSW Government for:

- Port Waratah Coal Services' expansion of the existing Kooragang Coal Terminal to 120 Mtpa, and
- Newcastle Coal Infrastructure Group's 66 Mtpa new coal export terminal.

Rail infrastructure

In June 2004 the Australian and NSW Governments' signed an agreement to transfer operation and maintenance of the State's rail infrastructure, other than the RailCorp network and the Country Regional Network, by way of lease to the Australian Rail Track Corporation (ARTC).

The ARTC will undertake capital works to upgrade the capacity of the Hunter rail infrastructure. The ARTC expects to spend around \$1.4 billion over the next five years to lift the Hunter's coal rail capacity to meet expected future volume growth. This Strategy encompasses two very large projects, a new alignment on the Liverpool Range, and a third road between Minimbah Bank and Maitland.

The NSW Government is also developing a 25 year Freight Strategy which will assist in planning for transport for mineral exports.

2. Community acceptance

With coal production predicted to grow substantially in the next decade, there is a need for Government to address the potential cumulative impacts this will have, particularly on communities in places like the Hunter Valley. Such impacts may be social or environmental and include considerations such as the adequacy of social and economic infrastructure.

In order to address these community concerns the NSW Government has developed a range of strategic management initiatives.

Strengthening compliance and regulatory activities

NSW has one of the most comprehensive air quality monitoring systems in Australia. There are 20 air quality monitoring stations in the Greater Metropolitan Region. There are also regional monitoring stations located in Albury, Bathurst, Tamworth and Wagga Wagga. An additional fourteen sites will be built in the Upper Hunter, with two stations to be up and running this year in Singleton and Muswellbrook. The remaining twelve sites will follow in 2011. The mining and power generation industries have committed to funding the network and they will be independently monitored by the Department of Environment, Climate Change and Water.

Following a detailed review by the NSW Government of the mining regulatory framework, substantial amendments to the *Mining Act 1992* were passed by the NSW Parliament in May 2008. The amendments are intended to streamline administrative processes and ensure that the regulation of mining is consistent with contemporary environmental standards, community expectations and recent developments in the NSW environmental regulatory framework.

The NSW Government is providing two new compliance officers, to monitor mine compliance, particularly in relation to compliance with dust and noise conditions. These officers will be based at either Singleton or Muswellbrook.

Rehabilitation

Both the NSW Government and the community recognise that the long term future of mining depends on high quality environmental management and effective rehabilitation. Procedures and extensive controls are in place to regulate rehabilitation and to ensure that land used for mining can be effectively returned to productive future land uses.

NSW Government will review rehabilitation legislation to remove unnecessary red tape.

Under the *Mining Act 1992*, Industry & Investment NSW has a wide range of powers for regulating rehabilitation including:

- Environmental management and rehabilitation conditions on mining titles
- Ability to determine and hold rehabilitation security bonds for all mining and exploration titles, and
- Enforcement powers to ensure titleholders comply with their obligations.

Companies must also submit and comply with an approved rehabilitation plan. This is the primary document for recording the rehabilitation methodology and monitoring rehabilitation progress.

The government monitors the mining industry through inspections and audits to ensure compliance with statutory requirements and with mining lease conditions.

In addition, the NSW Government currently holds over \$1.17 billion in security bonds that can be used by the Government to carry out rehabilitation in the event that a titleholder defaults on its rehabilitation obligations.

The NSW Government is continuously examining ways in which industry best practice can be applied to improving environmental outcomes through the progressive rehabilitation of mining areas. The Government is examining ways in which mines can improve dust management, water management and more sustainable and integrated rehabilitation in mining areas, particularly in the Hunter Valley.

The Government also provides funding to the *Derelict Mines Program* which aims to rehabilitate old abandoned mining areas where no individual or company can be held responsible. The Program selects derelict sites for rehabilitation on a priority basis considering risks to public safety, pollution impacts, contamination, erosion or land degradation, and public concerns. The range of rehabilitation works includes detailed site assessments, reduction of safety hazards by fencing and filling shafts, management of water and sediment movement, acid mine drainage management, monitoring and revegetation of the sites.

3. Workforce, education and training

The NSW Government currently implements regional initiatives to respond to local skills needs in partnership with industry, such as the Muswellbrook Mining Skills Centre, a partnership between the local TAFE and mining companies to deliver training to local mining apprentices. The Government will assess expanding regional initiatives such as these as part of its response to local skills needs.

The Government has developed the *Tertiary Education Plan* which will play an important role in better aligning economic and social priorities for the State and the strategic interests and capabilities of our tertiary sector.

Together with the *NSW Knowledge Statement*, which provides an overarching vision for building the knowledge,

skills and innovation capabilities of the State, these initiatives will help the industry and NSW economy adjust to the emerging challenges and opportunities over the next ten years.

4. Future industry growth and development

Coal Mining Strategy for NSW

A Cabinet Sub-Committee chaired by the Hon. Tony Kelly MLC, Minister for Planning Lands and Infrastructure and bringing together the portfolios of Planning, Lands and Infrastructure, Health, Treasury, Environment and Climate Change and Industry and Investment NSW will develop a *Coal Mining Strategy* for NSW.

NSW gas industry

The NSW Government is supporting natural gas supply and pipeline projects across NSW. These support the development of the gas industry in NSW, including prospects for the development of NSW's coal seam gas reserves.

Expansion of exploration activity for new mineral reserves

Since 1993–94, the NSW Government has allocated \$84.2 million towards pre-competitive geoscience under the *New Frontiers* program.

New Frontiers aims to attract petroleum and mineral exploration in under-explored and remote regions through the application of advanced geosciences technologies.

New Frontiers supports the acquisition, processing and delivery of basic geoscientific data. The minerals program aims to resolve the 3-dimensional architecture of the State's key mineral provinces through application of advanced technologies including seismic, detailed gravity surveys, drilling, and advanced 3D modelling and imaging.

Investment attraction activity

The NSW Government actively identifies and seeks potential investors and promotes investment opportunities in NSW. This includes:

- Hosting international delegations
- Supporting NSW participation in major international events such as Electra Mining Johannesburg, IMME Kolkata, Mining Indaba Capetown, PDAC Toronto, OZmine 2011 Jakarta, Exponor Chile, Exposibram Peru, and Belo Horizonte Brazil
- Matching and facilitation of meetings between NSW companies and potential investors
- Run investor forums that facilitate networking opportunities. Recent events includes Mineral Explorers

Presentation, *NSW Low Emission Coal Technology Summit*, and the *NSW Mineral Exploration & Investment Conference*

- Development of promotional material
- Provision of assistance in major project developments, and
- Supporting investments in industry development that sustains sector growth such as innovation and mining technologies.

5. Research & Development

Low emission coal technology

The success of R&D in technologies to reduce the carbon emissions from the use of coal will be increasingly important for the industry's long-term viability. A key priority for the Government and industry will be to continue to support these activities including identifying sites suitable for geological storage of carbon dioxide.

The NSW Government has committed \$100 million over four years to the *Clean Coal Fund*. The *Clean Coal Fund* provides funding for research into low emissions coal technologies as well as ongoing support for industry and research events, such as the *NSW Low Emissions Coal Technologies Summit*.

The NSW Government is coordinating a state-wide assessment of storage capacity project for a carbon capture and storage demonstration project which, over the medium to longer term, proposes a state wide assessment of potential storage opportunities in NSW.

NSW Institute for Frontier Geoscience

The NSW Institute for Frontier Geoscience provides the leadership, teaching and research capacity as well as stipends to contribute to a sustainable minerals industry in NSW. The Institute builds on the existing strengths of the University of Newcastle, exploits the natural synergies of the Hunter Region and fosters increased collaboration with the Department's geosciences groups and industry in the region. In addition, the Institute adds research and teaching capability to the existing discipline of Earth Sciences and provides more geoscience graduates. The establishment of the NSW Institute for Frontier Geosciences provides the critical skills required for the future viability of the minerals and energy economies in NSW.

The NSW Government has provided funding under an agreement with the University of Newcastle to establish a *Chair in Geoscience* for the NSW Institute for Frontier Geoscience.

The Chair in Geosciences will provide the strategic direction, entrepreneurialism and industry engagement to develop the Institute. The Chair is supported further with two academic appointments with expertise in relevant areas such as field and resource geology or sedimentology and geosequestration. A number of stipends to attract and support undergraduate students have also been established.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS MINING



George Davey

Deputy Director General

Primary Industries Division,
Industry and Investment NSW

☎ 02 8289 3944

✉ george.davey@industry.nsw.gov.au



TOURISM

VISION

Expand the tourism sector in New South Wales and increase the State's domestic and international visitor numbers and tourist expenditure, through improving the quality, quantity and diversity of tourism experiences and their promotion.

The NSW Tourism industry contributed an estimated \$13 billion in value added to the State economy in 2009-10, with total consumption across the sector of \$28 billion. It comprises tour operators, transport providers, accommodation, food and beverage with impact on education and retail sectors.

Approximately 162,500 people are directly employed in the NSW tourism industry representing 4.8% of total State employment. The industry is dominated by small and medium-sized enterprises. Over half of all tourism industry businesses are owner-operated without employees and 99% employ fewer than 200 people.

The June 2010 Tourism Forecasts predicted growth of 3.1% per annum for NSW international visitor nights. Almost all growth is expected to come from international visitors, equalising with domestic visitor numbers by 2020.



NSW COMPETITIVE ADVANTAGES

International appeal

NSW and Sydney are currently destinations of choice for millions of international visitors. Sydney's multi-cultural nature provides a welcoming base for international tourists, as well as visitors who come to see friends and family in Australia. In order: the UK, NZ, China and Hong Kong, and the USA are the top five countries in terms of numbers of tourists, accounting for 50 per cent of total visitors. In terms of spending, China, the UK, NZ and the USA and Korea account for the highest annual spend per visitor, accounting for 51 per cent of total spend.

'Brand Sydney'

Sydney is the State's greatest tourism asset. It is consistently voted as one of the world's leading cities for travel and brand recognition. Sydney is also home to draw card iconic landmarks such as the Sydney Opera House as well as vibrant cultural, arts, sport and food scenes, and numerous internationally-recognised events and festivals.

High quality business and cultural facilities and services

Sydney's position as a business and financial centre drives significant business tourism into NSW with 52 per cent of all business travellers to Australia visiting NSW, and 94 per cent of those visiting Sydney. It is well supported with high quality venues and services. These include business convention centres, nationally and internationally renowned performance venues, museums, galleries and sporting facilities and Australia's busiest international airport and major cruise terminal facilities.

International education facilities and services

NSW is home to 11 universities. Two are in the top 50 in the world by the THES-QS World University Rankings 2009, while five are in the top 100 Asia-Pacific academic institutions as ranked by the Shanghai Jiao Tong Academic Ranking of World Universities 2009. This provides a competitive strength in the international education market, which drives a significant contribution, particularly in terms of number of days stayed and total financial contribution. 51 per cent of all education visitors to Australia visited NSW, and the average total expenditure in Australia was \$14,835 per person.

Diversity

The diversity of tourism experiences available in NSW enables visitors to experience much of what Australia has to offer without leaving the State. There is something for everyone. From the mountains—with Australia's highest mountain peak, Mount Kosciuszko, and major ski resorts including the largest in Australia; to the lakes and a stunning array of beaches; NSW offers adventures for all tastes. NSW is home to over 800 national parks including rainforest, desert to marine reserves and World Heritage-listed sites including Lord Howe Island and the Greater Blue Mountains. For gourmet tourists, food and wine regions such as the Hunter Valley and the Riverina are a major attraction. For the music lover, NSW provides major regional festivals including the *Tamworth Country Music Festival* and the *Byron Bay Blues Festival*.

Chris Brown

Managing Director, Tourism and Transport Forum

The tourism sector in NSW has endured a tough few years. The high of the Olympics was followed by external shocks like September 11, SARs, Asian Financial Crisis, Global Financial Crisis and Swine Flu which hurt arrival numbers. However the tide may be turning. Recent figures have been encouraging and the mood across industry improving. Prospects out of India and China are very good. Low cost carriers are opening up new domestic and international markets. Sydney will always be the primary gateway for international visitors to Australia.

OPPORTUNITIES FOR GROWTH

Asia

Growth is expected from markets across Asia including China, India, South Korea, Malaysia, Indonesia and Taiwan. Growth over the last few years in these segments has already been significant, not just in total visitor numbers but also in total economic contribution, through holiday, education and business tourism.

Ageing population

Ageing populations are changing the face of global tourism markets. Mature tourists generally have a higher disposable income, are more interested in travel, can stay for longer periods and travel year-round boosting the tourism sector. This age demographic dominates leisure travel to NSW from markets such as NZ, USA, the UK, Germany and Japan. Tailored services which cater to the demands of this generation and the experiences they seek will face growth in the coming decade.

Education

In addition to the established markets of secondary education, growth opportunity areas include short-term students studying English and undertaking vocational courses.

Youth and backpacker markets

Continuing to target the working holiday maker market and the large youth and backpacker component offers great potential for growing visitor numbers to NSW. As they tend to stay for longer periods, they are a significant tourism target market for the State. There is also potential to encourage working holiday makers to spend more time visiting regional NSW and therefore benefit regional economies.

Environmental/nature tourism

There is strong and growing demand for high quality, environmental or nature-based tourism experiences. NSW is well placed to build on its existing natural and industry strengths to further NSW's reputation as a leading nature tourism destination.

World class events

Consumer tastes are becoming increasingly sophisticated, and technology is driving better information access to niche interest groups about events and activities. NSW can build on a strong track record of high profile well-run events with an international reputation. These include a major focus on regional innovative community events, which can be used to co-promote broader tourist activities in regional areas. The current calendar of NSW events includes the following:

SYDNEY EXAMPLES

Sydney New Years Eve	31 December—1 January
Sydney Festival	9 January—30 January
Sydney Gay and Lesbian Mardi Gras	19 February—7 March (Parade on 27 February)
Chinese New Year Festival	12 February—28 February
Biennale of Sydney	12 May—1 August
VIVID	27 May—21 June
City to Surf—Sun-Herald	8 August
Crave	1 October—31 October
Vivacity	31 December—26 January

REGIONAL EXAMPLES

Country Link Parkes Elvis Festival	5 January—9 January
Tamworth Country Music Festival and The Country Music Awards of Australia	14 January—23 January
Byron Bay Blues Festival	21 April—25 April

Digital technologies

Opportunities for innovation and growth exist in the ever expanding online—and mobile—based consumer segments. With high technical literacy and strong industry innovation, NSW is well placed to develop and use social media and smart phone applications to attract media-savvy consumers. Improved broadband access will provide opportunities for the use of high-quality video marketing.

ACTIONS TO SUPPORT GROWTH

1. Destination promotion

Sydney tourism campaign

The NSW Government and industry invested more than \$10 million in 2009–10 in a new multi-media Sydney campaign 'Sydnicity', targeted at both domestic and international visitors. A similar level of investment is planned in 2010–11 and 2011–12. The *Sydnicity* campaign delivered through Tourism NSW was launched in the Australian and New Zealand markets in April 2010, the China market in June 2010 and will be further rolled out globally throughout 2010–11.

The campaign builds on the well known Sydney icons and highlights the nature, shopping, food and wine, arts and culture, and events experiences on offer year round. The campaign incorporates the new multi dimensional and cross-industry brand for Sydney.

Regional tourism campaign

Regional NSW will be promoted through the new \$12 million tourism campaign launched in April 2010. A similar level of investment is planned for 2010–11 and 2011–12. The NSW Government is also allocating an additional \$5.1 million for co-operative destination marketing and support for regional tourism organisations.

Marketing will continue to showcase NSW strengths especially in nature, food and wine, culture, surfing and beach experiences, events and precincts available to visitors. Sydney and Regional NSW will continue to be promoted to the domestic market through the new major tourism campaigns launched in 2010.

Greater Sydney tourism partnership funding program

The \$2.7 million *Greater Sydney Tourism Partnership* funding program aims to promote tourism destinations and events within the Greater Sydney metropolitan area by increasing awareness of the depth and variety of experiences Sydney has to offer beyond the iconic CBD attractions. The program offers funding support for cooperative destination marketing campaigns and for event promotion to assist local tourism precinct operators to attract visitors.

Other Industry partnerships

The NSW Government has developed partnerships with the tourism industry including hotel chains, airlines,

Country Link and industry associations such as the Caravan and Camping Industry Association and the Australian Hotels Association to deliver marketing and communications programs both domestically and in key international source markets.

The NSW Government will build on its strategic domestic and international marketing partnerships with 11 airlines and already has campaigns valued at \$9.524 million planned for 2010–11.

The NSW Government will also continue to implement activities under the three year \$8.8 million strategic partnership established with the Queensland Government in 2009. This new initiative is the first cross-border partnership and leverages opportunities to drive international visitation to the East Coast of Australia. Consumers in Japan, the USA, China, UK and Europe will be targeted under the partnership.

Enhancement of Tourism NSW websites

The Tourism NSW consumer web sites—*visitnsw.com* and *sydney.com* rank highly against other States and Territories. The marketing and promotional activity drives consumers to these sites to help them plan and book their holiday.

There are over 10,000 tourism products, experiences and events listed on the dataset that underpins these web sites. Last year over 800,000 leads were delivered to these tourism businesses. The sites will be further enhanced to facilitate easier booking of products and experiences direct with product suppliers or via nominated travel distributors.

Development of digital technologies

Digital technologies have become a major focus for the marketing and promotional activities of Tourism NSW and its industry partners. Continual innovation and use of new technologies will be required, such as the creation of smart phone applications and other mobile technologies designed for use by prospective visitors to NSW.

The NSW Government is working collaboratively with the Australian Government, States and Territories to deliver a *National Online Strategy for Tourism* as an initiative of the *National Long Term Tourism Strategy*. A major component of this project is the development of a program of resources to improve industry's capability to become more proficient in digital marketing and distribution.



Leveraging NSW's events calendar

The NSW Government develops communications campaigns to promote and leverage from the year-long calendar of events including *Vivacity*, *Vivid Sydney* and *Crave Sydney*. The Government works to leverage ongoing economic and cultural benefits from events and seek to encourage investment and infrastructure development that will sustain major events in the state.

The NSW Government also provides assistance for the marketing of events that attract overnight visitors throughout the State. The *Regional Flagship Events Program* has provided funding support for more than 186 events in regional NSW and is being enhanced through workshops to assist regional communities to enhance the tourism appeal of their events. In addition, grants of up to \$10,000 are provided for promotion of events that are staged in Sydney precincts.

2. Destination planning and development of infrastructure

Destination plans will be developed in conjunction with key industry stakeholders, for key tourism areas of the State. The plans will identify key markets and reflect infrastructure and access requirements. The planning will build on Sydney's strength as the nation's main gateway and aim to spread tourism benefits throughout the State, especially through the increased dispersion of visitors to regional NSW.

Joint Study on Aviation Capacity

Planning for tourist access particularly for aviation will be a critical component of destination planning. The NSW Government is working with the Australian Government on a *Joint Study on Aviation Capacity for the Sydney Region*.

Cruise ship berthing location management

The Passenger Cruise Terminal Steering Committee represented by NSW Government agencies and industry is currently considering the future needs of the growing cruise sector and the facilities required in Sydney Harbour. In particular, ways to accommodate increasingly large cruise ships. The NSW Government will also undertake a study on the needs and opportunities presented by cruise ship visitation to regional port locations.

Expanding NSW's convention and exhibition facilities

The NSW Government has provided \$1 million to develop a comprehensive master plan to redevelop and expand convention and exhibition facilities at Darling Harbour South. An interdepartmental committee has been established to oversight preparation of the master plan. The Committee's work will also consider proposals to upgrade the existing Sydney Showground exhibition facilities located at Sydney Olympic Park.

Developing tourism experiences

Nature tourism

The NSW Government's recent *National Parks and Wildlife Amendment (Visitors and Tourists) Bill 2010* is aimed at improving access and expanding sustainable tourist experiences and attractions for people wishing to experience NSW national parks. The Government is working with the private sector to develop new opportunities for low-impact nature-based tourism as a means of building advocacy for conservation of the unique ecological values of the NSW park estate, as well as to support diversification of the sustainable tourism industry. Increased marketing and promotion of NSW nature-based tourism and the development of an events calendar for National Parks are also helping to achieve these aims.

Aboriginal tourism

The NSW Government is working to position the State as a destination with Aboriginal experiences for visitors. Tourism NSW is developing an *Aboriginal Tourism Action Plan* to support Aboriginal businesses through business mentoring, business and professional development, tailored advice on tourism marketing and product development.

Initiatives will include working with Aboriginal communities and industry and government agencies such as the NSW National Parks and Wildlife Service to create new guided Aboriginal tourism experiences; joint industry training with peak tourism industry associations on tourism distribution channels and increasing the level of Aboriginal interpretation in visitor precincts.

Cultural and heritage tourism

The NSW will promote and grow the tourism benefits from all forms of art working in partnership with the cultural institutions and event promoters. A review of facilities will be conducted to ensure we have adequate venues and related accommodation for performances and cultural events. There will also be a focus on creating and promoting arts precincts to tourists.

3. Strengthening the focus on international markets

International Industry Incentive Funding Scheme

The \$1.48 million, three and a half year scheme provides incentives for NSW tourism businesses to be taken into international markets through Tourism NSW's overseas trade missions, new product workshops or nominated Tourism Australia international tradeshow to showcase the NSW tourism industry. Its purpose is to increase the presence of NSW products, experiences and destinations in the market place and to educate NSW tourism suppliers on the needs of key international markets.

In 2009–10, eighty businesses were sponsored through the Scheme. Sales missions planned for 2010–2011 include New Zealand, UK/Europe, North America and India.

Network of overseas offices

The NSW Government has established a network of overseas offices. In addition to tourism offices for the regions of New Zealand, North America, UK/Europe, Japan, North Asia and South East Asia, there are NSW Government offices in Abu Dhabi, Mumbai, Shanghai and Guangzhou.

A key element of the NSW Tourism Strategy was expansion of international presence and increased activities to grow international markets. The Tourism NSW offices generate opportunities for NSW tourism businesses to connect with key international travel distributors. This is achieved via trade missions and attendance at key international travel trade events such as the *Australian Tourism Exchange* (ATE), Australia's major annual international trade event. ATE will be held in Sydney in April 2011. Tourism NSW international offices also work closely with the major airlines and travel wholesalers on programs which enhance the profile of Sydney and NSW tourism destinations.

Enhancing the tourism experience for international students

Informed by the findings of reports by the *NSW Ministerial Taskforce on International Education* and the *Joint Ministerial Taskforce on Tourism and Education*, the NSW Government will undertake a number of initiatives to enhance the tourism experience for international students.

Thirteen key initiatives have been developed from the Taskforce recommendations. A key initiative is the establishment of the Premier's Council on International Education to assist the development of an International Marketing Plan to position NSW as Australia's premier state for education. The Council will also establish an 'International Student of the Year Award' to recognise international achievement in NSW.

Other key NSW Government initiatives of the report include, improving the social engagement of international students with local communities, developing strategies to assist with travel and accommodation, providing a web portal to deliver comprehensive information and coordinating Australian Government initiatives.

Improving the tourist experience and visitor information

The NSW Government is improving the visitor experience, visitor information, and service quality.

The NSW Government and industry stakeholders will co-ordinate initiatives to make it easier for visitors to obtain information 'both pre-departure and in destination'. In addition, ongoing improvements to visitor information systems and signage will make it easier for tourists to find their way around NSW and locate key attractions and experiences.

Other initiatives will focus on ensuring a welcoming experience for visitors including a renewed focus on customer service training in partnership with industry.

Business Events Sydney

Business Events Sydney receives funding from the NSW Government through Events NSW to identify and attract international and national conferences, congresses, business events, meetings and incentives programs to Sydney in order to increase Sydney's share of the high-yield business tourism market.

Business Events Sydney targets conventions and conferences from industry sectors of strategic importance to NSW, including Medical and Scientific meetings, Creative Industries, Education and Training, Finance and Insurance, Health and Community Services, Information, Communications and Technology, Primary Industries and Mining and Business Services.

Strategies will be put in place to target international conventions and conferences that best align with NSW industry sector capabilities and expertise.

4. Developing business and workforce skills

Tertiary Education Plan and NSW Knowledge Statement

The NSW Government provides a key platform for economic growth through its role in primary and secondary school education and vocational training. The NSW Government has developed the *Tertiary Education Plan* which will play an important role in better aligning economic and social priorities for the State and the strategic interests and capabilities of our tertiary sector.

Together with the *NSW Knowledge Statement*, which provides an overarching vision for building the knowledge, skills and innovation capabilities of the State, these initiatives will help the industry and NSW economy adjust to the emerging challenges and opportunities over the next ten years.

The NSW Government is also working with the NSW Industry Training Advisory Board for tourism and the NSW Tourism Industry Council to assist the industry to further develop business skills. This includes:

- Engaging with the industry to better utilise Recognition of Prior Learning as an incentive to further training
- Developing programs to attract school students into the industry, and
- Building additional industry input into tourism VET in order to enhance the training system's responsiveness to the needs of industry.

NSW Skills Council

The NSW Skills Council will complete a report on tourism labour, skills needs and workforce development. There will be a focus on linking training for young people to jobs placement in the tourism industry with incentives developed for industry. It will also profile the skills needed in the industry and identify groups to target who can meet those needs once they are adequately trained. More broadly, the report will focus on the structure of the industry—for instance, the predominance of SMEs, its geographic spread across the State, its needs for seasonal labour, etc,—and identify workforce development strategies that can be implemented by the industry in partnership with government to ensure longer term growth.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS TOURISM



Dominica Nelson
Director

Strategy and Alliances
Tourism NSW
Industry & Investment NSW

☎ 02 9931 1532

✉ dominica.nelson@tourism.nsw.gov.au



HEALTH & ALLIED SERVICES

VISION

The NSW health sector will work to deliver greater capacity and access to healthcare through increased partnering between public and private health providers.

The provision of health services to the population of NSW is a core responsibility of the NSW Government. A growing and ageing population and increase in life expectancy will present challenges for Government and industry partners in the provision of these services in the future. With Government taking the lead in providing low cost, high quality health services to the community, it is anticipated that the private and non-government sectors will take on a greater role in helping deliver an expanding capacity of services, thereby reducing the growth in Government capital spending in the sector.

Private health services are valuable complementary services to the provision of public, hospital based, health care and may include: general practitioners, dental, optometry, physiotherapy, occupational therapy, podiatry, and speech pathology. A range of other services are offered through the private sector as alternatives to traditional medicine and include things such as acupuncture and naturopathy.

Size and growth of the sector

In 2009–10, the health and social assistance sector accounted for an estimated \$23 billion, or 6.9% of NSW total industry value added. Over the ten years to 2008–09, it has been the fastest growing sector in NSW, with value-added growth of almost 5% per annum.

Private sector employment in the health and social assistance sector, including residential and social assistance services, was estimated at 273,000 people in 2008–09. This is more than 8% of all private sector employment in NSW. In the ten years to 2009–10, total employment in the sector has grown at an average annual rate of 3.2%, well above the average employment growth rate.

Continuing strong growth of the sector is forecast over the next ten years—the sector is expected to grow by 41.6% in value added terms, with predicted employment growth of 117,000, which is the largest increase of any industry in terms of number of people employed.

COMPETITIVE ADVANTAGES

A globally competitive clinical trials sector

Australia is a highly cost-effective location for clinical trials after the Netherlands and Canada. Having a broad multicultural population and highly trained clinicians, Sydney leads clinical trials in Australia with large clinical research organisations such as GlaxoSmithKline, Covance, Quintiles, Roche, Novotech, Datapharm and ICP Firefly.

Clinical research and health application

NSW has seven major medical schools and is home to many of Australia's major teaching hospitals, as well as high quality medical research precincts in areas such as Westmead, central and eastern Sydney, Newcastle and Wollongong. NSW institutions carry out nearly half (46 per cent) of the clinical sciences research performed nationwide.

Public Health Institutes

Institutes including the Cancer Institute NSW, George Institute for International Health and the Sax Institute provide a strong evidence base to inform the development of health policies and achieve ongoing improvements in the detection, diagnosis, and treatment of a broad range of diseases in NSW and internationally. The success of these institutes is built on the strong collaborative links between researchers, service delivery agencies and industry partners.

Biomedical devices and technology sector

Companies producing medical devices include ResMed and Cochlear who have expertise in instrumentation, electronics and engineering, with successful applications in hearing implant technology and sleep apnoea.

OPPORTUNITIES FOR GROWTH

Increase in the demand for NSW health services

Demand for health services is expected to show strong growth to 2020, driven by an increasingly older population and longer life expectancies. The sector's share of the NSW economy is projected to rise from 6.9 per cent in 2009–10 to 7.5 per cent in 2020, supported also by rising incomes, technology advances and increasing demand for the level and choice of services offered.

While the NSW and Australian Governments will continue to maintain primary responsibility for the full range of health care services, particularly the highly complex care, there are opportunities for complementary roles for the private sector. This could include medical precincts incorporating private service businesses associated with general practitioner super clinics.

Aged care and retirement villages

The ageing population will continue to drive demand for private sector provision of aged care and retirement village services. Community aged care services, aimed to support an ageing population who wish and are able to continue to live at home, are expected to increase strongly over the long-term. This demand for additional accommodation will provide opportunities for businesses in the construction industry, particularly those in regional communities. It is also likely that the sites of aged care accommodation will increasingly incorporate allied services such as pharmacies.

Technology advances—e-health

Information technology advances and innovations are likely to lower costs and provide new opportunities for businesses particularly at the patient–healthcare provider interface and through increased provision of medical records, healthcare in the home, tele-health, and community based services. Rollout of the National Broadband Network will enhance both service provision and business opportunities—particularly in regional areas.

The roll-out of smart technologies in e-health will provide growth opportunities for the State's ICT industry through the design, development and deployment of communications systems and software. Such development will also enhance the opportunities for the State's ICT community to collaborate with cutting edge research being carried out in this area from organisations such as National ICT Australia and Australia's Commonwealth Scientific and Industrial Research Organisation.

Research and industry alliances

In addition to partnership opportunities through technology development programs at National ICT Australia and Australia's Commonwealth Scientific and Industrial Research Organisation, there exist opportunities for greater alliances in medical research. NSW's medical research precincts, universities, business incubators and industry presence provide an opportunity to build on pre-existing NSW Government investments and to establish international alliances. NSW is home to around 80 per cent of the multinational pharmaceutical companies in Australia and 70 per cent of pharmaceutical companies that have Asia Pacific regional headquarters in Australia. There are opportunities to attract greater levels of Australian Government, private and international investment, in clinical applications, clinical trials, and the development of biomedical technologies and devices.

Export and commercialisation opportunities

As well as expanding health services locally, there will be strong growth in the middle classes of emerging economies such as India and China. This will drive demand for goods and services and provide opportunities for NSW as a leading health services economy, through expanded export markets in delivering medical expertise, equipment and supplies, training, and public health services.

Through the commercialisation or licensing of publicly held intellectual property the potential exists to leverage our research output, including the possibility of exporting our health services and technology.

ACTIONS TO SUPPORT GROWTH

1. Increasing workforce skills and development

- The NSW Government will work in partnership with government agencies (including the Australian Government), the non-government sector, the health (public and private) and education sectors and research bodies to develop a coordinated approach to health workforce education, continuing education, locum programs, training and research
- The NSW Government will work with the Australian Government, universities and professional colleges to increase the number of doctors, nurses, midwives, dentists, population health and allied health workers through a combination of recruitment, retention, education and training strategies. This will include marketing strategies to promote health careers in schools and undertake recruitment of overseas trained workers as an adjunct to the longer term goal of having an appropriately skilled workforce
- The NSW Government will undertake annual Labour Force Surveys of registered health professionals to inform workforce requirements at State and local levels. The NSW Government will work with the national Health Workforce Principal Committee on determining the number of medical, nursing, dental and allied health higher education places required to meet future demand, and
- The NSW Government will provide incentives for the private and educational training institutions to continue to identify and develop innovative solutions that will:
 - Increase the quality and equity of health services delivery, and
 - Reduce costs and improve access to health services.

2. Promote health services exports

- The NSW Government will work with health service businesses to promote export opportunities particularly for higher-end and medical training services into Asian and other high-end usage markets. Assistance will include access to NSW Government offices overseas and their local expertise to assist with business establishment and facilitating local contact and network development, and

- Through the *Science Leveraging Fund*, *Innovation Pathways Program* and the *Medical Research Commercialisation Fund* with access to \$30 million superannuation investment for medical research commercialisation, the NSW Government supports organisations with the potential to commercialise and export intellectual property held in public research organisations.

3. Innovation in health services and e-health

The NSW Government will:

- Work with the private and community sector to encourage participation and innovation through a partnership approach
- Increase the research and development participation rate of private industry in collaboration with public and non-profit health and medical research institutes to increase medical excellence and the translation of research outcomes into clinical practice for business growth
- Encourage NICTA, CSIRO and other ICT research institutions to work with the health and allied services industries to maximise the benefits of public sector initiatives including the My Health Record, Healthelink and the roll-out of the National Broadband Network to encourage tele-health, e-health and other intelligent system solutions, and
- Participate in a central educative role in the application of government driven intelligent technologies to improve service delivery, tailored health services and education to remote and home based patients for medical support management, and monitoring of disease and chronic conditions.

4. Partnering with the private sector

- The NSW Government will pursue greater coordination and integration with private sector health providers to improve the continuity and safety of care and use of resources across public and private health services. The NSW Government will continue to enhance relationships, improve consultation mechanisms and ensure best practice regulations that do not impede business and service delivery, and maintain safety and quality
- The NSW Government will facilitate improvements to the integration between the community care sector and the hospital system to improve the provision of home-based and self-help support systems for discharged patients, and
- The NSW Government has established Health Support Services (HSS), the shared services organisation supporting NSW public health organisations deliver frontline healthcare. HSS delivers a range of services to its customers across NSW, such as linen and food services. HSS will build partnerships with the private sector for support services that the private sector can provide more effectively.

5. Regulatory reform

- To promote expanded private sector service provision, the NSW Government will work with industry to examine the interaction between the public and private health sectors. The focus of this work will be to streamline the regulatory process, working in conjunction with the *National Health Reform* agenda.

NSW GOVERNMENT CONTACT FOR INDUSTRY AND INVESTORS HEALTH & ALLIED SERVICES



David Gates

Chief Procurement Officer

NSW Health

☎ 02 9391 9767

✉ dgate@doh.health.nsw.gov.au

