



Australian Government

Department of Industry
Innovation, Science, Research
and Tertiary Education

A Plan for Australian Jobs

The Australian Government's
Industry and Innovation Statement



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The Australian Government's
Industry and Innovation Statement

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Foreword

Creating and supporting Australian jobs and building a dynamic and diverse economy are critical objectives for the Australian Government. *A Plan for Australian Jobs* is a \$1 billion investment in this critical work.

Australia's economy is resilient. While the Global Financial Crisis pushed other economies into recession, we saved jobs and kept our economy growing. Now the Government is laying the foundations for future growth and prosperity.

Our economy is experiencing profound structural change. A high Australian dollar is placing many businesses, particularly those in manufacturing, under pressure. Changes in our economy have real impacts on people and communities. Australians expect people to be supported through these periods of change and that is why we are acting.

Australians also expect their business and political leaders to generate prosperity. The Government's vision is for Australia to have innovative industries that deliver high-skill and well-paying jobs. We want Australia to be world-competitive with a dynamic and diverse economy, powered by multiple engines of growth across a range of industries and regions. That is why the Government has almost doubled its spending on schooling, made record investments in research, and is modernising the nation's transport infrastructure, building the National Broadband Network, and moving to a *Clean Energy Future*.

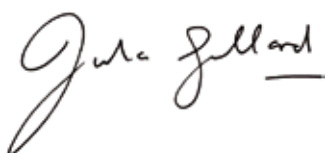
Now we are taking the next steps.

Working with industry and unions, the Government has a three-point plan to ensure Australia continues to be a strong, fair, and smart nation:

- Backing Australian firms to win more work at home,
- Supporting Australian industry to increase exports and win business abroad, and
- Helping Australian small and medium businesses to grow and create new jobs.

This is a plan about what *we can do right now* to get more work into Australian factories, workshops, offices, construction sites and services businesses; *what we must do* for Australia to get a bigger slice of the exports and opportunities in our fast-growing region of the world; and *what we should do* to secure skilled jobs now and for the next generation.

Australia's economic strength and proximity to Asia mean we can build the future we want, rather than drift towards one that is built on luck. This is a plan to use our strength as a nation to shape a secure future for ourselves.



Julia Gillard MP
Prime Minister



Greg Combet AM MP
Minister for Industry and Innovation
Minister for Climate Change and Energy Efficiency



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Executive Summary

A PLAN FOR AUSTRALIAN JOBS: THE AUSTRALIAN GOVERNMENT'S INDUSTRY AND INNOVATION STATEMENT

Creating and supporting jobs are the central objectives of the Australian Government's economic policy. *A Plan for Australian Jobs* will contribute to these objectives through a \$1 billion investment in productivity, prosperity and jobs. This strategy for jobs and growth represents the next stage in the Government's policies for an Australian economy which prospers in the 21st century. It will help Australian businesses seize the opportunities for growth in our region and adapt successfully to changing economic conditions.

Unlike many developed economies, the Australian economy is resilient and has strong fundamentals. Our economy has grown significantly since the Global Financial Crisis, our unemployment rate is low and inflation remains contained. While our prosperity is built on robust foundations, our economy is experiencing profound and rapid structural change. The Government is ensuring we meet this challenge through policies that boost productivity and manage change — because Australia values fairness as well as prosperity.

This is why the Government acted decisively during the Global Financial Crisis. While much of the world fell into recession, our actions saved jobs and kept our economy growing. Our resilience in the face of challenging global conditions means we can look to the future with confidence. There are, however, both opportunities and further challenges ahead.

We need to keep working to build productivity, which is the key determinant of higher living standards. The high Australian dollar is hitting many of our trade-exposed industries hard. Acute global challenges are creating uncertainty. These are placing some of our manufacturing and services businesses under extreme pressure. We can't address these issues by looking back to the past. We need new approaches to building and maintaining a dynamic and diverse economy to ensure Australia's future prosperity.

The Government's *A Plan for Australian Jobs* responds to the report, *Smarter Manufacturing for a Smarter Australia*, by the non-Government members of the Prime Minister's Taskforce on Manufacturing. It includes new policy measures to address the concerns of the sector, including the current period of intense structural change. It builds on the Government's December 2012 announcements to support Australia's manufacturing sector by strengthening Australia's anti-dumping and countervailing system and the industry-led *Manufacturing Leaders Group*.

The fundamental issues for manufacturing — to innovate and to improve productivity to capture the opportunities of the future — are also important for businesses and jobs across Australia's entire economy. The policies in *A Plan for Australian Jobs* will ensure Australia has a dynamic, diverse and globally connected economy, across a range of industries and regions. These new initiatives reflect the strategy laid out in the *Australia in the Asian Century White Paper* in which the Government set out its long-term plan to deliver a prosperous and resilient Australia by 2025, achieving growth in income and jobs by lifting national productivity.

The rise of Asia will be a defining feature of our future. In coming years, Asia will not only be the world's largest producer, but also its largest consumer. As the populations of Asia's economies become more affluent they will demand a range of quality goods and services — from the dinner table to health care, education and the family holiday.

This presents Australia with great opportunities not only for our manufacturing industry but also for our services sector. We are in the right place at the right time. The Government's policies to improve productivity and competitiveness are positioning Australia in the race to the top, not to the bottom.

To realise these opportunities we will need innovative and dynamic businesses capable of connecting to global and Asian supply chains. Working with industry, unions, educators and the research sector, the Government

has developed a package of measures to build stronger businesses and industries, contributing towards a more dynamic and productive economy. This is a plan to create more jobs today and the skilled and rewarding new jobs of tomorrow.

INVESTING IN GROWTH

The Government's economic management and the hard work of all Australians have delivered impressive growth, low unemployment and low inflation. This has been delivered despite acute challenges in the global economy and continuing international uncertainty. Our record of growth, creating more than 800,000 jobs since 2007, demonstrates Australia's resilience.

We are well placed to look to the future with confidence. But the Government understands that we need to build on Australia's strengths. The impact of global change is creating some intense pressures and challenges that require further action to secure and create jobs in Australia, now and in the future. Our policies to improve productivity growth rest on the five pillars of productivity articulated in the *Australia in the Asian Century White Paper*: skills and education; innovation; infrastructure; tax reform; and regulatory reform.

The Government has adopted policies (see *Appendixes 1 and 2*) to improve productivity by investing in education and skills and improving support for public and business research and development (R&D). The Government is also building the National Broadband Network and making substantial investments in modernising the nation's transport infrastructure. Australia's taxation system has been strengthened and the *Clean Energy Future* plan will ensure Australia is competitive in the low-carbon global economy of the future.

In line with the Government's productivity agenda, *A Plan for Australian Jobs* makes further important investments in our innovation system to promote productivity, growth and jobs.

INNOVATION IS A KEY DRIVER

Innovation is increasingly central to achieving productivity growth. The Government's vision is for Australia to have an innovation system in the top 10 globally by 2025. This is a significant challenge. Many developed nations, including the United States and European countries, are making large investments in their innovation systems. Asia is also becoming a centre of innovation and technological development.

Australia will continue to benefit from our vast minerals and energy resources. However, skills, innovation and entrepreneurship will increasingly be the drivers of prosperity. According to the Organisation for Economic Cooperation and Development (OECD) more than half the productivity growth in developed nations now comes from innovation.¹

Innovation is about creating knowledge and using practical know-how to convert this knowledge into better economic outcomes. Australia can do better here. On the World Economic Forum Global Competitiveness Index,² Australia ranks 12th on basic requirements (i.e. infrastructure, health and primary education and macroeconomic settings) and 13th on efficiency (i.e. higher education and training, financial market development and technological readiness), but 28th on innovation and sophistication. On the INSEAD Global Innovation Index,³ Australia ranks well on innovation *inputs* including research and skills, but is weak on innovation *outputs* like new products, entrepreneurship and exploiting comparative advantage.

As with other relatively small countries, most of the knowledge and technology applied in Australian businesses will continue to be developed abroad. Domestic modification of innovations introduced elsewhere is a common way in which our businesses innovate.⁴ This highlights the importance for firms to collaborate in identifying and exploiting knowledge from external sources. But innovation in Australia is about more than adopting new

1 OECD (2012) *OECD Compendium of Productivity Indicators 2012*

2 World Economic Forum (2012) *Global Competitiveness Report 2012-13*, p. 95

3 INSEAD and the World Intellectual Property Organisation (2012) *The Global Innovation Index 2012*

4 Department of Innovation, Industry, Science and Research (2011) *Australian Innovation System Report 2011* p. 21; Department of Industry, Innovation, Science, Research and Tertiary Education (2012) *Australian Innovation System Report 2012* p. 77

technologies and processes from abroad. We also have the opportunity to develop our own innovations. Australia has a history of producing innovations that have changed the world, including the black box flight recorder, key technologies underpinning Wi-Fi, the cochlear implant and the world’s first artificial pacemaker.

In the future, the success of our innovations will depend on our collaborations with others and our ability to tap into growing global markets in our region and beyond. The rise of Asia creates significant new demand for goods and services that Australia can supply successfully if we build on our current strengths and convert them into capabilities that can add value in the areas where markets are expanding. To do that, we need to drive better collaboration between firms and researchers, build specialist knowledge and expertise, and make faster, more direct connections between Australian firms and specialists and the global networks that will drive growth in the decades ahead.

We must improve our performance in translating investments in innovation into commercial and economic results to ensure Australia continues to prosper and grow. This will require our workers, researchers, businesses and industries to focus on skills, collaboration and entrepreneurship. *A Plan for Australian Jobs* adopts three strategies to contribute to these goals:

Backing Australian firms to win more work at home: The Government will introduce measures to assist our businesses in winning work on major projects. This will create more jobs today and enable Australian businesses to achieve the scale and experience to secure work in global supply chains in the future. It will also help deliver a fair share of benefits from the resources boom while setting businesses up to create jobs for the future.

Supporting Australian industry to win new business abroad: The Government will establish up to 10 *Industry Innovation Precincts*. These Precincts will bring together businesses, researchers and government agencies to work on developing capabilities needed to increase exports and win new business abroad. They will be led and run by industry, and will drive innovation, productivity and growth.

Helping Australian small and medium businesses to grow and create new jobs: The Government will help small and medium-size enterprises (SMEs) to innovate, grow and create jobs. New measures will improve access to finance, support firms with high-growth potential and provide better access to business opportunities in the public sector. This will ensure more of today’s small firms grow into the successful medium-size businesses of tomorrow.

A Plan for Australian Jobs will harness Australia’s skills and research expertise, boost Australian industry participation and enable our SMEs to grow. These measures go to the heart of productivity and will ensure Australia is more competitive.

Figure 1 outlines the policy framework focusing on skills, innovation, collaboration and entrepreneurship as key drivers of future prosperity.

Figure 1: Policy Framework

A PLAN FOR AUSTRALIAN JOBS		
BACKING AUSTRALIAN FIRMS TO WIN MORE WORK AT HOME	SUPPORTING AUSTRALIAN INDUSTRY TO WIN NEW BUSINESS ABROAD	HELPING AUSTRALIAN SMALL AND MEDIUM BUSINESSES TO GROW AND CREATE NEW JOBS
The Government will support the capabilities of Australian firms, in construction, manufacturing and services, to win work from Australia’s major projects and connect with global supply chains — to enable Australian industry to win more work at home and abroad, and support and create Australian jobs .	The Government will support up to 10 industry-driven <i>Industry Innovation Precincts</i> , bringing together industry, researchers and governments to capture the major opportunities in the Asian Century — to win new business in the world and create more Australian jobs .	The Government will connect Australian SMEs with the opportunities to build capabilities to assist growth, focusing on the finance, business capabilities, connections and culture needed to build, innovate and forge new economic opportunities and create new Australian jobs .
The Government will establish an online <i>Industry Innovation Network</i> — an open innovation platform connecting businesses and researchers across Australia, sourcing and sharing knowledge and ideas to build a flexible, skilled and innovative economy that can engage in the Asian Century .		

BACKING AUSTRALIAN FIRMS TO WIN MORE WORK AT HOME

Resource sector investment is set to remain at high levels over the medium term, with \$268 billion already committed. There are still huge opportunities for Australian businesses in the construction and production phases of projects, which last for years or even decades. However, Australia's size and geography, and the scale and capacity of local firms, means they do not always find it easy to connect with major projects.

Australian firms have raised concerns that the lack of early information about projects can prevent them from bidding for this work. Project proponents — many of them large multinationals — often do not have information about the capabilities of local suppliers. The costs of such barriers are substantial. They include lost job opportunities and a failure to realise the wider economic benefits from large projects, including investment in local firms and regions.

Australian firms and workers could, and should, win a greater share of the work flowing from major projects. Alongside the immediate benefits of more contracts and jobs in Australia, there are important long-term opportunities for Australian firms to participate in the international supply chains that support major minerals and energy and infrastructure projects.

More targeted policies are needed to help Australian firms build the capabilities to win work on these projects. The Government will therefore implement new policies to ensure Australian firms and workers can make the most of the opportunities arising from these once-in-a-generation investments. A new *Australian Industry Participation Authority* will be established to help Australian firms seeking work on large domestic projects and in global supply chains. It will improve coordination of the wide range of support currently available to help Australian firms under Government programs such as Buy Australian at Home and Abroad and Supplier Advocates.

The Government will also legislate to extend Australian Industry Participation (AIP) arrangements so they give fair chances to Australian firms. The new Australian Jobs Act will give Australian firms better access to major projects, not only in resources and infrastructure projects but across every sector of the economy. All projects with capital expenditure of \$500 million or more will be required to implement AIP Plans outlining how Australian industry will be given opportunities to win work on a commercial basis. These plans will be developed at the early stages of project planning to maximise their effectiveness.

To ensure Australian firms have access to global supply chains, projects with expenditure of \$2 billion or more that apply for concessions under the Enhanced Project By-Law Scheme will also be required to embed Australian Industry Opportunity officers within their procurement teams for major projects or global supply offices to ensure Australian firms have access to and can win work on global supply chains.

Enhanced industry participation will promote productivity and growth by building scale in our industries; building capabilities so industries can compete internationally; and giving industries greater connections to global supply chains.

The Government is also delivering stronger support for Australian industry against unfair competition from overseas by reforming the anti-dumping system.

The Government's National Workforce Development Fund and Centre for Workplace Leadership will also make significant contributions to improving firm management skills, and as a consequence, help firms win more work. The National Workplace Development Fund is expected to support more than 5,500 people to gain important management-related skills by June 2013 with a total investment of over \$17 million. The Centre for Workplace Leadership will improve management practices and workplace cooperation, reflecting strong evidence that these practices are critical to productivity.

SUPPORTING AUSTRALIAN INDUSTRY TO WIN NEW BUSINESS ABROAD

The Government will establish up to 10 *Industry Innovation Precincts* to drive business innovation and growth in areas of Australian competitive advantage. Precincts will enable firms to collaborate and build scale with researchers and with each other to improve knowledge and skills, deploy technology, create new products and services and take advantage of business opportunities.

The world's most successful innovation regions build critical mass around local strengths. This enables new ideas and methods to spread quickly, generating a pool of knowledge that increases innovation and productivity.⁵ Strong evidence shows that clusters of firms create deeper labour markets, increase specialisation and engagement among firms, generate economies of scale and improve the ability of businesses to absorb knowledge, respond to customer needs and innovate.⁶

Industry Innovation Precincts will boost productivity by fostering clusters of innovative firms and encouraging better connections with researchers and industry expertise. Each Precinct will have core partners, including several businesses and research institutions such as the CSIRO or universities. Led by industry, Precincts will link businesses with each other and with the best researchers from public institutions. This will help forge greater mobility between academic institutions and businesses, creating benefit from the long-term understanding of each other's contributions. They will work with business service providers with expertise in areas such as management, technology deployment, finance and access to new markets.

Firms around the country will be able to benefit from Precinct activities through a new *Industry Innovation Network*, an information technology platform supported by the National Broadband Network. This will enable businesses to take part in Precinct activities, gaining access to knowledge, support, services and partnerships regardless of their location.

The Government will invest more than \$500 million in *Industry Innovation Precincts*. Up to five Precincts will be established in areas of current Australian competitive advantage like manufacturing, food, finance and resources and up to five Precincts will support emerging opportunities — their focus will be on industries with strong export potential.

The first Precinct will be a Manufacturing Precinct and will be focused on two locations — one in south east Melbourne and another in Adelaide. A Food Precinct will also be established, headquartered in Melbourne. The remaining Precincts will be selected during 2013 and established by 2014 after engagement and a competitive process with Australian industry, the research community and state, territory and local governments.

Industry Innovation Precincts will be led and run by industry. They will have flexibility in the projects and services they deliver, ensuring that collaboration and innovation are driven by market demand. They may also take actions to stimulate engagement between parties by, for example, streamlining intellectual property arrangements within each Precinct. Services offered will include a *Growth Opportunities and Leadership Development (GOLD)* service for high-growth SMEs within the Precincts. Precincts will also link firms to sources of finance, business advice, market intelligence, and technology and research expertise.

The Government will encourage collaboration between businesses and researchers by investing dedicated research funding through the Australian Research Council's \$236.3 million Industrial Transformation Research Program (ITRP) into key areas where business and researchers can work together to boost Australia's competitive advantage. *Industry Innovation Precincts* will have a direct partnership with the ITRP which will only fund projects that are directly related to the priority research areas of Precincts.

5 OECD (2012) *Science, Technology and Industry Outlook 2012* p.186

6 OECD (2012) *Beyond Industrial Policy — Emerging issues and new trends* p. 31

Precincts will also be able to bid for funds from a competitive *Industry Collaboration Fund*, increasing to \$50 million a year. Projects funded could include those that target:

- market opportunities — accessing a major Asian infrastructure market or project that is not accessible to individual SMEs, but can be tackled by a consortium,
- technology opportunities — where groups of SMEs can be transformed by technology deployment and dissemination, or
- production chain projects — where domestic production chains can be strengthened by building knowledge based services capability and export markets.

Industry Innovation Precincts will promote productivity and growth by:

- concentrating innovation and collaboration in areas where it can translate into growth and investment,
- spreading new ideas and organisational processes more rapidly,
- facilitating the translation of Australia's research investments into positive economic outcomes,
- better aligning research directions with industry needs,
- improving business scale and quality by enabling engagement between firms,
- developing links to international Precincts and clusters — helping Australian know-how to access international production chains, and
- showcasing innovation opportunities for our businesses.

Supporting existing exporting industries is also very important. That is why the Government is increasing opportunities for Australia's pharmaceuticals industry through clinical research reforms. These reforms will position Australia as a leader in clinical research and improve our attractiveness as a destination for clinical research investment.

It is also why the Government is restating its commitment to the \$5.4 billion New Car Plan to support the vital automotive industry. Not only does it provide around 250,000 direct and indirect jobs, the sector is an integral part of the broader manufacturing sector. It delivers wider benefits for the economy through its investment, skills, technologies and exports. Automotive manufacturing uses inputs from other sectors like steel, chemicals and plastics and makes the single largest contribution to manufacturing R&D, with many innovations spreading to other sectors. Between 2011 and 2015, for example, the New Car Plan will support \$4 billion in capital and innovation investment and \$32.2 billion in domestic production.

HELPING AUSTRALIAN SMALL AND MEDIUM BUSINESSES TO GROW AND CREATE NEW JOBS

Australia has a good record in starting new firms, but we do not perform so well in growing them into the mid-sized firms that can succeed in export markets and drive prosperity in terms of jobs in Australia. Evidence shows that Australian SMEs are held back by limited access to finance, markets and management skills.

The Government will strengthen support for Australian SMEs to help them to grow, improve productivity, diversify their customer base, access export markets and become internationally competitive.

Venture Australia, a new coordinated package to extend investments in venture capital in Australia will improve SME access to high risk finance to grow the Australian knowledge-based firms of tomorrow. The Government will invest \$350 million in a new round of the Innovation Investment Fund program to stimulate private investment in Australian start-ups. The Government will also reform venture capital tax arrangements to improve clarity of tax treatment for private sector investors and to facilitate increased investment in venture capital by domestic and foreign investors, managed investment trusts and 'angel' investors.

Improving SME management skills can yield significant dividends. Clients of the Government's business advisory service Enterprise Connect report that, in the financial year following a basic Business Review provided by Enterprise Connect, their labour productivity grows by an average of five per cent.

The Government will establish the *Growth Opportunities and Leadership Development (GOLD)* initiative to provide focused support for SMEs with high-growth potential. The *Industry Innovation Precincts* will coordinate delivery of high end Enterprise Connect, AusIndustry, Commercialisation Australia and/or other relevant business support as appropriate.

In addition, access to core Enterprise Connect services will be extended to new sectors like professional services, information and communication technologies, and transport and logistics. This will improve the productivity of businesses in key enabling sectors for the broader economy. Improved access for smaller firms will also mean a 20 per cent increase in the number of manufacturing companies eligible for Enterprise Connect services.

The public sector is an important source of business and growth potential for Australian SMEs. To expand SME access to public sector markets, the Government will invest nearly \$30 million over five years in a new *Enterprise Solutions Program*, based on the United States' Small Business Innovation Research program. This program will help SMEs understand and develop the capabilities required by Government and make them more competitive when applying for public tenders.

SMEs will also benefit from the Government's initiatives to ensure Australian firms have a fair chance of winning business on major projects. The existing Buy Australian at Home and Abroad and Supplier Advocate initiatives will be better coordinated through the *Australian Industry Participation Authority*.

BUILDING AUSTRALIA'S FUTURE TOGETHER

Working together across the community is essential to our long-term plan for Australia's economy.

The *Australia in the Asian Century White Paper*, the Prime Minister's Taskforce on Manufacturing and the Prime Minister's Science, Engineering and Innovation Council have enabled industry, unions, and the research community to contribute to developing strategies for the nation's economic future.

The report of the Prime Minister's Taskforce on Manufacturing — *Smarter Manufacturing for a Smarter Australia* — concluded that a vibrant manufacturing sector which adapts to new markets and a high dollar and builds on its strengths is essential to a dynamic and diverse Australian economy. The Government endorses that vision. We already have a range of policies and investments in place that are supporting manufacturing to become more sustainable for the future. *A Plan for Australian Jobs* responds to the Prime Minister's Taskforce on Manufacturing report (see *Appendix 3*). It delivers new measures which will help build a stronger manufacturing sector and also recognises that increased innovation performance and productivity are critical for all industries.

A Plan for Australian Jobs envisions a more productive, dynamic and globally connected Australian economy. It will be an economy powered by the skills and innovative practices of our businesses, workers and researchers. To achieve this, industry, including businesses, workers and unions, must not only be consulted on this vision, but empowered to lead. Governments, researchers, educators and community groups are all essential partners. However, industry itself must provide the leadership. This is a new direction for industry and innovation policy — putting industry leaders in the driver's seat in Precincts; enabling innovative practices to grow in the workshop, the factory floor and the laboratory; and engaging industry in developing and implementing government strategies.

To maintain this momentum, the Government is establishing new Industry Leaders Groups. The *Manufacturing Leaders Group* is helping this sector manage change, boost productivity and seize opportunities. The Government will also establish a new *Services Leaders Group* to identify ways of boosting productivity in services industries, the largest industry sector in Australia today. These Leaders Groups will advise on the skills, innovation practices, regulatory needs and priorities for global engagement. They will promote innovation performance, domestic and international engagement and support entrepreneurship, and encourage Australian business to think globally.

Empowering and engaging industry will enable all of us — governments, businesses, researchers, workers, unions and the general public — to create jobs and opportunities for the future. Working together we can build an Australia that is economically strong, that is smart when it comes to using knowledge, research and technology and that remains a fair place to live and work.

A PLAN FOR AUSTRALIAN JOBS: POLICY SUMMARY

The Government is **Backing Australian firms to win more work at home** through:

- expanding Australian Industry Participation (AIP) by requiring major projects worth \$500 million or more to develop plans for local procurement and requiring companies with projects with expenditure of \$2 billion or more to embed staff in their global teams to promote Australian firms and plan how they will use Australian firms, and
- strengthening anti-dumping and countervailing system reforms.

The Government is **Supporting Australian industry to win new business abroad** through:

- creating up to 10 *Industry Innovation Precincts* to drive collaboration and innovation in areas where Australian firms can compete in overseas markets. Precincts will be business led, focused on areas of scale, competitive advantage and emerging opportunities, and networked across Australia through a new online *Industry Innovation Network*,
- providing new support for SMEs with high-growth potential in *Industry Innovation Precincts* through *Growth Opportunities and Leadership Development (GOLD)*, and
- improving efficiency and streamlining costs to position Australia as a world leader in clinical research and the commercialisation of new medical technologies.

The Government is **Helping Australian small and medium businesses to grow and create new jobs** through:

- *Venture Australia* — new investment and measures to facilitate the growth of innovation-driven and knowledge-based businesses in Australia, to increase industry competitiveness and to attract new investment to Australia,
- establishing a new *Enterprise Solutions Program* to position Australian SMEs to develop solutions to public sector needs and to bid more competitively for Government tenders, and
- expanding Enterprise Connect services to new sectors.

To **Build Australia's Future Together** the Government is establishing the *Manufacturing and Services Leaders Groups* — encouraging industry to take the lead and work together with Government to tackle industry and innovation challenges, identify new opportunities and strengthen the evidence base to support investment decisions.

A PLAN FOR AUSTRALIAN JOBS: SUMMARY TABLE

	Total \$m
Backing Australian firms to win more work at home	
Opening up opportunities through Australian Industry Participation ¹	98.2
Strengthening Australia's Anti-Dumping and Countervailing System Reforms ¹	27.7
Supporting Australian industry to win new business abroad	
Industry Innovation Precincts comprising:	504.5
<i>Industry Innovation Precincts¹</i>	238.4
<i>Industrial Transformation Research Program (ITRP)²</i>	236.3
<i>Manufacturing Technology Innovation Centre (MTIC)²</i>	29.8
Expediting Clinical Trials Reform in Australia ¹	9.9
Helping Australian small and medium businesses to grow and create new jobs	
Venture Australia ³	378.6
Enterprise Solutions Program ¹	27.7
Building Australia's future together	
Manufacturing Leaders Group ¹	5.6
Services Leaders Group ¹	5.6
Total over forward estimates⁴	745.3
Total⁵	1057.8

1. Over forward estimates

2. Announced value (to 2015-16)

3. Total over 14 years (\$350m venture capital and \$28.6m costs). Total over forward estimates is \$66.1m, of which \$58.0m is capital

4. Includes ITRP and MTIC to 2015-16

5. Includes full Venture Australia resourcing

1: Building on Australia's Strengths

Australia's economic resilience reflects our robust policy foundations. We can look to the future with confidence. But the future is not assured. To create jobs for the future, we need to build on Australia's strengths and seize the new opportunities in our region. That is why the Government is implementing policies to lift productivity growth and build a more dynamic, diverse and resilient economy.

Australia's economy is resilient. Swift action during the Global Financial Crisis ensured Australia did not experience the business closures and mass job losses seen elsewhere around the world. We have great firms and institutions and a good record of job creation and growth in recent years. Our strong public finances and the Government's commitment to fiscal discipline underscore confidence in the Australian economy. We can look to the future with confidence. As we do, we see both challenges and opportunities.

CHALLENGES FACING AUSTRALIAN INDUSTRY

The Australian economy is constantly undergoing change, with businesses expanding and contracting at different rates, and workers moving between jobs. Around 300,000 businesses are started and a similar number closed in Australia each year.⁷ Around two million people start new jobs and leave old ones, and about half a million workers change industry each year. Such change is a normal part of a dynamic, market-based economy.

However, Australia's economy is also experiencing one of the most significant periods of structural change in recent decades. This reflects a changed global economic environment following the Global Financial Crisis and the rise of the Asian region as a centre of economic activity and strategic power.

Demand for Australian mineral and energy resources remains strong, and has fuelled an extraordinary surge of national income and investment in Australia. This also contributes to structural change in the Australian economy, as capital and labour has flowed into the resources sector. The investment phase of the mining boom will peak in the coming years, with activity shifting towards production and extraction.

In many sectors, demand and profitability have remained subdued following the Global Financial Crisis, but the Australian dollar has remained historically high.

Structural change in our economy has created challenges for many people, businesses, industries and regions.

Acute global challenges are creating uncertainty and, in part because of our economic strengths, putting further upward pressure on the Australian dollar. These developments are placing some of our manufacturing and services businesses under extreme pressure.

Rising costs, the emergence of low cost competitors and weak demand in related sectors exacerbate this pressure. This is compounded, particularly for SMEs, by the difficulty many of our manufacturers experience in winning work from major resources and construction projects both at home and abroad. While major resource projects are some of the biggest users of infrastructure, components and specialised services in our economy, they are not always easy for Australian suppliers to access.

Australian firms therefore face the challenge of winning new business in a rapidly changing regional and global marketplace, while adjusting to the fact that a high dollar may be here to stay for the foreseeable future. Winning in this new market place requires firms to compete on quality as well as cost, offering distinctive value that is grounded in Australian strengths.

⁷ Australian Bureau of Statistics (2012) *Counts of Australian Businesses, including Entries and Exits, Jun 2007 to Jun 2011* cat no. 8165.0

For Australia as a whole, it is essential that our economy does not rely on too narrow a base, for example sectors where overseas demand is strong, or business models which have been successful in past decades but may be obsolete in the face of new technologies and regional production or supply chains.

As other economies invest more in skills, infrastructure and innovation, Australian firms need to develop their own specialised capabilities in order to offer products and services that are tailored to new markets and able to add distinctive value. More and more, Australian businesses need to *innovate* to improve their productivity, capture new market opportunities and grow.

But while it is becoming more important, Australian businesses face challenges in innovating. The proportion of Australian businesses reporting one or more barriers to innovation increased to 45 per cent between 2005–06 and 2010–11.⁸ Limited access to either skilled people or additional funds are the two most common perceived external barriers to innovation.⁹

SMEs face higher barriers to innovation and accordingly innovate and collaborate less often. Large Australian businesses rank almost last in the OECD on innovation. Further, despite the significant benefits of collaboration, Australian businesses of all sizes remain poor collaborators by international standards.¹⁰

OPPORTUNITIES FOR AUSTRALIAN INDUSTRY

To prosper in the future, Australian industry must respond to these challenges. In coming years, Asia will not only be the world's largest producer but also its largest consumer. Asia's emerging affluent citizens will demand a range of quality goods and services. This presents Australia with great opportunities. We are in the right place at the right time. With major stakeholders — industry, unions and employees — the Government is positioning Australia in the race to the top by implementing productivity-enhancing reforms and policies to ensure our economy is competitive and our people are skilled.

But we will need to do more to realise these opportunities. We will need innovative and dynamic businesses capable of connecting to global and Asian supply chains.

We need to keep working to improve productivity growth, the key influence on higher income and living standards. In recent years, the Government has taken action to improve productivity by:

- **investing in education and skills** for all Australians including through: universal access to early childhood education; a new National Quality Framework for Early Childhood Education and Care; school reform to improve teacher quality and student literacy and numeracy; a new, demand-driven funding system for undergraduate places; greater Australian Government support for students attending university; the establishment of the Australian Workforce and Productivity Agency; and major investment in, and reform of, Australia's training system,
- **investing in public research, business research and development and SME support** outlined in the 2009 *Powering Ideas: An Innovation Agenda for the 21st Century*,
- setting a strategic framework for research funding through the 2012 **National Research Investment Plan**, linking government investment in research to innovation, productivity and national wellbeing,
- **building the National Broadband Network** to create new ways to do business and deliver services, connecting Australia to the world through super-fast broadband services,
- making historically large investments **modernising and extending the nation's road, rail and port transport** infrastructure,
- **moving to a Clean Energy Future** with reforms to encourage investment in clean technologies so Australia will be competitive in a low-carbon global economy,

8 Australian Bureau of Statistics (2012) *Innovation in Australian businesses 2010–11*, cat no. 8158.0

9 Department of Industry, Innovation, Science, Research and Tertiary Education (2012) *Australian Innovation System Report 2012* p. 4

10 Department of Industry, Innovation, Science, Research and Tertiary Education (2012) *Australian Innovation System Report 2012* p. 4

- **strengthening Australia's taxation system** to improve its contributions to productivity at the individual and firm levels, and
- **leveraging our proximity to Asian nations** by strengthening our relationships in the region, pursuing free trade and building scientific, educational and people to people links.

More information on these and other Government policies to support productivity growth is available at *Appendix 1*. Targeted industry support measures managed by the Department of Industry, Innovation, Science, Research and Tertiary Education are outlined at *Appendix 2*.

These initiatives are major investments in Australia's future, but there is more to be done. *A Plan for Australian Jobs* outlines the Government's approach to creating jobs and competitive firms in Australia through productivity and innovation.

2: The Government's Policy Principles

The Government's plan to support Australian firms to succeed is underpinned by five clear principles. They are: future focused; supporting displaced employees first; a focus on productivity and innovation; outward looking; and a commitment to competition.

Five principles guide the Labor Government's approach to improving the performance of Australian industry.

First, policy must look to the future, not to the past. Government has a role in supporting long-standing businesses and industries, but with the focus on their future competitiveness. We must also look to the opportunities for all businesses for the future — the opportunities for jobs growth. The three point plan that constitutes *A Plan for Australian Jobs* reflects this principle.

Second, policy must emphasise support for employees. This is fundamental. The performance of Australian firms depends on a highly skilled and engaged workforce. Employees who are displaced when businesses restructure need support to find alternative employment and to acquire new skills. This Government is committed to providing this support. *Chapter 7* details the Government's approach to responding to structural adjustment.

Third, policy must be focussed on innovation and productivity. During this period of structural change, businesses have to adapt and compete in order to prosper. Helping them to improve their productivity performance, including through innovation, is a policy priority. Government has an important role in maintaining open and competitive markets, in helping firms and workers to develop the capabilities to innovate, in opening up new market opportunities and in developing the infrastructure and partnerships that enable business innovation.

The Government's agenda to improve productivity and growth rests on the five pillars of productivity articulated in the *Australia in the Asian Century White Paper*: skills and education; innovation; infrastructure; tax reform; and regulatory reform.

Strong productivity growth drives broader economic growth, high-value jobs and higher living standards. Sixty-five per cent of economic growth per capita in Australia over the last four decades can be attributed to increases in productivity.¹¹

Productivity growth accelerated in the 1990s on the back of a series of competition-enhancing economic reforms introduced in the 1980s and 1990s, and then slowed in the early and mid-2000s. Some of this decline is due to one-off factors such as severe drought and unprecedented capital investments in mining that will reap benefits over time.¹² However whilst overall productivity growth has continued to slide there has been some recovery in labour productivity recently.

Productivity growth continues to be a priority. The need to stimulate productivity growth is more pressing now that Australia has entered a period where an ageing population will reduce workforce participation and given that our terms of trade are likely to have peaked.

Fourth, policy should look to the global economy and the opportunities for Australia in trade, rather than being inwardly-focussed. In the *Australia in the Asian Century White Paper*, the Government set out ambitious objectives for expanding and participating in growing regional markets, developing high quality and comprehensive free trade agreements, strengthening our key relationships in the region and increasing business and people to people connections.

¹¹ Department of Innovation, Industry, Science and Research (2010) *Australian Innovation System Report 2010* p. 1

¹² Forsyth, P. (2000) *Microeconomic Policies and Structural Change*. In: Gruen, D. and Shrestha, S. eds. (2000) *The Australian Economy in the 1990s*. 1st ed. Sydney: Reserve Bank of Australia, p.235–267; Brennan, G. and Pincus, J. (2002) *From the Australian Settlement to Microeconomic Reform: the Change in Twentieth Century Policy Regimes*. *Centre for International Economic Studies, Adelaide University* (Discussion Paper No. 0213)

The **fifth** guiding principle for policy at a time of structural change is a strong commitment to the need for vigilance on competition and regulation. Political pressures to throw up new barriers to competition, or perpetuate old ones, must be resisted, and work must continue to break down the inefficiencies of our Federal-State structure. The Government is committed to open, competitive markets and to working with business to ensure regulation is not creating unnecessary costs and inflexibilities.

3: Backing Australian Firms to Win More Work at Home

The Government is taking action to encourage companies that undertake major projects to make use of Australian industry capabilities. These measures will give Australian firms more opportunities to win work supplying goods and services on these projects. They will also help Australian firms to develop the capabilities they need to take part in global supply chains. The Government is delivering stronger support for Australian industry by reforming the anti-dumping system to make sure local companies do not face unfair competition. To help improve the performance of firms, management and workplace skills will be improved through the National Workforce Development Fund and the Centre for Workplace Leadership.

The record pipeline of investment in Australia's resources sector, with \$268 billion already committed, will generate numerous opportunities for Australian businesses in the construction and production phases of projects, which can last for years or decades. However, major international firms undertaking large-scale projects in Australia do not always make the most of Australian capabilities. Australia's size and geography and the small scale and capacity of local firms mean they often find it difficult to connect with major projects.

Australian firms face barriers in securing work on major projects because of a lack of timely information about opportunities as well as gaps, both real and perceived, in their capabilities.

Australian firms have raised concerns that lack of early information about projects can prevent them from bidding for this work. Project proponents — many of them large multinationals — often lack information about the capabilities of local suppliers. The processes used in major project procurement pose barriers to Australian firms. Major projects are increasingly:

- working through global engineering, procurement and construction management companies using global supply chains, rather than local suppliers, and
- using fully integrated, imported plant, rather than assembling it locally in the construction phase.

Missing out on these opportunities puts manufacturing, construction and service businesses at a disadvantage. It also reduces the demand for the inputs these Australian based firms would have used such as Australian steel, cement and aluminium. By supplying these projects, overseas competitors get the chance to strengthen their capabilities and connections to position themselves for future supply chain opportunities. Where local firms do not get the same chances, it makes it even harder for them to compete.

The opportunity-capability gap stems from two sources that are often conflated:

- actual capability gaps, whereby Australian firms do not meet the standards required of suppliers to major projects, and
- information gaps, where a lack of familiarity and relationships with local suppliers limits purchasing decisions in a competitive and fast-moving market.

Information gaps represent a market failure that prevents project proponents and developers from having full knowledge of the capabilities of local suppliers.

There is a strong case for action to make sure that local firms can access major projects where these capability gaps are minor or reflect incorrect perceptions rather than actual capability shortcomings. This will ensure the benefits of major projects for our economy are as large and widely shared as possible.

The experience of the Australian defence industry demonstrates that early consideration of local capabilities can identify opportunities for both one-off engagement and ongoing trusted relationships within global supply chains. Encouraging project proponents to consider Australian industry capabilities can address the poor flow of information that exists and help to build trusted relationships.

Experience also shows the most effective results are achieved by a combination of encouraging major project proponents to consider local companies and improving local capabilities. This expands both the supply options for proponents and the market potential of local businesses.

The Government believes that higher priority should be given to identifying untapped opportunities for Australian industry to participate in major projects. However, the Government does not accept that mandating local content is an effective or efficient way to bridge opportunity-capability gaps. Besides being inconsistent with international trade obligations, mandating local content ignores the need for Australian firms to develop capabilities that are genuinely competitive in order for them to fuel our future prosperity.

Local firms that offer solutions at global standards can compete effectively in global as well as Australian markets. It is time to give them a fair chance to do so.

REFORM TO CAPTURE AUSTRALIAN OPPORTUNITIES

The Government will back Australian firms through measures that make it easier for Australian businesses to win more work at home and to capture benefits from Australia's strong pipeline of major projects.

The Government will legislate to develop Australian Industry Participation (AIP) arrangements that maximise opportunities for Australian firms. The new Australian Jobs Act will ensure Australian firms are fairly considered for all major projects, expanding their opportunities to benefit from our economy's large-scale resources and construction activity.

Major projects in all sectors of the economy with capital expenditure of \$500 million or more will be required to implement AIP Plans. AIP Plans outline how local industry will be given opportunities to win work on a commercial basis. Projects across the economy, in sectors such as resources, energy, construction and manufacturing will be required to outline how local industry will be given opportunities to win work.

Experience over twenty years suggests a well-executed AIP Plan can increase local content by as much as five per cent and improve outcomes for both participating firms and local suppliers. For Australian industry, this could mean additional work of around \$1.6 billion per year for new projects covered by the new Australian Jobs Act. Promoting competitive and capable Australian firms will have benefits for industry, employment and local communities.

AIP Plans will be developed at the early stages of project planning to maximise their effectiveness. Large resource projects will need to identify opportunities in their operational as well as construction phase. This will enable them to find innovative Australian firms not being identified through current practices.

Undertaking AIP Plans will also provide benefits to project proponents. Surveys of major project proponents who already have to provide AIP Plans indicate over 70 per cent agreed or strongly agreed that AIP Plans had a positive impact on procurement outcomes for their company and over 70 per cent agreed or strongly agreed the AIP Plans had a positive impact for their Australian suppliers. Over 75 per cent of projects agreed that in maximising opportunities for Australian suppliers, the project had a high or moderate impact on regional development, and over 90 per cent believed that a high or moderate impact was achieved in employment and skills transfer.¹³

AIP Plans will require project proponents to specify their needs in Australian or other commonly used international standards, ensuring that standard specifications cannot be used to lock out Australian suppliers from participating in major projects. If project needs are not specified in Australian standards, an explanation will need to be provided to justify the specifications used and if this justification is not deemed as being valid, the AIP Plan will not be deemed compliant.

The Government will also reform the Enhanced Project By-Law Scheme (EPBS) to foster greater local participation. This scheme provides duty-free tariff concessions for eligible goods imported for projects in industries like mining, resource processing, manufacturing and energy supply. Projects with expenditure of \$2 billion or more that apply for concessions under the EPBS will also be required to embed Australian Industry

¹³ Results of Enhanced Product By-Law Scheme Post-Impact Surveys since 2003

Opportunity officers within their procurement teams for major projects or global supply offices to ensure Australian firms have access to and can win work on global supply chains. This builds on the successful approach of the Defence Global Supply Chain Program. It puts Australian capabilities and businesses into consideration when leading global companies in a range of sectors are looking for suppliers and expertise through their global supply chains.

A CASE STUDY: GLOBAL SUPPLY CHAIN PROGRAM

Through the Defence Materiel Organisation's (DMO) Global Supply Chain (GSC) program, the Government funds multinational Defence companies to establish business units to identify and certify Australian companies as part of their global supply chains.

GSC Deeds outline activities and engagement strategies to increase opportunities and scope for Australian industry to compete for work within the supply chains of multinational Defence companies, with the overall goal being to sustain Australian industry's capability to support the Australian Defence Force (ADF).

In response to changing Defence industry policy, Boeing formed its Office of Australian Industry Capability (OIAC) five years ago to work with the DMO to identify globally competitive Australian companies and facilitate the release of bid opportunities on a best fit basis. As reported by Boeing, the OIAC has facilitated contracts worth more than \$230 million to Australian industry.

The success of the OIAC prompted the government to establish and fund the GSC Program in 2009 to engage other defence multinationals. The companies currently engaged with the program under a combination of major DMO acquisition projects and direct program funding are Boeing, Lockheed Martin, Raytheon, Thales, Northrop Grumman, BAE Systems, Eurocopter and Finmeccanica.

In addition to bid opportunities, the GSC program has provided Australian companies with a range of technical training. In coordination with the Enterprise Connect Defence Industry Innovation Centre, GSC prime contractors provide targeted training to individual companies or to selected individuals, improving the global competitiveness of Australian industry. In 2012, Queensland based Ferra Engineering was named Boeing International Supplier of the year as a direct result of being on the GSC Program.

As at December 2012 the GSC Program has helped Australian companies win over \$480 million in contracts on merit against global competition.

The Government will also establish a new *Australian Industry Participation Authority* to help our businesses develop the capabilities and connections needed to capture these opportunities. The Authority will improve coordination between the Buy Australian At Home and Abroad initiative and Supplier Advocates and other relevant parts of AusIndustry and Enterprise Connect. It will be a one-stop-shop for Australian firms seeking to win work on large domestic projects. It will also work with the Industry Capability Network Ltd to consider options to integrate Industry Capability Network Ltd with the Authority's operations.

The Authority will support the continuing work of Supplier Advocates who use their professional networks, business experience and access to decision-makers to increase the competitiveness and capacity of SMEs, and help them connect with new business opportunities. Advocates build on the activities of industry partners and government agencies, including Enterprise Connect, the Industry Capability Network Ltd, Austrade and the Export Finance and Insurance Corporation (EFIC). In addition to the recently announced Automotive Supplier Advocate, Advocates currently work in the resources, rail, steel, information technology, clean technologies, water and textiles, clothing and footwear sectors.

STRENGTHENING AUSTRALIA'S ANTI-DUMPING SYSTEM

Australian industry will also benefit from changes to the anti-dumping regime recently announced by the Government. The Government's \$27.7 million *Strengthening Australia's Anti-Dumping and Countervailing System* reforms will improve the system for investigating dumping and applying remedies where dumping is injuring local producers.

There is evidence of a significant increase in the unfair trade practice known as dumping, where imported goods are being sold in Australia at prices below their normal value. The number of new investigations has more than tripled over the last two years.

It is neither fair nor efficient for Australian manufacturers or their workers to be harmed economically by products dumped into Australia. Accordingly the Government has decided to provide stronger protection for Australian industry against unfair competition from overseas by:

- establishing a new Anti-Dumping Commission to investigate dumping complaints,
- increasing resources for Customs resources to deal with cases speedily and fairly — including almost doubling the number of investigators,
- making the anti-dumping system easier for SMEs to access and use, and
- strengthening remedies against overseas producers who deliberately circumvent Australia's anti-dumping rules.

These reforms are consistent with the Government's strong track record of support for free and fair trade and for Australia to operate as an open and dynamic economy. Improvements to Australia's anti-dumping system will ensure competition is on a level playing field, supporting jobs in manufacturing and other industries.

IMPROVING MANAGEMENT AND WORKPLACE SKILLS

A key factor in firm performance is the quality of management and leadership. Well-managed firms tend to exhibit better innovation capabilities¹⁴ and better overall profitability, productivity and sales.¹⁵ The Government's National Workforce Development Fund and Centre for Workplace Leadership will make significant contributions to improving management skills.

The National Workforce Development Fund helps businesses to enhance the skill level of workers. Funds are available on a co-investment basis with the portion of Government contribution greater for smaller firms. Businesses submit proposals through Industry Skills Councils for their workers to undertake training for nationally recognised vocational qualifications.

Through an investment of \$17 million, the National Workforce Development Fund is expected to support more than 5,500 Australians by June 2013 to gain important management-related skills.

In addition, the Government will invest \$12 million over four financial years to establish the Centre for Workplace Leadership. Working across all industries, sectors and regions of Australia, the Centre will improve leadership capability in workplaces of all sizes, including SMEs, reflecting strong evidence that effective leadership is critical to productivity.

A joint venture of industry and Government, the Centre will be an independent, expert, not-for-profit entity. It will provide simple, accessible and practical leadership and management development tailored to the needs of individual workplaces, to help Australian firms improve their performance through workplace development and workplace collaboration.

14 Samson D (2010) *Innovation for business success: Achieving a systematic innovation capability*, Report prepared for the Department of Innovation, Industry, Science and Research, Canberra

15 Bloom, Nicholas and Van Reenan John (2010) *Why Do Management Practices Differ across Firms and Countries?* p. 10

The Centre will assist managers and leaders at all levels to create workplace environments where people give their best through their everyday relationships at work. A key role of the Centre will be to advocate the benefits of improving leadership capabilities for employers and employees alike. The Centre will also focus on Australia's youth — encouraging investment in future generations of Australian leaders and managers.

The Centre is expected to be operational in the first half of 2013.

By lifting management capacity and workplace performance, productivity will rise, improving the competitiveness of participating firms and thereby helping them win more work both in Australia and abroad.

FORGING WORKPLACE PARTNERSHIPS

Innovation is a key driver of business productivity. Increased leadership and collaboration through workplace partnerships will result in higher performing workplaces. According to the Society for Knowledge Economics: *"High performance workplaces are characterised by a set of shared values and beliefs where people welcome and seek to introduce change and innovation, where leaders care for their employees and foster collaboration, and where there is an ambition to deliver results and a focus on achieving goals."*¹⁶

The report from non-Government members of the Prime Minister's Manufacturing Taskforce also encouraged more collaborative workplaces. A key focus of the report was the need to *"forge a shared competitiveness culture through a new national partnership for workplaces, focused on the capabilities of managers and workers."*¹⁷

The Government will undertake a Workplace Partnership Program pilot initiative to bring together management and employees at the enterprise level with the objective of enhancing productivity, innovation and employee engagement. Further details of the pilot will be developed in consultation with the *Manufacturing Leaders Group*, the Australian Workforce and Productivity Agency and the Centre for Workplace Leadership. The objectives of the pilot program will be to:

- improve management and leadership skills at every level at the workplace,
- provide an opportunity for communication skills at all levels to be developed and practiced,
- enhance employee engagement, motivation and satisfaction,
- provide a mechanism for harnessing ideas from all levels at the workplace to maximise opportunities for innovation, efficiencies and business profitability for the benefit of all,
- build high trust relationships, and
- provide opportunity for unions (where they are present) to contribute positively at the workplace level.

16 Boedker C, Vidgen R, Meagher K, Cugin J, Mouritsen J, and Runnalls J. M. (2011) *Leadership, Culture and Management Practices of High Performing Workplaces in Australia: The High Performing Workplaces Index* p.11

17 A report of the non-Government members of the Prime Minister's Taskforce on Manufacturing (2012) *Smarter Manufacturing for a Smarter Australia* p. 13

4: The Importance of Innovation

*“The stimulus of intensified competition and the gains of flexible markets remain, but further productivity improvement is now in the more difficult terrain of improving human capital and innovation”.*¹⁸ (Productivity Commission)

In this century, as in the last, Australia will continue to benefit from its natural endowments. However the resources that will increasingly drive our prosperity will be the skills, ingenuity and entrepreneurship of our people. Australia has high-quality institutions and a diverse, adaptable and highly skilled workforce. As the global economy transforms, Australia will need to lift its innovation performance in order to prosper economically.

Innovation enables businesses to increase efficiency and productivity through the development and adoption of new technologies and know-how. The ability to innovate by finding new ways to do business, developing new business models and tailoring products to a changing market, is vital to the success of Australian businesses in the Asian Century.

The *Australia in the Asian Century White Paper* identifies Asia as a growing global centre of innovation, investing in skills, infrastructure and science. Australia cannot assume it has an advantage over Asian economies in higher value-added activities. The White Paper identifies actions that will help Australian industries capture the opportunities from growth in Asia. These include:

- supporting the capabilities of our people,
- developing innovative firms with better connections to Asia,
- improving collaboration between business and the research sector,
- developing the financing of innovation, and
- boosting the value of domestic and international engagement between firms and sectors.

WHAT IS INNOVATION AND WHY DOES IT MATTER?

The OECD defines innovation as: ... *the introduction of a new or significantly improved product, process, marketing method or organisational method in business practices, workplace organisation or external relations.*¹⁹

Innovation is often equated with investing more in research to create knowledge and technology. However, innovation is about more than creating knowledge and ideas; it is about applying knowledge and ideas in new ways to create value. Knowledge and ideas are most likely to find new applications when competition, capabilities and connections are strong. One example of the application of knowledge, ideas and technology to create value is the strong productivity growth experienced in industries such as financial services and logistics in the 1990s following the adoption of information and communications technologies created mostly in the United States.

Innovation is increasingly a collaborative pursuit that runs across firms, regions and sectors. Successful innovation occurs through an ‘innovation system’, linking together the ideas, technology, finance and production networks needed to successfully develop new ideas and methods and then bring them to scale in a particular industry sector.

Innovation often thrives through cross-cutting networks, where ideas can spread rapidly and be tested in practice by many users. While the specific form of innovation strategy varies widely from industry to industry and place to place, it requires skills, creativity and thinking “outside the box,” as well as connections between suppliers, competitors, customers, financiers and other partners. Creativity and design thinking are critical enablers of productivity and innovation and have been shown to play a significant role in the growth of firms and sectors.²⁰

¹⁸ Productivity Commission (2009) *Submission to the House of Representatives Committee on Australia’s Productivity Performance* p.37

¹⁹ OECD (2005) *Oslo Manual Guidelines for collecting and interpreting innovation data* 3rd edition OECD and European Commission Paris

²⁰ Department of Trade and Industry (2005) Economics Paper No. 15, *Creativity, Design and Business Performance*

Innovation can create higher value products and services, improve production and open new markets. A culture of innovation helps a business to increase productivity and thrive in a competitive market. This culture is vital for Australian businesses particularly in winning opportunities to service the fast-growing and increasingly affluent populations of the Asian economies.

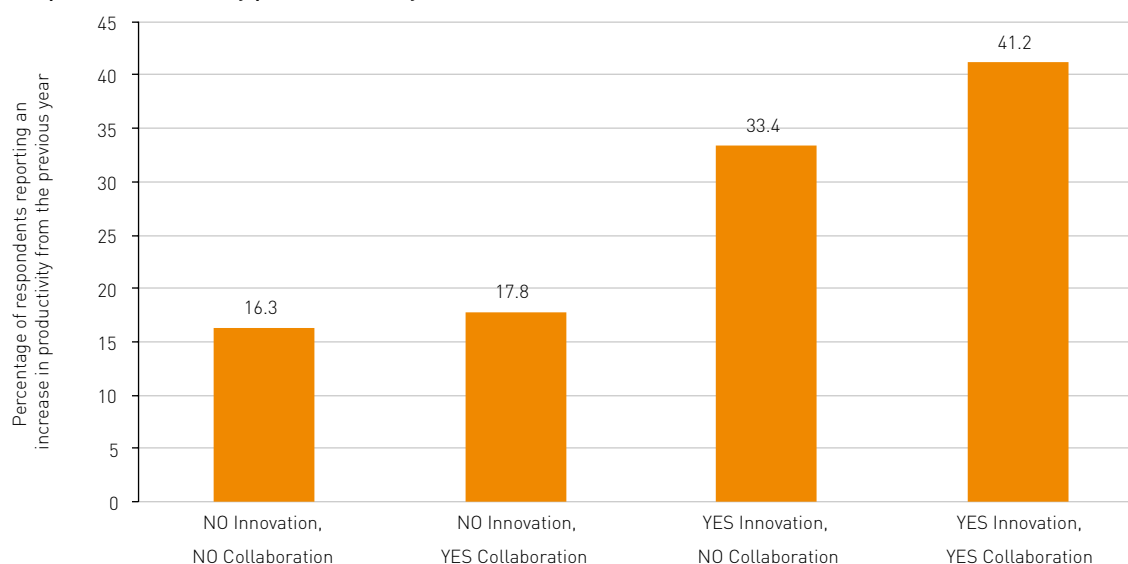
Economists have been analysing factors that drive growth for many years. In the long-run, especially for developed economies like Australia, overall improvements in productivity and economic growth come increasingly from innovation.²¹

OECD analysis shows that one-half to two-thirds of productivity growth in developed nations is due to innovation. For example, in the United Kingdom more than 60 per cent of economic growth between 2000 and 2008 has been attributed to innovation.²² Robert Solow, a Nobel Prize winning economist, has shown that well over half of the growth in United States output per hour during the first half of the 20th century can be attributed to advancements in knowledge, particularly technology. Many economic studies have confirmed these findings about the central role innovation, collaboration, positive spillovers and public investment play in determining economic prosperity.²³ Innovation depends on resources like specialist skills, finance and infrastructure that require shared, long term investment to develop. To encourage investment in new ideas or methods, where returns are long term or uncertain, requires effective ways to share risk. Public investment in strengthening innovation systems is an important part of economic development because it can create economic effects which spread widely and would not otherwise occur.

WHAT ROLE DOES COLLABORATION PLAY IN THE INNOVATION SYSTEM?

Collaboration is an essential aspect of innovation because it enables the spread and novel combination of ideas, spreads risk, propagates skills and builds critical mass.²⁴ The Australian Bureau of Statistics' Business Characteristics Survey shows that those Australian businesses that collaborate, as well as innovate, are more likely to demonstrate increased productivity performance (see **Graph 4.1**).

Graph 4.1: Productivity performance by innovation and collaboration status



Source: Australian Bureau of Statistics (2012) Customised output *Innovation in Australian Business 2009-10*, cat. no. 8167.0. Note: Collaboration activity is for any purpose.

21 Aghion, P. (2012) *From Growth Theory to Growth Policy Design* London School of Economics, Economic & Social Research Council

22 NESTA (2012) Plan I: *The Case For Innovation-led Growth*

23 Committee for the US National Academies (2010) *Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5*

24 Cutler & Company Pty Ltd (2008) *Venturous Australia, building strength in innovation* p.9

SMEs are particularly dependent on connections and collaborators for innovation:

*... small firms do not innovate by themselves but in collaboration with suppliers, customers, competitors, universities, research organisations and others. ... the quality of their local entrepreneurship environments ... is critical to generating local knowledge spillovers that promote growth.*²⁵

Collaboration helps SMEs lower costs by enabling resources including skills, knowledge, equipment and finance to be shared without each business needing to invest in every capability itself. More than 23 per cent of Australia's innovative businesses identify costs as a barrier to innovation activity.²⁶

In the past, Australian firms and regions may have been too small and too distant from global markets to develop the critical mass needed to compete as global innovators. Despite this, Australia has developed world class capabilities in several key sectors and fields of knowledge.

The impact of new technologies, open markets and the rise of Asia is now combining to lessen the tyranny of distance and the isolation of Australian firms and innovators. Digital technology and the global flow of ideas and culture are making it possible to collaborate and compete in real time through networks that stretch around the world.

Australia has resources and capabilities in many fields, from mining services and advanced manufacturing to international education and environmental management, that could be a key source of competitive advantage in the decades to come. But to develop and take advantage of these strengths in the Asian Century, Australian businesses need to work together to boost their capacity for innovation.

In Australia, engagement often stems from trusted business and personal relationships and does not easily extend beyond existing networks and familiar markets.²⁷ Industries and regions that collaborate beyond personal relationships have systems and cultures that make it easy to connect and share. We need to promote these systems and cultures across the economy to support more effective collaboration.

Collaboration underpins the value generated by clusters and networks of firms. These clusters and networks create value by sharing specialised investments, facilities, scientific capabilities and practical skills. They also generate knowledge spillovers where knowledge is spread to other businesses.²⁸ The wider economy also benefits because:

- strong industry clusters are associated with higher jobs and wages growth, and higher start-up and patenting rates,
- new industries are more likely to emerge from clusters building on a region's strengths and when nearby regions enjoy similar strengths, and
- regions and industries benefit from groups of strong collaborative industry clusters.²⁹

Many of our most pressing challenges and opportunities will require engagement across sectors, linking businesses to each other and to research, connecting the strengths of cities and regions, finding common ground between managers and workers and connecting to international partners. Collaborating this way will encourage specialisation and enhance regional comparative advantage, which will help address Australia's lack of scale and promote the competitiveness of Australian industry.³⁰

25 OECD (2010) *SMEs, Entrepreneurship and Innovation*

26 Australian Bureau of Statistics (2012) *Innovation in Australian businesses 2010-11* cat no. 8158.0

27 Hwang, V. and G. Horowitz (2012) *The Rainforest: The Secret to Building the Next Silicon Valley*

28 Keller, W. (2002) *Geographic Localization of International Technology Diffusion* American Economic Review 92(1):120-142

29 Delgado, M., Porter, M. and Stern, S. (2011) *Clusters, Convergence and Economic Performance* at http://www.isc.hbs.edu/pdf/DPS_Clusters_Performance_2011-0311.pdf

30 OECD (2012) *Beyond Industrial Policy – Emerging Issues and New Trends*; and Foray, D., David P.A. and Hall, B.H. (2009) *Smart Specialisation – The Concept*

5: Supporting Australian Industry to Win New Business Abroad

The Government will establish up to 10 Industry Innovation Precincts to help Australian industry develop the capabilities to succeed in export markets and seize new business opportunities. Industry Innovation Precincts will extend and accelerate what is already occurring in parts of the economy. They will bring firms and researchers together to develop new products and processes, encourage new investment, take advantage of new technology and improve skills and capabilities. Precincts will be developed in sectors and locations where there is great potential to leverage existing strengths and deepen the concentration of innovation and expertise. The Australian pharmaceuticals industry will also be supported through reforms to improve the conduct of clinical trials in Australia. The Government will continue to support the vital automotive industry, including through diversification.

Industry Innovation Precincts will improve collaboration between industry and the research sector to help drive innovation that enables Australian business to win in the Asian Century. Led and run by industry, Precincts will comprise networks of firms, researchers and business service providers, including the higher education and vocational education and training sectors. Through Precincts, and the culture they help to develop, Australia can secure a better economic dividend from its public and private investments in research and innovation.

INDUSTRY INNOVATION PRECINCTS

The Government will help Australian firms develop the connections, reach and scale to compete effectively in global markets through new *Industry Innovation Precincts*. The *Industry Innovation Network*, a digital platform connecting business to research capabilities across Australia, will spread access to the services and opportunities created by this investment.

Industry Innovation Precincts will deliver collaborative relationships between businesses and researchers, both at home and abroad. They will build critical mass in Australian industry and develop a cohort of growth-oriented businesses.

Industry Innovation Precincts will boost productivity by fostering clusters of innovative firms. They are designed to boost growth and productivity through business collaboration, networking and agglomeration that would not otherwise fully emerge because of existing barriers to innovation in Australia.

They will:

- help translate Australia's research investment and expertise into successful commercial and economic outcomes,
- help research become more industry led, by focusing on challenges and opportunities identified by business,
- improve business scale and quality by enabling engagement between firms, developing shared facilities and services, and concentrating expertise in particular locations,
- develop links to international precincts and clusters — helping Australian know-how to access international production chains, and
- showcase innovation opportunities for our businesses.

Australia is not the first country to adopt these approaches to enhancing innovation. This initiative is informed by programs overseas, including the United Kingdom's Catapult Centres and the United States' National Network for Manufacturing Innovation.

PRECINCTS IN ACTION

Precincts or business clusters are not a new phenomenon. There are hundreds of clusters operating throughout the world. It makes sense for businesses to work together where they have complementary skills and resources and can achieve better outcomes by collaborating. Indeed, in a more competitive and dynamic global economy, collaboration has become even more critical where being and remaining world's best is an essential component of sustainable competitive advantage. There are many examples in Australia and overseas of how clusters or precincts can drive business growth.

Australian Wine Industry

In Australia, the wine industry has traditionally clustered effectively. Different geographical clusters and different wineries compete with each other fiercely in the marketplace but often also share equipment and develop and use joint access processing and testing facilities. There is extensive movement of people between wineries, there is a sophisticated applied R&D system through the Australian Wine Research Institute and the Grape and Wine Research and Development Corporation and an equally sophisticated education and training system (both vocational and tertiary). The strong export focus of the industry required a coordinated approach to R&D, a well-developed supply chain, sustainable alliances between growers and producers, significant public and private sector infrastructure and a unified marketing strategy. The industry has successfully integrated the core ingredients of viticulture, oenology and organisational and marketing requirements into a highly evolved mix of innovation activity within regional clusters.

Cambridge Science Park, UK

Fifty years since its inception, the Cambridge Science Park is the oldest and most powerful cluster in Europe. Built on the solid scientific research provided by Cambridge University, it features firms in sectors such as electronics, computing, software, scientific instruments and pharmaceuticals. The number of jobs in R&D is around five times the British average. Today, its 1400 start-up firms employ more than 53,000 people with turnover of more than £13 billion a year. The cluster has helped generate 11 billion-dollar companies in the past 15 years (Abcam, ARM, Autonomy, AVEVA, CAT, Chiroscience, CSR, Domino, Ionica, Marshall, Solexa and Virata.) The 50 fastest growing firms within the cluster employ 28,356 people and are responsible for turnover of £7.4 billion.

German Clusters

Germany has a long established policy to develop clusters and has identified and supports over 100 regional clusters. The German Government has also made a cluster competition the flagship initiative of the nation's High-Tech Strategy 2020. The "Leading-Edge Cluster Competition," or officially "Spitzencluster Wettbewerb." was launched in 2007 and comprises three rounds of competition.

The third and final round of winning clusters was announced in January 2012:

- Carbon composites in and around Munich to create innovative lightweight materials for presently "heavy" industries,
- Electromobility in Stuttgart to bridge batteries, energy delivery, logistics, software, and transport in sustainable mobility solutions,
- Individualised immunotherapy in the Rhein-Main region to prepare the healthcare system to deal with prevention, diagnosis, and treatment in an aging population,
- The development, scale-up, and commercialisation of materials from biomass around Leipzig and central Germany,
- Intelligent technical systems in Westphalia to incorporate ICT and "smart" features into everyday industrial and consumer goods.

In each case, private firms (127 of them in the intelligent systems cluster) partner with local universities, research institutions, vocational schools, industry and labor associations, and other cluster organizations to devise initiatives to advance the industry in the region and the region globally.

Precincts will be governed by industry-led boards and include representatives from businesses, the research sector and other stakeholders. Each Precinct will have several business participants as well as core research partners, such as the CSIRO or a university. Led by industry, Precincts will link businesses with researchers from the public and private sectors. They will be responsible for fast tracking engagement and joint work between different organisations. This could include, for example, streamlining intellectual property arrangements between the participants within a Precinct. Precincts will also act to stimulate mobility between businesses and academic institutions. Furthermore, they will work with service providers who can deliver businesses with advice and assistance in areas such as skills development, technology deployment, finance and market access.

Precincts will have considerable flexibility in the projects and services they deliver. A competitive *Industry Collaboration Fund*, with funding building to \$50 million a year, will be administered by a new *National Precincts Board*. It will fund Precincts for large-scale projects that have the potential to generate significant spillovers and develop world-class commercial activity. These projects are expected to include co-funding arrangements and will involve collaborations, particularly between businesses that are not currently funded through other programs. These projects may be based on market and technology opportunities or production chain projects. For example:

- market opportunities — accessing a major Asian infrastructure market or project that is not accessible to individual SMEs but can be tackled by a consortium,
- technology opportunities — where groups of SMEs can be transformed by technology deployment and dissemination, or
- production chain projects — where domestic production chains can be strengthened by building knowledge based services capability and export markets.

Firms around the country, including in regional locations, will be able to benefit from Precinct activities through a national information technology platform, the *Industry Innovation Network*. The Network will enable businesses and researchers to take part in Precinct activities regardless of their location. Precincts will also connect through Innovation Brokers and through relationships with key national providers of research and business services.

Our most capable SMEs engaged in Precincts will have access to advanced business support through the new *Growth Opportunities and Leadership Development (GOLD)* service (see **Box 5.1**).

BOX 5.1: GOLD — SUPPORTING FIRMS WITH HIGH-GROWTH POTENTIAL

GOLD will offer an advanced integrated service to firms assessed to have high-growth potential. It will be a one stop shop for advanced SMEs. Services will be provided in *Industry Innovation Precincts* in order to maximise knowledge spillovers and expose participating SMEs to leading practice. *GOLD* services will be delivered as appropriate by Enterprise Connect, AusIndustry, Commercialisation Australia, and other service providers.

GOLD will provide access to a range of new capabilities, including:

- **Skills and Technical Expertise** — through the successful Researchers in Business scheme, which will help firms bring researchers into their business operations to assist in solving their practical problems.
- **Design** — through a new Design Solutions initiative that will enable firms to apply design thinking to develop and evolve their business models and operations.
- **Management** — through the extended Mt Eliza Leadership 21 program that will strengthen the leadership capabilities that are critical to building an innovation culture.
- **Marketing** — through streamlined and integrated access to various Enterprise Connect, Commercialisation Australia, Export Finance and Insurance Corporation and Austrade services to help access new markets.

To further support SMEs, Precincts may engage Innovation Champions- experienced industry leaders and successful entrepreneurs from home and abroad. Champions will give presentations on best practice and provide encouragement and role-models to young entrepreneurs and researchers. They will be available to mentor Precinct participants and provide advice and connections to individual projects (for example, connections to new markets or key international players).

The Government will invest \$504.5 million in Precincts between 2012–13 and 2016–17. This investment includes:

- \$238.4 million to establish, administer and operate Precincts, including the competitive *Industry Collaboration Fund*,
- \$236.3 million of Industrial Transformation Research Program (ITRP) funding providing support for Precincts to undertake applied research in priority areas, and
- \$29.8 million of investment incorporating the previously announced Manufacturing Technology Innovation Centre into the Manufacturing Precinct.

The first Precinct will be a Manufacturing Precinct, located in south east Melbourne and Adelaide, and connected to smaller hubs around the nation by a virtual network (see **Box 5.2**).

BOX 5.2: MANUFACTURING PRECINCT

The Manufacturing Precinct will be headquartered in south east Melbourne at Clayton which has strong resources in advanced manufacturing. It will also have a base in Adelaide with a focus on the defence industry. It will foster innovation by Australian manufacturers in product design and development, manufacturing techniques, and firm organisation and management.

The Manufacturing Precinct will bring together industry, research organisations, universities, large firms and government as well as initiatives such as Austrade, AusIndustry, Commercialisation Australia, the Cooperative Research Centres (including the Defence Materials Technology Centre) and Enterprise Connect to:

- drive best practice technology and process adoption and adaptation through lean manufacturing, technology deployment and the provision of assistance to develop and implement innovation strategies,
- improve the industrial and commercial impact of Australia's research effort by placing researchers into industry and facilitating linkages with overseas research bodies,
- improve management and workforce capability through access to education, training and seminars,
- help manufacturers take their capabilities and products to the world through linkages to overseas firms and global supply chains, and
- create environments where businesses can collaborate to achieve growth.

Stakeholder consultation with key organisations and service delivery providers is under way. Some services will be open for business in May 2013 with others to follow by July 2013.

The second Precinct will be a Food Precinct. Australia's food production and processing sector has strong export potential. As the *Australia in the Asian Century White Paper* states:

Population and income growth in the Asian region is driving increased demand for food—in quantity, quality and product integrity. The real value of global food demand is expected to rise by around 35 per cent by 2025 from 2007 levels, with most demand coming from Asia ... Australia's agriculture and food sector is extraordinarily well-placed to build on its strengths: proximity to markets in Asia, complementarity in production systems, a robust biosecurity system, a record of innovation and reputation for producing high quality and safe food products, and a skilled workforce.³¹

The Food Precinct will cover the entire food supply chain (see **Box 5.3**).

31 Australian Government (2012) *Australia in the Asian Century White Paper* p. 214

BOX 5.3: FOOD PRECINCT

The Food Precinct will be headquartered in Melbourne to take advantage of the critical mass of industry and research located there. However, given the regionally dispersed nature of the industry and the significant number of infrastructure assets that exist already in the industry, it may have a number of other locations. Locations will be connected and supported through the *Industry Innovation Network*.

Collaboration between the food and beverage industry and public research institutes, universities and government needs to be more strategic, commercially targeted and coordinated. The industry is also dominated by SMEs, many lacking the scale, experience and skills to make the most of the opportunities of the future.

The Food Precinct will offer services including:

- developing consumer insights as the basis for targeted R&D,
- disseminate information on technology transfer opportunities,
- improving access to industry intelligence including technological developments and export opportunities, and
- providing information and advice like mentoring and facilitating open innovation and diagnostic services.

Industry and supply chain partners have played a leading role in designing prototypes for the Food Precinct's business and network plan and are helping to develop a capability map for the food supply chain. This activity demonstrates the value of connections and engagement across the production chain to build greater critical mass.

The Manufacturing Precinct and Food Precinct will build on Australia's existing comparative advantage in these areas.

Other *Industry Innovation Precincts* will be selected during 2013 and established by 2014. Up to three additional Precincts will build on areas of existing competitive advantage while up to five smaller Precincts will focus on emerging opportunities.

The independent *National Precincts Board* will initially advise on the selection of Precincts. The Government will invite industry-led proposals against identified selection criteria. Proposals can focus on areas that either build on Australian competitive advantage or that represent emerging and rapid growth opportunities that build on Australian capabilities. Recommendations by the Board will be provided to the Minister for Industry and Innovation for approval.

Work to be undertaken by the Australian Research Committee to progress agreed actions under the National Research Investment Plan will form an important input into the selection of Precincts. This includes the development of strategic research priorities and mapping of Australia's research capability, ensuring knowledge and skills developed by our research sector are aligned with industry needs.

INDUSTRY INNOVATION PRECINCTS BUILD ON EXISTING PROGRAMS

Under its strategy for 2011–2015, CSIRO has commenced an initiative to support the formation of research-focused "Global Precincts." Three examples of these are in the fields of: Manufacturing and Materials Sciences in south east Melbourne at CSIRO, Monash University and connected to Geelong; a Resources Precinct in Perth; and an Environmental Sciences Precinct in Brisbane.

Industry Innovation Precincts and CSIRO's research "Global Precincts" will work together to support collaboration and networks between industry and research.

The new *Industry Innovation Precincts* will have a direct partnership with the Australian Research Council's (ARC) ITRP, which will only fund projects that are directly related to the priority research areas of Precincts. The ITRP

will fund ARC Research Hubs and Centres to undertake applied research in areas identified as important by Precincts and their industry users.

Precincts will also build upon the Government's Cooperative Research Centres (CRCs) program. As a longstanding research-industry program, implemented in 1991 by the Hawke Labor Government, the Government remains committed to CRCs with a budget of \$625 million over the next four years. CRCs have been highly successful; however, CRCs generally have had a more defined scope of R&D activity, fewer participants and a fixed timeframe compared to *Industry Innovation Precincts*. Precincts will operate at a different level, fostering open innovation and open membership to connect activities across the Australian innovation system. Precincts will be driven more by industry leadership and committed to supporting firms across the nation, including in regional Australia, through the *Industry Innovation Network*.

It is expected that proposals involving Precincts will become a significant share of applications for future CRC rounds. For example, the current \$240 million CRC round has set aside \$50 million specifically for innovative manufacturing to develop high-tech ways of supporting growth and competitiveness in the sector.

It is expected that Precincts will improve the identification of industry needs and potential partnerships to build strong bids for research funding through the CSIRO, CRCs, and the ARC's Linkage and ITRP grants. They will also help identify possible investment opportunities to venture capital fund managers through liaison with the *Venture Australia* package.

THE NEED FOR COLLABORATION

*"Australia's framework conditions for innovation...rank high internationally. [While] The innovation system compares well with other OECD countries on a number of indicators...a critical weakness of the innovation system is low collaboration among large firms and firms and universities, and on an international scale."*³²

Only a small proportion of Australia's firms have the scale of resources, domestic and global connections and culture to compete effectively in global markets. This is not good enough. It should be the majority, not the minority.

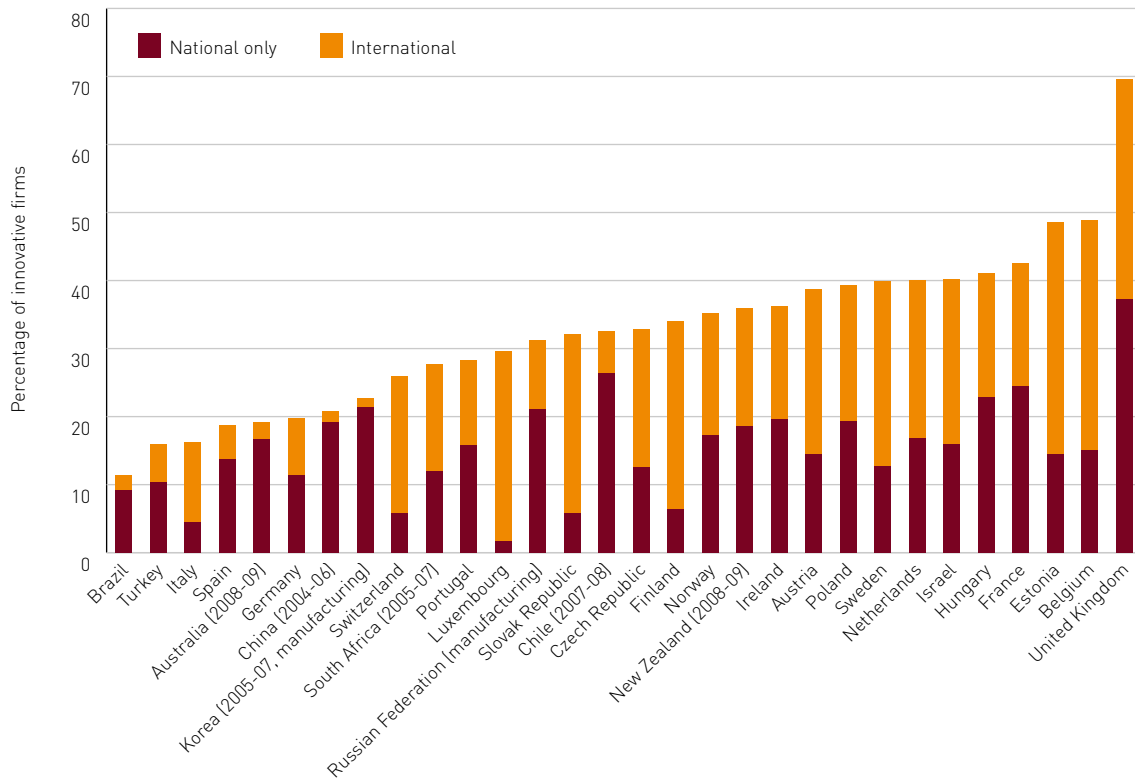
A raft of evidence shows Australia has relatively low levels of engagement between firms and research and knowledge providers and even lower levels of international collaboration compared to other countries. OECD and Australian Bureau Statistics data shows that Australia ranks 23rd out of 26 OECD countries in terms of the proportion of businesses collaborating on innovation.³³ A distinctive feature of global economic integration is the increasing rate of innovation engagement with foreign partners. Australian firms must build their capacity to access knowledge and make use of innovation developed overseas.³⁴ Australia performs poorly on international collaboration for innovation, ranking 20th (**Graph 5.1**).

32 OECD (2012) *OECD Economic Surveys Australia 2012* OECD Publishing p. 39

33 Australian Government (2012) *Australian Innovation System Report 2012* p.90

34 Tresselt T. (2008) *Does Technological Diffusion Explain Australia's Productivity Performance* IMF Working Paper Washington

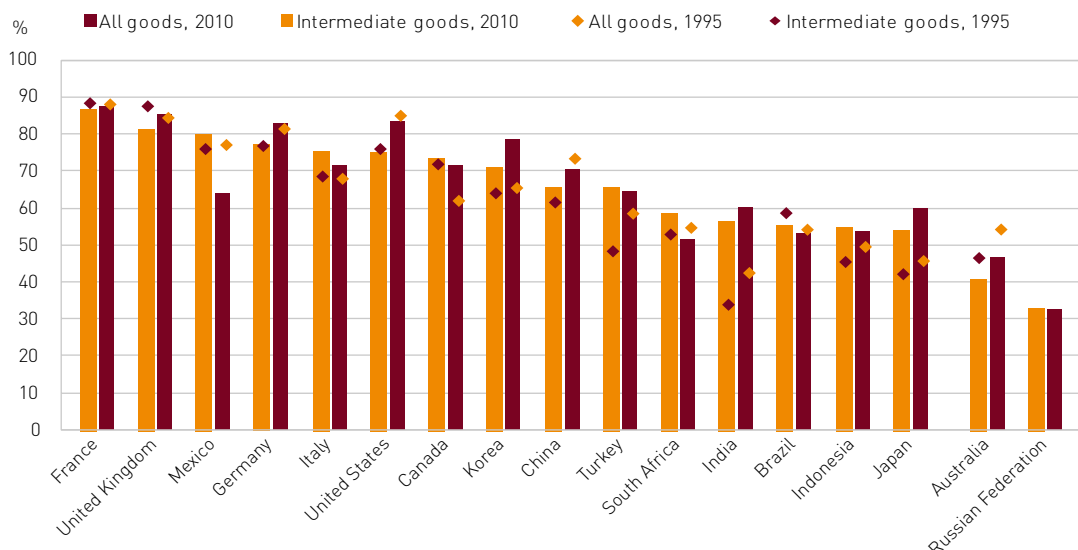
Graph 5.1: National and international collaboration in innovation, 2006–08



Sources: OECD (2011) *Science, Technology and Industry Scoreboard 2011*, based on Eurostat (CIS-2008) and national data sources; Australian Bureau of Statistics (2012) Department of Industry, Innovation, Science, Research and Tertiary Education special data request from *Innovation in Australian Business 2008–09*, cat. no. 8158.0.

Our poor international collaboration is also reflected in Australia’s weak penetration of global production chains and global markets.³⁵ As **Graph 5.2** shows for manufacturing, Australia is one of the few countries that have become less integrated into global production chains in recent decades.

Graph 5.2: Intra-industry trade, manufacturing, 1995 and 2010



Source: OECD (2012) *Australian Manufacturing in the Global Economy Study for the Australian Department of Industry, Innovation, Science, Research and Tertiary Education* p. 56

We need to get the most from our national collaboration efforts and find ways to assist business in collaborating more effectively over greater distances. The internationalisation of business innovation across the globe has

35 World Economic Forum (2012) *The Global Competitiveness Report 2012–13* p.95

increased rapidly over the past decade and this trend will continue as multinational enterprises constantly search for the best location to do research.³⁶

Collaboration between Australia's public research sector and industry is a further weakness. Two thirds of Australia's researchers work in the public sector (universities and government research institutions).³⁷ There is a common perception that most public research is not connected to industry needs. It is critical that industry is involved from the beginning of the research endeavour to ensure outcomes are connected to industry needs.³⁸

The need for better engagement has been recognised in the Australian Government's 2012 National Research Investment Plan:

"There is a need to ... promote and support linkage and collaboration between public and private sector organisations to place greater emphasis on building critical mass (both physical presence and virtually connected capabilities) around areas of local research capability, regional comparative advantage and demonstrated market opportunity. A key objective should be to ensure that Australian researchers and end-users are well connected to national and global networks."³⁹

Knowledge created from research and the translation of that knowledge to the broader economy builds the skill levels of the Australian workforce, supports Australia's productivity performance, and enhances the quality and productivity of working lives.

As such, the Government will continue to explore ways, in collaboration with industry and research sectors, to strengthen business access to skilled research personnel and infrastructure; to encourage mobility of researchers between universities and industry; to facilitate open access to the outputs from publicly funded research; and to recognise the critical role of science, technology, engineering and mathematics across the economy.

COMPLEMENTARY ACTION TO BOOST INNOVATION

The Government is committed to boosting innovation through the implementation of a National Research Investment Plan and consideration of breakthrough actions to enhance innovation. The establishment and implementation of *Industry Innovation Precincts* will complement the National Research Investment Plan and will implement a number of breakthrough actions to enhance innovation.

The National Research Investment Plan, released by the Government in November 2012, sets out a comprehensive national research investment planning process to ensure public research investment better serves the nation's needs and provides demonstrable value for money.

It is vital that the Australian Government's annual investment of nearly \$9 billion in science, research and innovation is invested strategically, with clear priorities determining the direction of publicly funded research activity, and with research effort better aligned with emerging industry needs and capabilities.

Selection of the *Industry Innovation Precincts* will be informed by the Australian Research Committee's work on the National Research Investment Plan.

Related to the development of the Plan has been the work of the Prime Minister's Science Engineering and Innovation Council (PMSEIC) during 2012 to identify breakthrough actions to enhance innovation in Australian products and services. Consultation with the science community and industry was led by the Chief Scientist of Australia, Professor Ian Chubb and resulted in five PMSEIC proposals:

- establish an Australian Innovation Council,
- strengthen business access to publicly funded research expertise, infrastructure and data,

³⁶ OECD (2008) *The Global Competition for Talent*

³⁷ OECD (2012) *Main Science and Technology Indicators 2012-13*

³⁸ Department of Innovation, Industry, Science and Research (2011) *Focusing Australia's Publicly Funded Research Review Maximising the Innovation Dividend, Review Key Findings and Future Directions* p. 63

³⁹ Australian Government, Department of Innovation, Industry, Innovation, Science, Research and Tertiary Education (2012) *National Research Investment Plan* p. 78

- encourage mobility of researchers between academia and business or other enterprises,
- harmonise intellectual property frameworks across the public research sector, and
- emphasise the role of science, technology, engineering and mathematics (STEM) education in changing the culture of both research and business sectors.

The *Industry Innovation Precincts* provide an important opportunity to trial the first four breakthrough actions recommended by PMSEIC as part of a broader government response by Government to the PMSEIC proposals.

AUSTRALIAN INNOVATION COUNCIL

The Chief Scientist proposed the formation of an Australian Innovation Council designed to consolidate a broad range of existing programs and allocate funds, working with existing research funding bodies on shared funding priorities as required.

The Government will not proceed with this proposal at this time and will instead ensure that the governance of the *Industry Innovation Precincts* through the establishment of a *National Precincts Board* reflects the need for better aligned research and industry investment settings. A core remit of the Board will be to create strong funding partnerships and systemic links between researchers and industry in the *Industry Innovation Precincts*.

The Board will be tasked with advising the Minister for Industry and Innovation on:

- industries, locations and research areas of each Industry Innovation Precinct,
- suitable projects to be funded under the *Industry Collaboration Fund*,
- strategic precinct policy,
- the performance, monitoring and reviews of *Industry Innovation Precincts*, and
- the overall performance of the *Industry Innovation Precincts* program, including the *Industry Innovation Network*.

The *National Precincts Board* will be industry led with a majority of members drawn from industry. It will also include representation from the research sector and labour movement. The Chief Scientist will be an *ex-officio* member of the Board.

By providing advice on the industries, location and priority research areas for each Precinct, the Board will directly influence the expenditure of over \$500 million allocated to increasing industry-related innovation. This includes providing advice on the funding rounds of the \$50 million per annum *Industry Collaboration Fund*.

In this way the practical integration of programs and priorities suggested by PMSEIC can take place and be evaluated. If successful, this approach could inform further program reform at an appropriate time.

STRENGTHEN BUSINESS ACCESS TO PUBLICLY FUNDED RESEARCH EXPERTISE, INFRASTRUCTURE AND DATA

The Chief Scientist has suggested the development of a public voucher scheme to enable eligible firms to buy-in public research expertise, knowledge and infrastructure to aid product development.

The Government agrees there needs to be a more open sharing of knowledge and data across the Australian innovation system.

Led by industry, Precincts will link businesses with each other and with researchers from public institutions. This will contribute to greater mobility between academic institutions and businesses, thereby creating benefit from the long term understanding of each other's contributions.

Our most capable SMEs engaged in Precincts will have access to advanced business support through the new *GOLD* service. One service will be the successful Researchers in Business scheme, which assists firms to bring researchers into their business operations in order to solve their practical problems.

Precincts may also consider a 'flying squad' approach as recommended by PMSEIC as a further way to support access to research expertise. In addition, services to industries within Precincts may also include provision of vouchers to facilitate access to publicly funded infrastructure. This step will complement steps being undertaken in a number of states to enable firms to access public research expertise through the provision of vouchers.

ENCOURAGE MOBILITY OF RESEARCHERS BETWEEN ACADEMIA AND BUSINESS OR OTHER ENTERPRISES

The Chief Scientist has recommended that researchers are encouraged to engage with industry and other areas, and that researchers are not disadvantaged on their return to the research sector.

The Government agrees there is a need for stronger and more systemic links between the university and business sectors in terms of sharing personnel and expertise.

In response the Government will engage with the university sector through the Compacts process with each public university to ensure that recruitment, promotion and workforce practices at universities recognise and reward industry experience by academics to achieve greater mobility across industry and research sectors.

In addition, the *Industry Innovation Precincts* will ensure that there is better utilisation of Australia's research capability through:

- strengthening business access to research expertise,
- encouraging mobility of researchers, and
- innovative approaches to fostering collaboration between businesses and the publicly funded research sector.

Offering the Researchers in Business scheme and the consideration of research vouchers within Precincts will increase interactions between businesses and researchers. This, in turn, will increase the mobility of researchers by bringing them into contact with challenges posed by and career paths associated with the business sector.

Furthermore, the ITRP is an integral part of the Government's *Industry Innovation Precincts* program. The ITRP will engage Australia's best researchers in issues facing the new industrial economies and training the future workforce. The scheme will support collaborative research activity between the Australian higher education sector and industry designed to focus on strategic outcomes not independently realisable. It will engage in cutting edge research on new technologies and economic and social transformation through the *Industry Innovation Precincts* thereby encouraging mobility of researchers between academia and business.

HARMONISE INTELLECTUAL PROPERTY FRAMEWORKS ACROSS THE PUBLIC RESEARCH SECTOR

The Chief Scientist has advised that differing approaches to intellectual property (IP) across the public research sector are a major obstacle in potential researcher-industry partnerships. PMSEIC recommends that IP policies among publicly funded research organisations should be standardised and simplified to foster collaboration within and between sectors.

The Government will separately respond to the November 2012 Advisory Council on Intellectual Property report, *Collaborations between the Public and Private Sectors: the Role of Intellectual Property*. Precincts will need to respond to any changes in government policy or actions that avail as a result of this work.

As a first step however, *Industry Innovation Precincts* will be responsible for fast tracking engagement, including through streamlining intellectual property arrangements between the participants within a Precinct.

BOOSTING OUR PHARMACEUTICAL INDUSTRY

The Australian pharmaceutical industry is a major high tech industry, exporting around \$4 billion per year, employing over 40,000 people, and investing more than \$1 billion a year in R&D. The outlook for the pharmaceutical industry is positive given Australia's strong economic credentials and our extensive research base, as well as access to the emerging Asian market. However, significant global pressures have contributed to its recent contraction in Australia.

Reforms to the regulation of clinical trials in Australia present a major opportunity for the industry to boost investment and high skilled jobs. Accordingly, the Government will boost opportunities for the Australian pharmaceutical industry by expediting the recommendations from the *Clinical Trial Action Group Report*. This will advance Australia's position as a leader in clinical research and improve our attractiveness as a destination for clinical research investment.

Clinical trials are research investigations which evaluate the effectiveness and safety of medications, medical devices or interventions as a means to prevent, detect or treat diseases or medical conditions. These trials are essential to providing the evidence which turns specialised medical research breakthroughs into treatments that are publicly available to patients and which prevent, manage and cure illness and disease.

Australia has traditionally been a destination of choice for the conduct of clinical trials by the international biopharmaceutical industry and academic institutions. However, our competitive advantage has declined over the last five years. Rising and varying costs between clinical trial sites and jurisdictions, delays in approving trials and difficulty recruiting patients are some of the causes of the decline.

The Government will introduce a new *Expediting Clinical Trial Reform in Australia* measure. This will improve efficiency and streamline administration and costs to position Australia as a world leader in clinical research and the commercialisation of new medical technologies.

Specifically the Government will spend \$9.9 million over five years to:

- expedite standardisation of the costs of clinical trials,
- incorporate clinical research needs into the eHealth system,
- develop a national interactive web portal for facilitating clinical trials,
- improve clinical trial conduct and timeliness of governance approvals through education and training, and
- work with the States and Territories and other stakeholders on a nationally consistent approach to clinical trials.

A SUSTAINABLE AUTOMOTIVE MANUFACTURING INDUSTRY

In some cases, an industry has strategic importance beyond the products it generates and the jobs it creates — and that is the case with the Australian automotive manufacturing industry. In this instance, its importance is also driven by the disproportionate investment in research and development, high demand for other Australian goods as inputs and its role as leading edge adopter of advanced global production methods.

Australia's automotive industry produces three of the top 10 vehicles in one of the world's most competitive markets, and provides around 250,000 direct and indirect jobs. Furthermore, the sector is an integral part of the broader manufacturing industry. It delivers wider benefits for the economy through its investment, skills, technologies and exports. Automotive manufacturing uses inputs from other sectors like steel, chemicals and plastics, and it makes the single largest contribution to manufacturing R&D, with many of the innovations spreading to different sectors. For example, SMR Automotive, an Adelaide-based company that makes rear vision mirrors, has leveraged its experience and skills in high precision moulding and in polymer electronics to also manufacture medical devices.

The Government is supporting such innovation and diversification in global supply chains through the \$5.4 billion New Car Plan. The New Car Plan is also supporting our motor vehicle manufacturers to develop the next generation of fuel efficient and cleaner technologies in the Toyota Hybrid Camry, the Holden Cruze, and the Ford Falcon EcoBoost.

Like many manufacturing sectors, the automotive sector is under pressure from the strong Australian dollar and competition from imports. The New Car Plan is designed to assist the industry adjust to this new environment and succeed by boosting productivity and innovation, and helping the sector grow, diversify and compete in new markets. Between 2011 to 2015 for example, the New Car Plan will support \$4 billion in capital and innovation investment, and \$32.2 billion in domestic production.

6. Helping Australian Small and Medium Businesses to Grow and Create New Jobs

Support for SMEs to grow and create new jobs will be strengthened. SMEs are held back by difficulties in accessing finance and skills. The Government will tackle these barriers by introducing Venture Australia to improve access to finance for SMEs, and the Enterprise Solutions Program, to facilitate SMEs in accessing public sector business opportunities. In addition, Enterprise Connect services will be extended to a wider range of SMEs.

Australia has a good record in starting new firms, but we do not perform so well in growing them into the mid-size firms that can expand rapidly and succeed in export markets.⁴⁰ We not only need to keep producing new firms but also to grow them, because average productivity increases with firm size.⁴¹

Australian Bureau of Statistics' surveys⁴² consistently find the major factors standing in the way of innovative growth among Australian SMEs are practical challenges — difficulties in accessing finance, capabilities and skills. These are larger barriers than regulation and taxation. These barriers are particularly important to those businesses that are active innovators.

High-growth firms will be increasingly important as the economy continues to change. In particular, innovative SMEs bring new economic and job opportunities that help offset those lost through structural change.

Access to finance through mechanisms like venture capital, access to new markets including the public sector and access to business know-how and best practice advice will facilitate the growth of new high-growth firms.

VENTURE AUSTRALIA — FINANCING INNOVATIVE START-UPS

The Government will improve access to finance for SMEs through *Venture Australia*, a \$378 million package to facilitate the growth of new knowledge-based and innovation-driven businesses in Australia, to increase industry competitiveness and to attract new investment to Australia based on our areas of strength.

Venture Australia comprises:

- a new \$350 million round of the Innovation Investment Fund program to stimulate private investment in Australian start-ups,
- changes to venture capital tax concession programs to provide clarity and certainty of tax treatment for investments and facilitate participation by “angel” syndicates,
- a new platform to market the successes of our start-ups and attract international investment and expertise into commercialising Australian ideas, and
- a commitment to return money to the sector by reinvesting all Government returns from its venture capital equity investment programs into future venture capital support.

This package has been informed by a comprehensive 2012 *Review of Venture Capital and Entrepreneurial Skills in Australia* and the 2011 *Board of Taxation Review Arrangements under the Venture Capital Limited Partnership Regime*. It builds on Australia's existing venture capital architecture such as the Innovation Investment Fund program which has had a significant impact on Australia's start-up and early stage venture capital investments.⁴³

40 Deloitte (2012) *Silicon Beach Building momentum, A study of the Australian Startup Ecosystem* p.9

41 Dolman, B., Parham, D. and Zheng, S. (2007) *Can Australia match US Productivity Performance?* Productivity Commission Staff Working Paper

42 Australian Bureau of Statistics (2012) *Innovation in Australian businesses 2010–11* cat no. 8158.0

43 Cummings, D (2007) *Journal of Business Venturing* 22 p. 193–235

Venture capital is an important part of the innovation system. It translates ideas into innovative products, processes and services and builds competitive new firms. Importantly venture capital also supports the development of high-growth companies in the early stages of their development through access to skills and business know-how.⁴⁴

Venture Australia complements existing programs and new SME measures within *Industry Innovation Precincts* aimed at translating more of Australia's knowledge and ideas into economic outcomes. To maximise the economic dividends from *Industry Innovation Precincts*, the Innovation Investment Fund guidelines will encourage Funds to examine opportunities in Precincts. This will help ensure that innovative SMEs taking part in Precincts have the opportunity to seek finance through the new Funds (subject to meeting Innovation Investment Fund program eligibility requirements).

ENTERPRISE SOLUTIONS PROGRAM — NEW MARKET OPPORTUNITIES FOR SMEs

Governments can encourage the growth of innovative SMEs through their role as customers seeking value for money solutions for delivering public services. Governments can influence demand for innovation through their purchasing power. The Government will invest \$27.7 million over five years in the *Enterprise Solutions Program* to help Australian SMEs develop solutions to public sector needs. Based on the successful United States Small Business Innovation Research program and the Victorian SME Market Validation Program, the *Enterprise Solutions Program* will fund innovative SMEs to develop solutions to future government procurement requirements. It will support productivity gains through the development of improved practices, products and services.

Consortia of public sector agencies across jurisdictions will make a call for proposals to solve needs where solutions are not readily available. Feasibility plans from SMEs outlining potential solutions will be competitively assessed. Successful SMEs will be provided with funding to undertake their feasibility study. SMEs may then receive funding to undertake further prototype, design or testing work. This process will increase the capability of selected SMEs and will put them in a better position to win future Government procurement work.

ENHANCING ENTERPRISE CONNECT

Since 2008, Enterprise Connect has boosted the productivity and performance of Australian SMEs in the manufacturing, defence, creative, resources, clean technology, and tourism sectors. Enterprise Connect has helped more than 19,000 Australian firms become more productive, innovative, competitive and sustainable:

- 96 per cent of clients implement business improvement recommendations made by Enterprise Connect,
- 75 per cent of clients who were new to engaging with the research sector have established ongoing relationships with their partners following a connection facilitated by Enterprise Connect, and
- 83 per cent of clients acknowledge that Enterprise Connect has helped them increase productivity or efficiency.

Experienced Enterprise Connect Business Advisers deliver a comprehensive Business Review, providing firms with detailed recommendations on how to improve their business and achieve their goals.

The Government will extend Enterprise Connect services to a wider range of SMEs. Eligibility will be extended to the professional services, information and communication technologies, and transport and logistics sectors. These are large sectors in their own right and are critical enablers for businesses throughout the economy.

⁴⁴ OECD (2010) *The OECD Innovation Strategy Getting a Head Start on Tomorrow* p. 92

A CASE STUDY: ENTERPRISE CONNECT DEMONSTRATING RESULTS — STEBERCRAFT PTY LTD

Stebercraft Pty Ltd, also trading as Steber International, is an Australian-owned business that manufactures custom-designed boats for patrol, sea rescue, defence and recreational purposes for clients in Australia and throughout the world. Stebercraft has been owned by the same family since its foundation in 1946 and has grown to provide over 55 jobs.

Enterprise Connect provided a Tailored Advisory Service grant that enabled Stebercraft to engage a consultant to help prepare a strategic business plan and a research and development plan. Stebercraft also implemented a new human resources management system and an integrated quality occupational health and safety and environmental management system.

Enterprise Connect provided tailored market research through Austrade that indicated a real opportunity for Stebercraft to increase its boat refurbishment service. Stebercraft carried out factory extensions, expanded its infrastructure to accommodate the refit market and developed marketing strategies promoting the service.

The results have been impressive. Stebercraft secured a \$5 million contract to supply five purpose-built vessels for the Royal Australian Navy. A dedicated and coordinated workforce has now delivered on this and is ready to deliver on many other new domestic and international market opportunities.

By upgrading its plant and implementing more efficient production methods, this business reduced electricity consumption by 11 per cent over two years. It is on track to reduce waste by 75 per cent by 2020. In 2011 Stebercraft was awarded Manufacturer of the Year at the 2011 Hunter Manufacturing Awards.

FINANCING SME EXPORT OPPORTUNITIES

Recently announced changes to the investment mandate of the Export Finance and Insurance Corporation (EFIC) will refocus the EFIC on providing support to SMEs wishing to expand their business into export markets.⁴⁵ This increased focus on SME export financing will provide support for access to new markets and international supply chains.

TARGETING SMEs FOR R&D TAX SUPPORT

Recognising that business R&D plays an important role in stimulating productivity, the Government has already undertaken significant reforms, introducing the new R&D Tax Incentive from 1 July 2011 to better target R&D activities that are likely to deliver more benefits to the economy.

Innovation through R&D is important for companies of all sizes. However, internationally it is recognised that small firms are more responsive in increasing their R&D spending as a result of R&D tax incentives than large firms.⁴⁶ Accordingly the Government is making further reforms to focus its resources where they will stimulate behavioural change and deliver the greatest return for taxpayer funds. R&D support for very large companies will be reprioritised including towards funding the measures under *A Plan for Australian Jobs* that will enhance support for innovation by SMEs.

This will be achieved by introducing a third tier to the eligibility requirements for the R&D Tax Incentive. Very large companies with annual Australian turnover of \$20 billion or more will no longer be able to claim R&D expenditure under the non-refundable 40 per cent R&D tax offset. Currently this new tier is estimated to apply to less than 20 corporate groups. Nonetheless these companies will be entitled to deduct R&D expenditure under the normal deduction provisions in general tax law.

45 Media release, *EFIC reforms to help business in Asia* 29 January 2013: http://www.trademinister.gov.au/releases/2013/ce_mr_130129b.html

46 For example: Cappelen A et al (2010) *Evaluation of the Norwegian R&D Tax credit Scheme*, The Journal of Technology, Management and Innovation Vol 5, Issue 3; OECD (2011) *The International Experience with R&D Tax Incentives*, Testimony by the OECD, United States Senate Committee on Finance, September 2011.

In addition, through *Industry Innovation Precincts* and the *Australian Industry Participation Authority*, we are providing opportunities and funding for very large Australian companies to lead, partner and mentor high-growth potential SMEs and to introduce them to global opportunities through access to their supply chains.

From 1 January 2014, R&D quarterly credits will become an important new part of the R&D Tax Incentive for SMEs. R&D quarterly credits will be an opt-in element of the R&D Tax Incentive available to eligible companies with an annual aggregated turnover of less than \$20 million. The R&D quarterly credits measure will allow such companies to receive the R&D refundable tax offset in quarterly instalments throughout the income year. Quarterly credits will enable these companies to access their benefits sooner, improving their cash flow and incentives to invest in R&D, with minimal additional compliance obligations for businesses.

7: Managing Change to Support Jobs

The Government's approach is driven by our commitment to put jobs and economic growth first. The Government is committed to supporting workers and their community when structural change occurs. This means helping people to make the most of their abilities and adapt to rapidly changing economic circumstances. It also means supporting regions to diversify and create new job opportunities.

THE ROLE OF GOVERNMENT WHEN ECONOMIES EXPERIENCE STRUCTURAL CHANGE

Australia's relative economic strength provides a foundation for businesses and communities to adapt to change. Around 300,000 businesses are started and a similar number closed in Australia each year.⁴⁷ Around two million people start new jobs and leave old ones, and about half a million workers change industry each year.

Australia's economy is currently experiencing one of the most significant periods of structural change in recent decades. In this period of a high Australian dollar there are calls for the Government to intervene. However, no government can take on the exchange rate risk of our businesses.

Nonetheless, more targeted support is warranted in some cases as some regions need additional support because of the costs faced by particular industries, communities and groups of workers in transition. Australian industry assistance has been steadily reduced over recent decades, with more tariff cuts scheduled in the years ahead. In a deregulated, competitive and open economy, it is important that there is shared understanding of the guiding principles behind the decisions we make to help people and communities with the changes brought about by structural adjustment.

Under these principles, decisions are:

- risk based and well timed — the likelihood and impacts of adjustment, considering access to other opportunities, should inform transition support,
- coordinated — governments, industry and regional stakeholders should be appropriately involved in planning and action, including financing,
- focussed on employees — planning and action should be flexible and reflect the specific capabilities and circumstances of workers,
- fair and flexible — universal employment services should provide a platform for targeted transition support, and
- outcome driven — planning and action to assist economic transition should be complementary, not separate, to regional development strategies.

HELPING PEOPLE TO ADAPT

The core of the Government's response to structural adjustment is an emphasis on support for employees. This is fundamental. Employees who are displaced when businesses restructure need support to find alternative employment and to acquire new skills; this Government is committed to providing this support.

The Government has a range of initiatives to support people to get back into the workforce. These include Job Services Australia, Regional Education Skills and Job Coordinators, and Local Employment Coordinators.

Any worker made redundant is eligible for employment support with a Job Services Australia provider. This support is tailored to the needs and circumstances of each person and can include help with resumé preparation, job applications, interview skills and career advice.

47 Australian Bureau of Statistics (2012) *Counts of Australian Businesses, including Entries and Exits, Jun 2007 to Jun 2011* cat no. 8165.0

They can also access free, unbiased financial information from Centrelink about their redundancy package, available government assistance and managing their finances after redundancy.

Those aged 45 years and over have access to free, professional career counselling through the Experience+ Career Advice service. Career advisers help mature-age workers make informed decisions, identify skills, explore career options and prepare a plan of action to find work.

Job seekers can look for vacancies in their local area, or according to their particular skills or occupation with the help of the Australian JobSearch website. This is Australia's largest free online jobs website, funded and operated by the Australian Government. It advertises jobs across all industries and regions of Australia, helping to match job seekers with employer needs.

For example, Australia's resources sector offers a range of job opportunities for Australians — from trades and transport to safety, administration and financial services.

The new Resources Sector Jobs Board, launched in June 2012, is a free service to assist job seekers and connect employers with quality staff.

The Jobs Board website makes it easier for job seekers to find current and expected resource sector vacancies. Job seekers can add their skills and qualifications to a database that potential employers can access.

The Government assists displaced workers in industries and communities involved in large-scale closures in circumstances where alternative job opportunities are limited.

Examples are the Textile, Clothing and Footwear Structural Adjustment Program, the Automotive Industry Structural Adjustment Program, and support for workers made redundant from BlueScope Steel and the native forestry industry in Tasmania.

Under these programs, eligible workers receive immediate access to a higher level of intensive support through Job Services Australia to help them access the skills and job search assistance they need to return to the workforce as quickly as possible.

HELPING REGIONS AND COMMUNITIES TO ADAPT

Some regions with narrow economic bases, those facing sudden transitions and those with weak business networks, may require assistance in creating new economic and job opportunities to support workers in transition.

The Australian Government has employed Local Employment Coordinators to work in 20 Priority Employment Areas across Australia. Local Employment Coordinators collaborate with local government, communities and business to develop local solutions for local labour market needs. For instance, they help connect job seekers with employment and training opportunities through events like Jobs and Skills Expos, and assist employers in accessing government programs.

Also, as part of *Building Australia's Future Workforce*, new Regional Education, Skills and Jobs Coordinators seek to meet local education, skills and jobs challenges by better connecting stakeholders and/or programs.

The Government supports regional jobs through programs such as the (nearly \$1 billion) Regional Development Australia Fund, and through initiatives such as Regional Innovation and Investment Funds (see **Box 7.1**).

BOX 7.1: REGIONAL INNOVATION AND INVESTMENT FUNDS

The Department of Industry, Innovation, Science, Research and Tertiary Education delivers three regional innovation and investment funds in the Illawarra, Tasmania and south east South Australia, having already implemented nine such funds across Australia.

As at June 2012, 12 regional Innovation and Investment Funds had provided over \$218 million in assistance to projects across regions in New South Wales, South Australia, Victoria and Tasmania. This has supported investment of over \$700 million in 235 projects and the creation of over 6,000 jobs.

Grant recipients report that they have introduced new or improved products, processes and services as a result of the project, and increased their connections with publicly funded research, training organisations, and business networks.

8: Building Australia's Future Together

Our plan to make Australia's economy more diverse and more innovative requires a partnership between all those involved in the innovation system to ensure we capitalise on emerging global opportunities. Business, unions and workers have a key role to play alongside Government in guiding Australia to achieve its goals in the Asian Century.

A STRATEGIC APPROACH

The *Australia in the Asian Century White Paper*, the Prime Minister's Economic and Future Jobs Forums and the Prime Minister's Taskforce on Manufacturing have enabled industry, unions, and the research community to contribute to strategies for the nation's economic future. *A Plan for Australian Jobs* provides specific responses to some of the recommendations in these reports and discussions and builds a platform for collaboration to further Australia's success in the Asian Century.

The Prime Minister's Taskforce on Manufacturing analysed the outlook for Australian manufacturing and mapped out a powerful vision for a dynamic manufacturing industry. The Government endorses the main conclusion of the Taskforce Report, *Smarter Manufacturing for a Smarter Australia*, that a vibrant manufacturing sector is essential to a dynamic and diverse Australian economy.

We already have a range of policies and investments in place to support productivity growth (*Appendix 1*). These investments, along with other targeted industry support measures managed by the Department of Industry, Innovation, Science, Research and Tertiary Education (*Appendix 2*), are supporting manufacturing to become more sustainable for the future.

A Plan for Australian Jobs responds to the Prime Minister's Taskforce on Manufacturing report. It delivers new measures which will help build a stronger manufacturing sector as well as recognising that the issues of innovation and productivity are critical for all industries. *Appendix 3* summarises the concordance between the Taskforce Report and *A Plan for Australian Jobs*.

A Plan for Australian Jobs envisions a more productive and dynamic Australian economy. It will be an economy powered by the skills and innovation of our businesses, workers and researchers. The Government believes not only must business and industry, workers and unions be consulted on this vision; they must also be empowered to lead. Governments, researchers, educators and others will all be essential partners. However, industry itself must provide the leadership. This is a new direction for industry and innovation policy — putting industry leaders in the driver's seat in Precincts; enabling innovative practices to emerge from the workshop, the factory floor and the laboratory; and engaging industry in developing and implementing government strategies.

LEADERS GROUPS

The Government is establishing two Industry Leaders Groups to provide strategic advice on Australia's key manufacturing and services sectors. They will advise on how to maximise the returns on Government industry and innovation reforms.

A *Manufacturing Leaders Group* will help this important sector manage change, lift productivity and seize future opportunities. The Group will continue the important dialogue established by the Prime Minister's Taskforce on Manufacturing.

A *Services Leaders Group* will also be established, including representatives from the information and communication technology, finance and professional services industries. It will focus on responding to the challenges and opportunities arising from continuing globalisation and technological change that face services firms in the market sector more broadly.

The *Manufacturing and Services Leaders Groups* will:

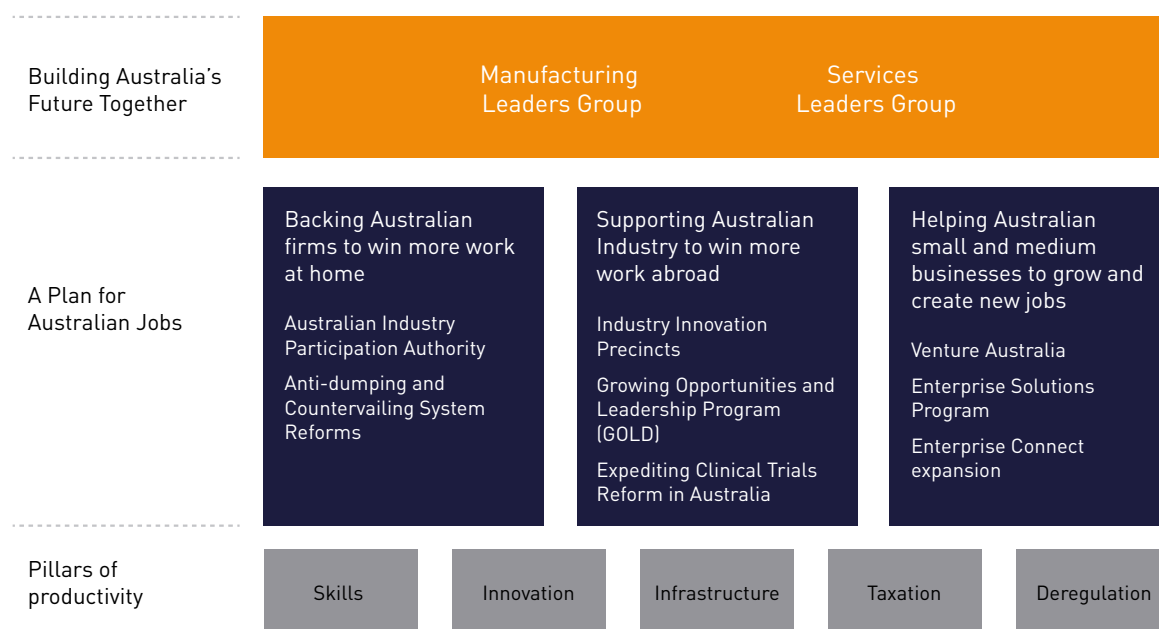
- provide advice on issues relating to productivity, skills, innovation, international engagement and regulatory reform,
- provide or commission strategic research and analysis, and
- champion innovation, collaboration and entrepreneurship in industry.

The Minister for Industry and Innovation has announced the membership of the *Manufacturing Leaders Group*. The Minister will appoint members of the *Services Leaders Group*. Membership will incorporate a breadth of expertise and perspectives, with members appointed for their ability to drive, support and affect change.

Innovation Australia, through the administration of a range of business support programs, will also continue to play a key role in fostering industry innovation.

To streamline consultative mechanisms, the Government will not extend the work of existing Industry Innovation Councils. However, *Leaders Groups*, *Industry Innovation Precincts* and the *Industry Innovation Network* and Innovation Australia will all create opportunities for industry-specific dialogue.

A PLAN FOR AUSTRALIAN JOBS



The Government has kept the Australian economy strong and is laying the foundations for future growth and prosperity through investment in skills, innovation, infrastructure, taxation and deregulation.

A Plan for Australian Jobs envisions a more productive and dynamic Australian economy. It will be an economy powered by the skills and innovation of our businesses, workers and researchers.

Not only must business and industry, workers and unions be consulted on this vision, they must also be empowered to lead.

A Plan for Australian Jobs rests on three key pillars:

- backing Australian firms to win more work at home,
- supporting Australian industry to win more work abroad, and
- helping Australian small and medium businesses to grow and create new jobs.

This is a three-point plan to ensure Australia remains a strong, fair and smart nation.

WORKING TOGETHER

Australia's economy is resilient, especially compared to many other advanced economies that have struggled with recession and sluggish growth. By contrast, decisive action taken by the Government and the hard work of our people and businesses have seen Australia maintain growth. The resources boom has contributed to our success, as has our proximity to the growing economies of the Asian region.

Now we need to ensure our economy continues to grow to deliver prosperity and new jobs into the future.

The high Australian dollar is imposing significant pressures on manufacturing and other industries, and on regions that depend on these industries. We need to support these sectors so they emerge from the current period of structural adjustment with economically sustainable businesses and resilient and vibrant local communities.

Our economy is benefitting from a large pipeline of investment in major projects in our resources and infrastructure sectors. We need to ensure this investment translates into more opportunities for Australian businesses. This will not only deliver more jobs today; it will ensure our local firms and suppliers develop the capabilities and relationships they need to link into the global supply chains and export opportunities that will be essential for future prosperity.

Economists tell us that the growth and jobs of the future will increasingly come from productivity and innovation. Australia needs to do better at translating our substantial investments in research into economic outcomes. Improving engagement between industry and the research sector will enable our businesses to improve skills, use new technologies, create new products and take advantage of business opportunities. It will contribute to productivity and create the jobs of the future.

We also need to support our entrepreneurial small businesses and start-up firms so they can grow into successful mid-sized firms that play key roles in global supply chains. Policies need to tackle the barriers to growth by small firms, such as difficulties in accessing finance, skills and new markets. Government support and advice for SMEs need to be extended.

Australia is well placed to tap into the tremendous economic opportunities of the Asian Century, as the populations of our neighbouring countries grow more affluent and demand higher quality goods and services. *A Plan for Australian Jobs* is a \$1 billion investment in realising these opportunities. It is aimed at boosting productivity, innovation and growth. By empowering and engaging industry, it will enable all of us — governments, businesses, researchers, workers, unions and the general public — to work together to create the jobs of the future.

Appendix 1: Policies to Improve Productivity, Growth and Jobs

The Government has adopted a wide ranging set of policies to promote productivity, growth and jobs. They include:

- **investing in education and skills** for all Australians including through: universal access to early childhood education; a new National Quality Framework for Early Childhood Education and Care; school reform to improve teacher quality and student literacy and numeracy; a new, demand-driven funding system for undergraduate places; greater Australian Government support for students attending university; the establishment of the Australian Workforce and Productivity Agency; and major investment in, and reform of, Australia's training system,
- **investing in public research, business research and development and SME support** outlined in the 2009 *Powering Ideas: An Innovation Agenda for the 21st Century*,
- setting a strategic framework for research funding through the 2012 **National Research Investment Plan**, linking government investment in research to innovation, productivity and national wellbeing,
- **building the National Broadband Network** to create new ways to do business and deliver services, connecting Australia to the world through super-fast broadband services,
- making historically large investments **modernising and extending the nation's road, rail and port transport** infrastructure,
- **moving to a Clean Energy Future** with reforms to encourage investment in clean technologies so Australia will be competitive in a low-carbon global economy,
- **strengthening Australia's taxation system** to improve its contributions to productivity at the individual and firm levels, and
- **leveraging our proximity to Asian nations** by strengthening our relationships in the region, pursuing free trade and building scientific, educational and people-to-people links.

INVESTING IN EDUCATION AND SKILLS

The Government recognises that education and skills are the fundamental building blocks of an innovative economy, expanding opportunities and creating jobs. Knowledge produced through research is also critical.

FOUNDATION SKILLS

The 2006 Adult Literacy and Life Skills Survey found that approximately 4.5 million Australians (40 per cent) in the labour force and approximately 6 million working age Australians (44 per cent) had prose literacy skills below what is considered the minimum level required by individuals to meet the complex demands of work and life in modern economies.⁴⁸ Education outcomes vary significantly across regions and population groups and responding to this requires a range of tailored solutions at the national and local levels.

Australia also needs a strong focus on building skills and expertise across science, mathematics and technology disciplines as these are demonstrated drivers of innovation and will be particularly important as we move to a low carbon and broadband-enabled economy. There are concerns about the proportion of students taking physics, chemistry, biology and advanced mathematics in year 12, which has been declining over a 20 year period. There have also been declines in the number of students who go on to study mathematics, science and engineering at university, and concerns about the number of people who are able to complete apprenticeships in technical trades. Lack of people qualified in these areas may have an impact on our ability to be at the leading edge of innovation, to take advantage of technological advances, and to generate the new knowledge we need to meet future challenges.

⁴⁸ While exact numbers vary, this is consistent with other reports in recent years

That is why over the next four years the Government is spending an unprecedented \$35.3 billion to support record enrolments in our higher education system and provide a better future for students, their families and their communities.

The Government now supports more than 790,000 student places for Australians in public universities, and over 54,000 places in private higher education providers.

The Government has also made record investments in schools, upgraded infrastructure at over 9,500 Australian schools and has achieved a 1:1 computer to student ratio for every year 9 to 12 student across the country.

ASIA-RELEVANT SKILLS

Despite some of our natural advantages, including proximity to Southeast Asia and significant populations from many Asian countries, Australian business generally lacks sufficient skills for engaging with Asian partners. There has actually been a decline in the number of Australians studying important languages such as Chinese, Japanese and Indonesian. Most Australian business people and officials have a poor understanding of the business cultures and practices of Asian countries, which are much more focused on face to face engagement and building personal relationships of trust than on the formal contracts and impersonal telecommunications acceptable to Western businesses.

Australia has opportunities in the Asian century to establish people to people and professional networks between Australians and their Asian counterparts. These links can be established through schools, Vocational Education and Training (VET) and higher education.

There has been a significant growth in tertiary education in Asia, particularly in China. China has experienced the largest growth in higher education supply in human history from a 3.1 per cent enrolment rate in 1991 to a 25 per cent enrolment rate in 2010. China has also increased the number of its regular higher education institutions from just over 1,000 in 1998 to over 2,350 in 2010.

Educating Australians about Asian and other international partners is also critical to our future prosperity. The Australian Government has invested \$62.1 million since 2008–09 through the National Asian Languages and Studies in Schools Program to increase the number of students who undertake studies of the languages and cultures of China, Indonesia, Japan and Korea. The Australian Government is continuing to support the teaching of Asia literacy and languages in Australian schools through the:

- Australian Curriculum,
- Endeavour Language Teacher Fellowship Program, and
- Asia Education Foundation.

WORK SKILLS

The Government's \$1.75 billion National Partnership Agreement with the States agrees to broad reform of the VET system to:

- improve access, through a national entitlement to training and expanded access to HECS-style income-contingent loans,
- increase quality and transparency, through greater information about courses, costs and training provider quality on the new My Skills website, and
- promote equity, through additional incentives to improve completion rates, particularly for disadvantaged students.

The National Workforce Development Fund enables businesses to co-invest with the Government to train, retrain and up-skill new and existing workers. Coinvestment amounts are based on the size of participating businesses with government providing the greatest contribution to small businesses. Industry Skills Councils, who are also the bodies who develop with industry the competencies that underpin qualifications in the vocational education

and training sector, work closely with industry bodies and individual employers to identify projects. This service means that businesses are provided with expert advice on the best training available to meet their skill needs.

The Australian Workforce and Productivity Agency provides advice to Government on the strategic priorities for the Fund and oversees the Fund's administration. So far the Government has committed \$174 million in funding for 498 projects covering all sectors of the economy from construction to logistics to aged care to manufacturing. Under the coinvestment model, industry is contributing a further \$100 million. These projects will provide training for over 52,000 Australian workers. This includes supporting 3,500 people to gain important management related skills, with over \$11 million invested by the Government and employers. The Government expects that the Fund will be supporting more than 5,500 people in gaining management related skills by June 2013 with a total investment of over \$17 million.

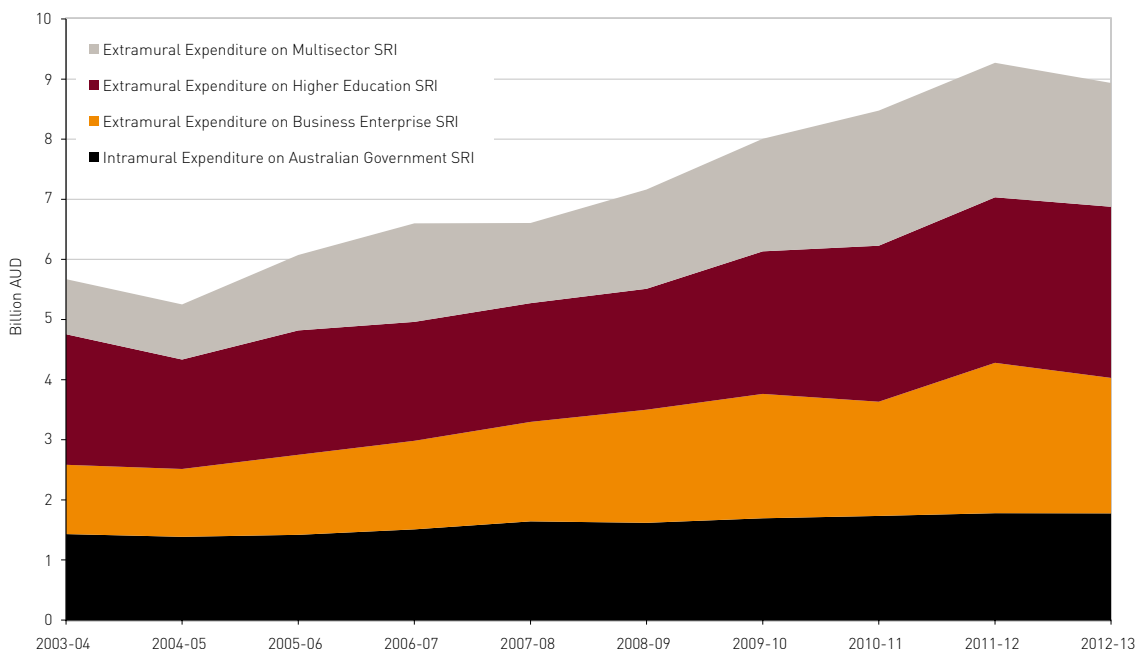
The Fund forms part of a suite of programs under the Australian Government Skills Connect initiative. Skills Connect is an integrated approach designed to help link eligible Australian enterprises with a range of skills and workforce development programs and funding. It is the employers' gateway to information and support to connect them with Australian Government funding that meets their unique business or industry training and workforce development needs. The aim is to help them build productivity and improve the future of their business.

INVESTING IN PUBLIC RESEARCH, BUSINESS RESEARCH AND DEVELOPMENT AND SMALL AND MEDIUM ENTERPRISES

CONTINUING TO INVEST IN SCIENCE AND RESEARCH

Investment in science and research powers the development of new knowledge and ideas. Australian governments and business have been making increasing investments in the nation's science and research effort – as shown in **Figure 1**.

Figure 1: Australian Government Support for Science, Research and Innovation (SRI) through the Budget and Other Appropriations (\$Bn)



Source: Australian Government Science, Research and Innovation Budget Tables 2012–13, Table 1⁴⁹

⁴⁹ *Intramural expenditures* are all expenditures for R&D performed within a statistical unit or sector of the economy during a specific period, whatever the source of funds. In this figure, intramural expenditure is expenditure on R&D performed within the Government sector

Extramural expenditures are sums that a unit, organisation or sector reports having paid or committed to pay to another unit, organisation or sector for the performance of R&D during a specific period. This includes acquisition of R&D performed by other units and grants given to others for performing R&D Source: Frascati Manual (2002) OECD

PUBLICLY FUNDED RESEARCH AND DEVELOPMENT

The primary recipients of Government funding for science, research and innovation are universities, publicly funded research agencies, medical research institutes and businesses. This public investment in our research base is essential to maintain the knowledge capital to support business innovation as well as broader public benefits.

In 2012, \$1.63 billion was provided to eligible Australian higher education providers as block grants for research and research training, through a number of performance-based schemes. These research block grants are allocated according to performance based formulas and are independent of funding for specific research projects, programs, or fellowships.

In Australia's research system, universities are the institutions that are primarily responsible for human capital development and the delivery of research workforce training. A skilled and highly educated workforce contributes to greater organisational productivity, important for the nation's economic growth and higher standards of living.⁵⁰

Universities also provide the platform for the fundamental advancement of knowledge by addressing both basic and applied research across all fields of science as well as the humanities, arts and social sciences. Universities also have a role in translating quality research into, for example, policy, commercial and/or community outcomes, leading to future technological advance and addressing national challenges. University research further underpins the quality of education and skills development essential for the rest of the economy. Basic research funding provides links and access to the 97 per cent of R&D not produced within Australia.

The CSIRO is Australia's national research agency, and one of the largest and most diverse scientific organisations in the world. It has over 6,600 staff located across 56 sites throughout Australia and overseas.

CSIRO plays a distinctive role within the Australian national innovation system as a broad, mission directed, multi-disciplinary and applied R&D organisation, with a significant focus on supporting short, medium and longer term industry innovation through leading edge science and technology. In order to do this, it works with more than 1,700 companies each year, systematically partnering with the SMEs, Australian corporations, and multinational corporations best placed to deliver impact through CSIRO's science and provide benefits to Australia.

CSIRO's role in the innovation system has been enhanced through the national research Flagships and flagship collaboration fund, which support innovation precincts and networks of global standing and scale in Australia.

The Government provides rural producers with a means of investing collectively in R&D to benefit their industry and wider community, through the rural Research and Development Corporations (RDCs). RDCs are a partnership between government and industry in priority setting and funding for innovation to improve productivity and product quality to underpin the competitiveness and profitability of Australia's agricultural, fisheries and forestry industries. Australia's RDC model is unique and held in high regard both in Australia and internationally.

BUSINESS RESEARCH AND DEVELOPMENT

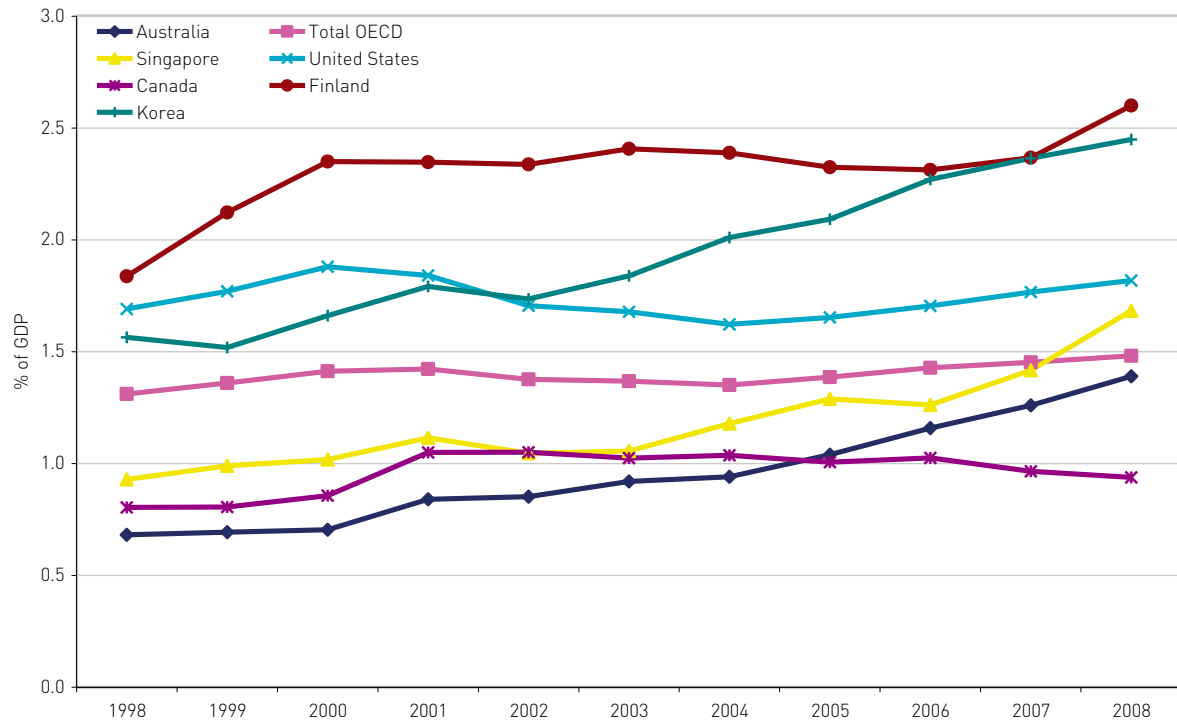
A focus for Australian innovation effort over the past decade has been to lift our historically low levels of business expenditure on research and development (BERD).

Rising BERD has been shown to be a critical platform on which economic prosperity is built.

Figure 2 shows both the progress made and the challenge remaining. Over the past decade, Australia has improved its performance faster than other nations, but we are only now approaching the OECD average for BERD. And we have a very long way to go to catch up with nations like South Korea and Finland which are amongst the world's leaders on this indicator of innovation.

⁵⁰ Human capital accumulation affects productivity both directly and indirectly and increases in educational attainment may translate into increases in aggregate productivity that exceed changes in the productivity of individual workers reflected in wage changes. Kennedy, Steven, Stoney, Nicholas & Vance, Leo (2009) *Labour force participation and the influence of educational attainment* Economic Roundup Issue 3, Australian Treasury, Canberra

Figure 2: Business Expenditure on Research and Development (BERD) (% of GDP)



Source: OECD (2012) *Main Science and Technology Indicators 2012-13*, OECD, Paris; Australian Bureau of Statistics 8104.0 — Research and Experimental Development, Businesses, Australia

INTERNATIONAL ENGAGEMENT

International engagement through research collaboration and through deep institutional and people-to-people links is an important means for Australian institutions to tap into the global knowledge pool. Australia's investment in R&D as a percentage of GDP is approaching that of the OECD average but other countries in our region, notably China, are also significantly increasing their investment in R&D.

International collaboration has a number of potential benefits:

- the opportunity to work with leading researchers, organisations and specialised equipment,
- benefiting from scale: for example by participating in research projects no single nation could sustain alone by sharing a complex project through sub-projects aligned to the strengths and capabilities of individual countries,
- capacity-building through knowledge transfer, and
- the geopolitical benefits of "science diplomacy", that allows relationship and confidence building between individuals, institutions, and nations.

NATIONAL RESEARCH INVESTMENT PLAN — A STRATEGIC FRAMEWORK FOR RESEARCH FUNDING

The 2012 National Research Investment Plan offers a comprehensive blueprint for Australia's research future. It includes a strategic framework for major research funding and provides an evidence-base for Government investment in research by linking funding to innovation, productivity and national wellbeing.

For the first time, the Plan sets out a comprehensive national research investment planning process. It will enable a coordinated, whole-of-government approach to research investment that is structured to meet national needs and provide value for money. The Plan will support future decisions by the government in relation to the level and balance of research investment.

The Plan sets out:

- the **objective** of guiding research investment in a way that improves national wellbeing by increasing productivity and addressing Australia's key challenges,
- a framework, in the form of a **national research fabric**, that enables the development of Australia's research capacity and capability to be responsive to the needs of all sectors including business,
- a set of **research investment principles** that ensures government investments address the overall investment objective and are delivered efficiently, and
- a statement of **strategic research priorities** that enables investment to be focused on meeting the government's priorities and ensuring maximum impact and scale.

From a business perspective, the Plan aims to result in government investment in enabling capability and each of the fundamental elements of the research fabric being more closely aligned with business needs. Key aspects of the Plan that support business research include:

- business involvement in the development of enabling capability for the five key domains (natural, physical, human, technology, information) and access to the resulting research capability and research outputs,
- government support for basic research and the creation of a stock of new knowledge that can underpin business innovation,
- easier access by business to the outputs of publicly funded research,
- access to a supply of research qualified staff that meets the level of demand and skills required by business,
- access by business to national and landmark research infrastructure,
- government support for collaboration programs designed to strengthen links between the research sector and industry, and
- business participation in government-level collaboration initiatives with established and emerging research nations.

INFRASTRUCTURE FOR THE 21ST CENTURY

The nation's transport infrastructure provides the backbone for connecting people and businesses, moving people and products and enabling trade.

The national objective is that Australia will implement a systematic national framework for developing, financing and maintaining nationally significant infrastructure that will assist governments and the private sector to plan and prioritise infrastructure needs at least 20 years ahead.

Over the six years to 2013–14, through the Building Australia Fund and the Nation Building Program, the Government has committed an unprecedented \$36 billion to Australia's transport infrastructure, with more than \$7 billion to major public transport projects. In addition to record funding of roads, rail tracks and ports, a concerted effort has been made to rethink the way future infrastructure needs and projects are identified and different ways to fund them.

Infrastructure Australia provides independent policy advice on priority infrastructure projects in the Australian market. The Government has increased funding for Infrastructure Australia, up nearly 40 per cent to \$36 million over four years. An increase in funding will enable Infrastructure Australia to drive the development of a long-term, coordinated national approach to infrastructure planning and investment and encourage private sector involvement in nationally significant infrastructure.

Infrastructure investment will support Australia's growing trade and investment with the Asian region, improve productivity and reduce future congestion costs by billions of dollars a year. The Government is also actively engaging with the private sector to develop new ways to fund and finance infrastructure through the Infrastructure Financing Working Group. It is establishing new infrastructure incentive tax provisions for infrastructure projects designated to be of national significance up to a cap of \$25 billion.

The Government will continue to sharpen the frameworks governing infrastructure provision and use across all classes of infrastructure, including promoting greater competition in retail energy markets, ensuring energy network investment is efficient and reviewing third-party access regulation.

In May 2012, the Government launched the National Infrastructure Construction Schedule. For the first time, information on all major infrastructure projects worth \$50 million or more, planned or delivered by all governments, and encompassing energy, water, transport, communications and social infrastructure, has been brought together. This portal provides the private sector with more information about future opportunities for linking with major government infrastructure projects in Australia.

In addition to physical infrastructure, rapid developments in information and communications technologies open new opportunities to source and share ideas, buy and sell products and services, and create new ones.

To take advantage of these opportunities, the Government is rolling out the high-speed **National Broadband Network**. High-speed, reliable and affordable broadband will change how we provide and market our services, will drive the development of new products and services and define how we engage with each other and with our work. For society, it will unleash new opportunities to improve learning and care systems, allow "smart" management of infrastructure, and expand options such as teleworking.

It is also the foundation on which Australia can become one of the world's leading digital economies as existing businesses connect in new ways with knowledge and ideas, and as new businesses and new business models emerge to take our knowledge and ideas to global markets. Cloud computing, crowd sourcing, 3D printing and telepresence all offer significant opportunities for those businesses with the capabilities to grasp them.

The Government will release a *Digital Economy White Paper* in 2013 outlining policy in this area of growing importance.

Australia's ongoing social and economic wellbeing and national security also depend on access to space based systems. Space capabilities are increasingly important aspects of critical infrastructure assets, networks and supply chains.

The areas of civilian benefit from Australia's space capabilities are diverse, including:

- satellite imagery that helps mitigate agricultural threats through application in long term weather forecasts and also enables effective responses to natural disasters such as bushfires and floods,
- space based positioning systems that enable high efficiency transport and logistics, and
- communication satellites that boost productivity by providing faster communication speeds in remote areas.

Australia's participation in the Square Kilometre Array initiative is anticipated to provide a number of industry spin-offs, including in new imaging technology and massive data processing.

MOVING TO A CLEAN ENERGY FUTURE

The fact of human-induced climate change means the global economy will need to de-carbonise over coming decades. This presents both opportunities and challenges for Australian business. The Government is ensuring the challenges are met and the opportunities are not missed.

With the world moving towards a future of lower carbon pollution, new technologies, energy sources and business practices will be in demand. Australian companies have the opportunity to be at the forefront of meeting this demand. The **Clean Energy Future** plan assists business to grasp these market opportunities, while reducing costs.

From 2015, the Australian carbon price mechanism will be linked to the European Union Emissions Trading System, producing the world's largest carbon market and becoming a major driver of the global transition to a low carbon economy.

From 1 July 2015, Australia's carbon price will effectively be the same as that of Australia's second largest trading bloc, and the same as more than 30 other countries. These arrangements mean Australia's carbon price mechanism will be able to capture least cost abatement opportunities both domestically and internationally. Firms are now able to buy European Allowances for use against their liabilities in 2015–16 and beyond.

As one of the most energy-intensive economies in the world, Australia also needs to reshape its own economy for a clean energy future.

The Government's policies support jobs and competitiveness through this transition.

The Jobs and Competitiveness Program, worth \$8.6 billion in the first three years alone of the carbon price mechanism and ongoing, will support local jobs and industry, and encourage investment in cleaner technologies.

This ongoing assistance supports companies that emit a lot of carbon but compete internationally, and thus cannot pass through all of these costs in global markets.

Around 40 to 50 of these 'emissions-intensive trade-exposed' activities are being assisted, including steel, aluminium, clinker and zinc manufacturing.

The Government's support for industry and innovation also includes:

- deployment of renewable energy technologies under the Renewable Energy Target scheme, designed to deliver on the Government's commitment to a 20 per cent share of renewables in our electricity mix in 2020,
- support for commercialisation and deployment of clean technologies through the establishment of a \$10 billion Clean Energy Finance Corporation, which will commence investing funds from 1 July 2013,
- support for development and commercialisation of renewable energy technologies through the \$3.2 billion Australian Renewable Energy Agency established 1 July 2012, and
- support for investment and innovation in clean and low emission technologies through the \$1.2 billion Clean Technology Program.

The Government also recognises the unfinished business and new challenges of energy market reforms. The *Energy White Paper 2012, Australia's energy transformation*, released in November 2012, sets out a strategic policy framework to address the challenges in our energy sector and position Australia for a long term transformation in the way we produce and use energy. The policy framework is based on a clear vision of building a secure, resilient and efficient energy system that:

- provides accessible, reliable and competitively priced energy for all Australians,
- enhances Australia's domestic and export growth potential, and
- delivers clean and sustainable energy.

The cornerstone of the Government's energy policy framework is a commitment to deliver Australia's energy needs through competitive and well-regulated markets that are operating in the long-term interests of consumers and the nation. The *Energy White Paper* identifies four priority action areas to support our energy transformation:

- delivering better energy market outcomes for consumers,
- accelerating our clean energy transformation,
- developing Australia's critical energy resources, particularly gas resources, and
- strengthening the resilience of Australia's energy policy framework.

CREATING A STRONGER, FAIRER AND SIMPLER TAX AND TRANSFER SYSTEM, AND REDUCING RED TAPE

The Government is continuing to build a stronger, fairer and simpler tax and transfer system — one that supports productivity growth while also sharing the benefits of our prosperity.

Initiatives like tripling the tax-free threshold will make it easier for people to participate in work, while measures such as the loss carry-back for companies and simpler arrangements for small business will support adaptation and business investment. The Government:

- will encourage businesses to adapt, change and undertake new investments, by allowing companies to carry back up to \$1 million of losses each year against tax paid in recent years, to boost productivity by decreasing the tax bias against riskier projects and investments,
- has replaced the Entrepreneurs Tax Offset with better targeted incentives for small business,
- will free over one million low-income earners from needing to lodge a tax return, improve incentives to participate in the workforce, and increase transparency and fairness, by tripling the tax-free threshold,
- will increase incentives for mature age workers to remain in the workforce, by abolishing the maximum age limit for the Superannuation Guarantee from 1 July 2013,
- has improved child care assistance, by increasing the Child Care Rebate,
- has improved participation incentives for single parents, by decreasing the taper rate of Newstart Allowance for single principal carers,
- has improved participation incentives for young people, by increasing the amount of income that all young people on Youth Allowance (Other) can earn, and
- has improved participation incentives for people with a disability, by increasing the number of hours that a person on the Disability Support Pension can work and retain access to their pension.

The Government has recognised that business R&D plays an important role in stimulating productivity, by undertaking significant reforms to introduce the new R&D Tax Incentive to better target R&D activities that are likely to deliver more benefits to the wider economy. The Government has decided to reprioritise government funding from R&D support for very large companies to the measures under *A Plan for Australian Jobs* that will enhance support for innovation by SMEs. This will be achieved by the introduction of a third tier to the eligibility requirements for the R&D Tax Incentive. Very large companies with an annual Australian turnover of \$20 billion or more will no longer be able to claim R&D expenditure under the non-refundable 40 per cent R&D tax offset. These companies will instead be entitled to deduct R&D expenditure under the normal deduction provisions in general tax law.

The Government is also adopting a balanced approach to regulation — one that protects health, safety and the environment, while removing unnecessary red tape.

Through the Business Advisory Forum the Australian Government is working with the states and territories to implement a series of productivity enhancing regulatory and competition priorities to:

- streamline environmental carbon reduction and approval processes,
- remove unnecessary carbon reduction and other climate change programs that undermine the effective operation of the carbon price and impose duplicative reporting requirements on business,
- increase competition and improve the efficiency of Australia's energy markets,
- lift regulatory performance,
- improve development assessment processes for low risk/low impact developments,
- improve the efficiency of approval processes for major development projects, and
- reduce red tape and reporting burdens on businesses.

The *Australia in the Asian Century White Paper* sets the goal that Australia will be in the top five countries globally for efficient regulation. The Government is committed to ensuring high quality regulation and regulatory settings, principally through:

- strengthening the regulatory impact assessment process to better manage the flow of regulation,
- managing the quality of existing regulation through structured processes for reviewing regulatory systems or frameworks and removing redundant regulation, and
- enhancing regulator performance, to ensure that regulation is administered in a transparent and consistent manner, with appropriate use of risk assessment in enforcement activities.

Appendix 2: Key Targeted Industry Support — Budgetary Measures (DIISRTE)

In addition to the wide ranging set of policies noted at *Appendix 1*, the Government also delivers targeted, industry support measures that aim to enhance the capability of Australian businesses to remain competitive and sustainable in a global economy, and to maximise the opportunities for Australian firms presented by major projects.

These measures can be divided into four themes: general industry support; R&D and innovation; sector-specific support and regional structural adjustment.⁵¹

Funding allocations and budgetary measures outlined in this Appendix refer to administered government funds.

GENERAL INDUSTRY SUPPORT

BUSINESS ADVICE

The Government provides comprehensive business advisory services to eligible SMEs to help them to maximise their sustainability and growth potential. These measures include:

- **Enterprise Connect** — this initiative offers tailored support and advice to Australian SMEs. This includes the provision of business reviews and grant assistance to implement review recommendations. The Government has committed funding of \$95.7 million over 2012–13 to 2015–16 to support continuation of the Enterprise Connect program.
- **Small Business Advisory Services (SBAS) program** — provides small businesses with access to low-cost business advisory services and activities to enhance business management skills. The Government has committed \$24.3 million in grant funding over 2012–13 to 2015–16 to continue the SBAS program.
- **Support for Industry Service Organisations Program** — the Government will provide \$16.9 million from 2012–13 to 2015–16 towards this program. The assistance will support Australian participation in international standards and conformance bodies, and ensure Australian standards and conformity assessment procedures are in alignment with international practices and do not disadvantage Australian consumers or industry.

AUSTRALIAN INDUSTRY ACCESS TO MAJOR PROJECTS AND SUPPLY CHAINS

The Government recognises the importance of maximising the opportunities for Australian industry to access global supply chains and to win work supplying goods and services to major projects. These measures include:

- **Australian Industry Participation (AIP) Plans** — which set out how companies will provide full, fair and reasonable opportunity for Australian industry. The Government continues to encourage the proponents of major projects to adopt AIP Plans. Strengthened AIP Plan requirements took effect on 1 July 2012. *A Plan for Australian Jobs* expands further on these requirements.

⁵¹ Refer to Chapter 8 for details of regional structural adjustment measures currently delivered by the Australian Government

- The **Buy Australian at Home and Abroad** initiatives, to which the Government has committed more than \$58 million. This includes \$19.1 million already invested through the 2009 Procurement Statement; it also includes \$34.4 million to support activities in the resources sector and \$5 million for the Clean Technology Focus for Supply Chains program. From 2012–13 to 2015–16, the *Buy Australian* initiatives are worth \$20.6 million.
- The Buy Australian initiatives are helping to enhance the competitiveness of Australian suppliers and to link them to new business opportunities. The initiatives include: Enterprise Connect supply chain projects; the Resource Sector Supplier Advisory Forum; Resources Sector Supplier Envoy; and the Resources Sector Supplier Advocates.

R&D AND INNOVATION

The Government recognises the importance of innovation as a key driver of productivity and global competitiveness. To this end, the Government is supporting Australian businesses and research agencies to invest in leading-edge research and development; to develop highly innovative products and processes; and to engage in industry-research sector collaboration. These measures include:

- **Australian Research Council Linkage Projects including the Industrial Transformation Research Program (ITRP)** provide funding to eligible organisations to support collaborative R&D projects between higher education researchers and other parts of the national innovation system, undertaken to acquire new knowledge, and that involve risk or innovation. The \$236.3 million ITRP component commenced in 2012–13 and funding will be directed to priority research areas related to *Industry Innovation Precincts*.
- **Commercialisation Australia** builds the capacity of, and opportunities for, Australia’s researchers, entrepreneurs and innovative firms to convert intellectual property into commercial ventures. Commercialisation Australia has funding of \$294.1 million from 2012–13 to 2015–16.
- **Cooperative Research Centre (CRC) Program** delivers economic, environmental and social benefits to Australia by supporting research partnerships between publicly funded researchers and end-users to address major challenges that require medium to long term collaborative efforts. The CRC Program has funding of \$625.3 million from 2012–13 to 2015–16.
- The **Commonwealth Scientific and Industrial Research Organisation (CSIRO)** is Australia’s national research agency. The CSIRO administers the National Research Flagships, which aim to increase economic, social and environmental wellbeing in areas of complex challenges through the provision of information, advice and scientific solutions. The CSIRO also operates core research and service activities, science outreach and hosts national research infrastructure. The National Flagships Program has funding of \$1,419.5 million from 2012–13 to 2015–16. The CSIRO’s core research and service activities, science outreach and national research infrastructure activities have funding of \$1,611.6 million from 2012–13 to 2015–16. Further information on CSIRO’s initiatives is provided at *Appendix 1*.
- **Innovation Investment Fund (IIF)** a co-investment scheme where the Government licenses private sector fund managers and provides capital for investment which must be matched with capital raised by the fund manager from the private sector. IIF venture capital funds invest in early stage companies commercialising Australian R&D and enable private sector investors to leverage off public equity capital. *A Plan for Australian Jobs* outlines a new *Venture Australia* suite of measures including a new \$350 million round of the IIF.
- **R&D Tax Incentive** provides a tax offset for eligible R&D activities and is targeted toward R&D that benefits Australia. Further reforms to the R&D Tax Incentive to deliver the greatest return for taxpayer funds are outlined in *A Plan for Australian Jobs*.

SECTOR-SPECIFIC SUPPORT

The Government is delivering targeted support to specific sectors. Such support will help Australian industries to be more innovative and better positioned to adapt to competitive pressures; enable the development of new business opportunities and markets, and help to grow and sustain Australian jobs. These measures include:

- The **New Car Plan** is assisting the automotive industry to adjust to this new environment and succeed by boosting productivity and innovation, helping the sector grow, diversify and compete in new markets.
- The **Automotive New Markets Initiative (ANMI)** is a \$35 million initiative that will assist the automotive industry develop new business opportunities domestically and internationally. The initiative commenced in 2012/13 and will run over four years. It has three key elements:
 - Automotive New Markets Program, jointly funded by the Australian and Victorian Governments,
 - Business Capability Support Program, and
 - Automotive Envoys and Automotive Supplier Advocate.

The ANMI is jointly administered by the Australian, Victorian and South Australian Governments.

- The **Automotive Transformation Scheme (ATS)** is a ten-year legislated entitlement scheme established by the *Automotive Transformation Scheme Act 2009* that will encourage competitive investment and innovation in the Australian industry to place it on an economically sustainable footing. The ATS runs from 1 January 2011 to 31 December 2020 and will provide over \$3 billion to the automotive industry. From 2011 to 2015, the ATS will support \$4 billion in capital and innovation investment, and \$28.7 billion in domestic production.
- **General Motors Holden's Next Generation Vehicles** — the Government will provide \$215.0 million to General Motors Holden to support capital investment and design and engineering of Holden's next generation vehicles. The grant assistance, along with contributions from the South Australian and Victorian Governments, will result in Holden injecting over \$1 billion into car manufacturing in Australia, which will support jobs at Holden and the automotive supply chain companies. The funding is expected to secure Holden's production of vehicles in Australia until at least 2022.
- **Ford Australia's Falcon and Territory** — the Australian Government is providing \$34 million to boost the performance of Ford's Falcon and Territory vehicles. In conjunction with assistance provided by the Victorian Government, Ford's total investment of over \$103 million will boost the fuel efficiency and emissions performance in both models. The funding will see the Falcon produced in Australia to at least the end of 2016.
- **Liquefied Petroleum Gas (LPG) Vehicle Scheme** — the LPG Vehicle Scheme provides grants for the LPG conversion of a registered motor vehicle or the purchase of a new vehicle fitted with LPG prior to first registration, subject to eligibility criteria.
- **Steel Transformation Plan Act (2011)** — The \$300 million Steel Transformation Plan was announced by the Government on 10 July 2011. The Plan encourages investment, innovation and competitiveness in the Australian steel manufacturing industry in order to assist the industry to transform into an efficient and economically sustainable industry in a low carbon economy. It is to be achieved in a way that improves environmental outcomes and promotes the development of workforce skills.
- The \$40 million funding for **Alcoa's Point Henry aluminum smelter**, announced on 29 June 2012, will support investment in the efficiency of Point Henry including through workforce skills training, capital expenditure such as maintenance and repairs and activities that will contribute to the competitiveness of the smelter.
- The Government's decision to provide a \$9.5 million grant towards the \$90 million project to establish a de-inked pulp facility at **Australian Paper's Maryvale pulp and paper mill** recognises the contribution the mill makes to supporting skills and jobs in regional Australia. The investment in the de-inked pulp facility will increase the competitiveness of the Maryvale mill and support the jobs of close to 900 workers directly employed there, as well as over 4,000 indirect jobs which rely on the mill's operations.

- The funding of up to \$28 million for **Norske Skog Australasia's Boyer paper mill**, in conjunction with a \$13 million loan from the Tasmanian Government, will enable the company to proceed with its \$85 million project to convert one of the two newsprint machines at Boyer to make coated catalogue paper. This will enhance the ongoing viability of the mill by diversifying its product range.
- The Government's **Textile, Clothing and Footwear (TCF) Innovation Package** is making the TCF industries stronger and more sustainable by supporting the development of new products and processes, especially at the high-tech, high-value end of the market. The package includes the:
 - \$33 million **TCF Strategic Capability Program** which supports large projects that will boost innovation capacity and performance at the enterprise and work place levels,
 - \$112.5 million **Clothing and Household Textile (Building Innovative Capability) Scheme** that supports innovation and the development of sustainable and internationally competitive manufacturing and design industries for clothing and household textiles in Australia,
 - \$17.5 million **TCF Small Business Program** that funds improvements to business enterprise culture.
- The **TCF Structural Adjustment Program** will operate until 2014–15. The program has two elements: a labour market element delivered through Job Services Australia; and a Restructuring Initiative Grant Scheme.

Appendix 3: Responding to Policy Directions of Smarter Manufacturing for a Smarter Australia

Manufacturing is an important and dynamic part of the Australian economy with deeply embedded and mutually reinforcing links with primary production, utilities, construction industries and the services sector.

Smarter Manufacturing for a Smarter Australia, the report of the non-Government members of the Prime Minister's Taskforce on Manufacturing, reflects critical challenges facing the sector as well as the rich opportunities for manufacturing over coming years.

A Plan for Australian Jobs: The Australian Government's Industry and Innovation Statement commits the Government to continuing its support for Australian manufacturing and sets out a series of measures that will address current and emerging industry challenges. It builds on the Government's December 2012 announcements to support Australia's manufacturing and services sectors, principally through reforms to Australia's anti-dumping system. These new measures also complement existing Government initiatives targeted at enhancing the competitiveness and productivity of Australian industry and the broader economy outlined at *Appendices 1 and 2*.

This Appendix demonstrates how *A Plan for Australian Jobs* responds to the policy directions set out in the *Smarter Manufacturing for a Smarter Australia* report.

A Plan for Australian Jobs articulates policies to support manufacturing as well as our services and resource sectors to create more jobs today and to create the skilled and rewarding new jobs of tomorrow. Manufacturing will continue to play a key role in the development of the Australian economy and its ongoing strength, diversity and resilience.

MANAGING CURRENT PRESSURES

SMARTER MANUFACTURING FOR A SMARTER AUSTRALIA POLICY DIRECTION:

Measures that recognise that the future for manufacturing is not going to look at all like the past. One critical issue is the extent to which current pressures threaten not only jobs, but also capabilities that will be required to meet the aspiration of a broad-based national economy.

A PLAN FOR AUSTRALIAN JOBS NEW MEASURES:

- Measures to *strengthen* Australian Industry Participation (AIP) will support the capabilities of Australian firms in construction, manufacturing and services to win work from Australia's major projects and connect with global supply chains. It will ensure that Australian firms are fairly considered for all major projects, expanding opportunities to benefit from large-scale resources and construction activity.
- The new *Australian Industry Participation Authority* will work to identify and maximise opportunities for Australian industry through the Buy Australian and Supplier Advocate programs, the Industry Capability Network and Austrade, in conjunction with the strengthened AIP provisions.
- *Australia's Anti-Dumping and Countervailing System* will be improved through reforms that provide stronger protection for Australian industry from unfair competition.

- The new *Anti-Dumping Commission* will deliver targeted resources to investigating dumping complaints and applying remedies where dumping is injuring local producers.
- The *Manufacturing and Services Leaders Group* will continue important dialogues with Government to provide strategic advice on the manufacturing and services sectors and advise on maximising returns from Government industry and innovation reforms.

ECONOMY-WIDE MEASURES

SMARTER MANUFACTURING FOR A SMARTER AUSTRALIA POLICY DIRECTION:

Economy-wide Government initiatives in transport, infrastructure, broadband, energy, regulatory and macroeconomic policies aim to reduce input costs, taxes and charges, and remove unnecessary regulation. Microeconomic reform to reduce costs remains critical, particularly given the emergence of Australia's 'high cost' environment.

A PLAN FOR AUSTRALIAN JOBS NEW MEASURES:

- Legislating to extend and *strengthen* current AIP arrangements to maximise opportunities and jobs for Australian industry. This will help Australian firms connect to major projects and benefit, for example, from the record pipeline of investment in Australia's resource sector.
- Reforms to Australia's *anti-dumping and countervailing systems* consistent with the Government's strong track record for free and fair trade and for Australia to operate as an open and dynamic economy.
- *Clinical trial* reforms to improve efficiency and streamline administration and costs to position Australia as a world leader in clinical research and the commercialisation of new medical technologies.
- Establishment of up to 10 *Industry Innovation Precincts*. Precincts will provide an open platform for networking, collaboration and engagement within a given sector, facilitated by an online *Industry Innovation Network* leveraging national broadband infrastructure. Collaboration helps lower costs by enabling resources including skills, knowledge, equipment and finance to be shared.

SMARTER NETWORKS

SMARTER MANUFACTURING FOR A SMARTER AUSTRALIA POLICY DIRECTION:

Collaboration and networks are critical to industrial and manufacturing innovation and competitiveness. Collaboration represents a fundamental challenge for Australia due to our constraints of scale and geography. There is considerable scope to generate greater value from our public investments in science and research by forging new models for working together.

A PLAN FOR AUSTRALIAN JOBS NEW MEASURES:

- *Industry Innovation Precincts* will drive business innovation and growth in areas of Australian advantage. They will create a strong collaborative culture and deliver significant indirect benefits and spill-over effects to the economy and community more broadly such as increases in Gross Domestic Product (GDP), improved labour market opportunities and enhanced standards of living through the improved quality of products and services.

- Precinct participants will gradually educate the wider sector about the benefits of innovation and collaboration by showcasing successful innovation case studies and drawing on early successes in assisting individual firms, particularly SMEs, to overcome barriers to growth, achieving greater benefits with more depth and reach.
- *Industry Innovation Precincts* will provide a beacon for international players about where Australia is globally competitive or creating emerging opportunities attracting international firms and investors into Australia.
- Precincts will have a direct partnership with the Australian Research Council's Industrial Transformation Research Program (ITRP) which is available to support connected research projects. ITRP will only fund projects that are directly related to the priority research areas of Precincts. The first round of ITRP funding announced in 2012 is focused on industrial research priorities across the food sector.
- The *Manufacturing and Services Leaders Group* will advise the Government on issues, including collaboration, innovation, skills and research relevant to the manufacturing and services industries.

SMARTER SMEs

SMARTER MANUFACTURING FOR A SMARTER AUSTRALIA POLICY DIRECTION:

Support for SMEs to improve access to knowledge and resources, and to support those with the commitment and potential to grow into the globally oriented medium-sized firms Australia lacks.

A PLAN FOR AUSTRALIAN JOBS NEW MEASURES:

- Individual SMEs will experience many benefits as a result of being involved in the *Industry Innovation Precincts*. For example: increased sales and exports; improved resilience; and improved strategic planning.
- Venture capital provides firms with access to finance as well as access to skills and business know-how. The \$378 million *Venture Australia* package will facilitate the growth of new knowledge-based and innovation-driven businesses in Australia, increasing industry competitiveness and attracting new investment to Australia.
- The \$27.7 million *Enterprise Solutions Program* leverages Government's role as a customer seeking value for money solutions for delivering public services. The program will help Australian SMEs to develop the skills and innovative capabilities to respond to public sector tenders and undertake feasibility studies, prototyping, design or testing work to solve the needs of public sector agencies where solutions are not readily available.
- The most capable SMEs engaged in Precincts will have access to advanced business support through the new *Growth Opportunities and Leadership Development (GOLD)* service.
- *Extension of Enterprise Connect* services to three additional industry sectors — ICT, transport and logistics and professional service. This will provide eligible firms in these sectors with access to core Enterprise Connect Business Review and associated services.
- The Government's *National Workforce Development Fund* and *Centre for Workplace Leadership* will make significant contributions to improving SME management skills. The *National Workplace Development Fund* is expected to support more than 5,500 people to gain important management-related skills by June 2013 with a total investment of over \$17 million. The *Centre for Workplace Leadership* will improve management practices and workplace cooperation, reflecting strong evidence that these practices are critical to productivity.

SMARTER WORKPLACES

SMARTER MANUFACTURING FOR A SMARTER AUSTRALIA POLICY DIRECTION:

To recognise that productivity gains are ultimately realised in workplaces, a new national conversation and sustained commitment from industry, unions, employees and government is required to build the managerial and workforce skills — and the innovation culture — that high performance workplaces demand.

A PLAN FOR AUSTRALIAN JOBS NEW MEASURES:

- The *Manufacturing and Services Leaders Group* will be a key forum for sharing information on success. These Groups will help Australian firms to manage change, lift productivity and seize future opportunities.
- Designed as a joint venture of industry and government, the *Centre for Workplace Leadership* will provide simple, accessible and action based leadership and management development tailored to the needs of individual workplaces. The Centre will assist managers and leaders at all levels to promote healthy and positive workplace environments. A key role of the Centre will be to make a compelling case to all Australian workplaces that improving leadership capabilities will deliver benefits for employers and employees alike. These include capabilities like innovation and higher levels of workplace productivity alongside opportunities to do meaningful and satisfying work. The Centre will also focus on Australia's youth — for investing in the future generations of Australian leaders and managers will ensure Australia will be able to remain at the forefront of economic growth and development.
- The *National Workforce Development Fund* helps businesses to enhance the skill level of workers as part of broader competitiveness and productivity strategies.
- A *Workplace Partnership Program* pilot initiative will bring together management and employees at the enterprise level with the objective of enhancing productivity, innovation and employee engagement. Further details of the pilot will be developed in consultation with the *Manufacturing Leaders Group*, the *Australian Workforce and Productivity Agency* and the *Centre for Workplace Leadership*.
- Firms across the country will be able to connect and benefit from Precinct activities through the *Industry Innovation Network*, regardless of their location. Participation in Precincts will support SMEs in using and realising the full benefits of research.
- Through Precincts, the *GOLD* initiative will provide an advanced integrated service to firms assessed to have high-growth potential. *GOLD* services will maximise knowledge spillovers and expose participating SMEs to leading practice.
- Access to Enterprise Connect services through an *expansion* to ICT, transport and logistics and professional services sectors will provide eligible firms in these sectors with detailed recommendations on how to improve their business and achieve their goals.

