



**Australian Government**

**Department of Innovation  
Industry, Science and Research**

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# **INNOVATION POLICY REPORT**

**MAY | 2011**

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## DEPARTMENTAL DEVELOPMENTS

### NEW: Report of the National Survey of Research Commercialisation (NSRC) released

On 18 August the Department launched the 5th iteration of the NSRC following extensive sector consultations and a survey preview “road show” held in 5 state capitals. The survey was sent to 99 Australian publicly funded research organisations (PFROs) of which 72 responded.

The survey sought data from universities, medical research institutes and publicly funded research agencies (CSIRO, DSTO, AIMS and ANSTO) on their commercialisation inputs, indicators of intent and outputs.

The survey found the following outcomes for years 2008 and 2009:

Indicators which are dependant on capital and/or good economic conditions to stimulate sales, such as “Licensing, Options and Assignments (LOA) income” and “capital raisings” were severely impacted by the GFC. The ‘deal flow’ also decreased (number of LOAs executed), as businesses and industry re-evaluated their investment strategies.

Indicators which look to the future such as invention disclosures, patenting activity, research contracts and consultancies and resources allocated towards commercialisation activities, all show growth. They portray an optimistic future outlook by the sector, and a greater focus on commercialisation particularly given the economic environment of the survey period which was dominated by the GFC.

LOA income for 2009 (\$315m) was a significant increase over the 2007 figure (\$233m); the superiority of this figure over previous years is based on income received by CSIRO for its WLAN technology.

Start-up company formations have continued their steady decline which began at the start of the decade. However, the value of institutional equity in start-up companies has increased by 31% from \$169m in 2000 to \$222m in 2009 (in adjusted 2009 dollars).

The survey was initially conducted in 2001 (for 2000). The last iteration of the survey was held in 2008 (for the 2005-2007) and the data from it was published in July 2009. Time series data for 10 years (2000-2009) is available to the Department across 16 key metrics.

The Department is currently publishing hard copies of the report which should be available in the week starting 23 May. The report is being published both in hard copy and electronic forms. The dataset from the survey and electronic copies of the report are [available on the Departments' website](#).

## NEW: Focusing Australia's Publicly Funded Research Review

With the implementation of the Government's ten year innovation reform agenda – Powering Ideas – now well advanced, it is timely to examine ways to optimise the innovation dividend from investment in publicly funded research. A process is underway through the auspices of the National Research Infrastructure Committee, to develop a long term strategy for collaborative research infrastructure investment.

Consideration also needs to be given to how Australia can continue to use its National Research Priorities and associated resource allocation processes, to focus research activities in areas of strategic importance and in which Australia is genuinely internationally competitive.

In this context, the Department of Innovation, Industry, Science and Research is reviewing a number of issues relating to Australia's publicly funded research, with a particular focus on priority setting. The department will be assisted by an Expert Reference Group and will [provide a report](#) to the Minister for Innovation, Industry, Science and Research by the end of July 2011.

## NEW: APS 200 Project on Public Sector Innovation

The Secretaries Board endorsed the Public Sector Innovation Project Final Report and recommendations for building a more innovative culture within the Australian Public Service (APS) on 6 April 2011.

The Final Report has outlined how recommendations can be implemented in key areas, including leadership, openness, procurement and strategy. Also, it includes: an Innovation Action Plan to generate innovative change in the APS; options for rewarding, celebrating and sharing APS innovation including an online [Innovation Showcase](#); and actions to sustain and embed an innovative culture within the APS over the long term. It also highlights the ongoing development of the Innovation Toolkit by the Department of Innovation, to better support APS staff in implementing innovations.

The Final Report includes a preferred model for a collaborative experimental centre (termed APS Design Centre), to be developed along the lines of [MindLab](#) in Denmark. The Secretaries Board accepted this model as a catalyst for further discussion, and agreed to make a final decision in the near future.

Key documents from the project, including the Innovation Action Plan, are to be made available shortly.

## NEW: Public Sector Innovation Showcase

The Department of Innovation, Industry, Science and Research in conjunction with the Department of Finance and Deregulation has established a platform to showcase innovation within the public sector. The aim is to enable government agencies and departments to share and disseminate examples of innovation and to show how innovative practices are achieving enhanced outcomes. It is intended

to be a living resource, with new content added as examples become available. [The Showcase](#) also includes examples of Government 2.0 initiatives being carried out in the Australian public sector.

## **NEW: Directory of Innovation Academics**

The Department has established a preliminary [directory of academics](#) interested in, or working on, innovation in Australia. The preliminary directory is not comprehensive or exhaustive and includes only those who have agreed to participate.

The aim of the directory is to identify academics and groups in Australia who are pursuing innovation-specific research, to assist research projects to be aware of relevant innovation experts, and to promote the diffusion of research to innovation community stakeholders.

Interested academics are invited to [contact the Department](#) if they would like to be included.

## **NEW: Chairs of Industry Innovation Councils**

Council Chairs met on 1 April to review cross-sector issues including the potential impact of the carbon price mechanism proposed by the Multi-Party Climate Change Committee, the need to address regulatory reform that better supports innovation, and to capture opportunities from the National Broadband Network. The Chairs also participated in the Department's Advisory Bodies workshop held on the same day, and discussed the potential for an Inter-departmental meeting of Chairs with representatives of departments on the micro-economic benefits of the Government's innovation and productivity agendas.

Since 2008, Minister Carr has established eight [Industry Innovation Councils](#) (Councils) covering the following sectors: Automotive; Built Environment; Future Manufacturing; Information Technology; Pulp and Paper; Space; Steel; and Textile, Clothing and Footwear. The Councils provide strategic advice on innovation priorities to the Minister, champion innovation in industry and build connections across Councils and with other innovation initiatives. The Councils work collaboratively with industry, unions and professional organisations, science and research agencies and government.

Also, the Future Manufacturing Council in collaboration with the Built Environment and Information Technology Councils facilitated a workshop in Melbourne on 8 March 2011 exploring ways to maximise Australian manufacturing industry participation in products for renewable energy and water efficiency in the built environment.

Professor Danny Samson from Melbourne University presented the findings of his research report Innovation for business success: Achieving a systematic innovation capability to the department and some Industry Innovation Councils on the 21st of April. The report provides insight on how firms in Australia can become and remain systematically innovative, and includes ten case studies of innovative Australian based companies. Professor Samson is working with the

department to develop his principles and tests for an innovative idea into mini-tools for firms.

The Built Environment Council has released its Recommendations Report which proposes ten recommendations for government and industry investment to move the industry forward over the next few years. The recommendations were informed by engagement with key industry stakeholders, issues presented at the 2010 CIB World Building Congress, and successful UK Government initiatives. The recommendations focus on four key themes: Better Practice; Design Leadership; Cooperative Research; and Enabling Regulation and Procurement.

## **NEW: Meeting of the Coordination Committee on Innovation**

The Coordination Committee on Innovation (CCI) is a coordination body for Australian Government departments and agencies to discuss innovation policy and collaborate on key issues related to the Australian innovation system.

The Committee met on 15 April and issues discussed included

- Australia's Innovation performance;
- The Enhancing International Business to Business Collaboration;
- The value of Australia's IP data and a national patent analytics pilot involving IP Australia, University technology transfer offices, CSIRO and DIISR;
- The draft Best Practise Guide on Innovation and Science Evaluation;
- The OECD Green Growth strategy.
- The Committee will now meet twice a year.

## **NEW: Procurement Working Group - Commonwealth, State and Territories Committee on Innovation**

Following the December 2010 meeting of the Commonwealth, State, and Territory Advisory Council on Innovation (CSTACI), an Innovation & Procurement Working Group was established. The working group is examining options to better utilise public sector purchasing practices to support innovation.

The group will disseminate work relating to innovation policy and procurement including:

- Local and international reports and publications of interest;
- Reports and findings on performance and measurement; and
- Information gathered from events and workshops, including OECD events.

The Working Group held its first teleconference on 29 March 2011 where members updated innovation and procurement in their respective jurisdictions,

discussed the terms of reference for the group, and to governance arrangements. The Group agreed to meet in early June, to coincide with the June CSTACI meeting.

## **NEW: Update of Commercialisation Australia website**

The 13th meeting of the Commercialisation Australia Board was held on 17 May 2011 and it is next scheduled to meet in late June. A Ministerial announcement of grants approved from the January, February and March Board meetings is expected to be made before the end of May.

The [Commercialisation Australia website](#) was enhanced in March 2011 to introduce additional functionality. This includes the "Our Participants" page, providing information about program participants. Users can search the page by state, sector, grant type, grant amount and project completion status. Participants are invited to provide additional information about themselves and their progress which will be added to the website on a regular basis.

Program documentation revisions were also released on the website. The Customer Information Guide and the application forms were amended in response to feedback from stakeholders and specific recommendations from the 2010 interim evaluation. The application process was simplified for smaller applications - single component Skills & Knowledge applications are now assessed on a continuous basis by the CEO of Commercialisation Australia (rather than the Commercialisation Australia Board). The Customer Information Guide contains clearer messaging in relation to the Need for Funding merit criterion and additional guidance on eligible projects and activities. Eligible expenditure was revised to remove certain restrictions and to include customer engagement costs where they are part of an eligible project.

Details of the new Pilot Programs component were released on the website on 30 March, including guidelines and a sample application form. Its release was subsequently promoted to key stakeholders and has attracted enquiries from several potential applicants. The Pilot Programs component will assess the practicality and effectiveness of new, alternative methods of support that will contribute to building the capacity of, and opportunities for, Australia's researchers, entrepreneurs and innovative firms to convert intellectual property into successful commercial ventures.

To cope with the demand for the Commercialisation Australia grant assistance in Western Australia, a select tender process is underway to engage Case Managers in that region. It is anticipated that this process will be completed by mid May.

Commercialisation Australia's Volunteer Business Mentor (VBM) Network currently includes more than 60 registered mentors from Australia and overseas. A database which houses details of the mentors will be available to Commercialisation Australia Case Managers by end May 2011. The Case Managers will use the database to facilitate introductions between mentors and program participants.

## NEW: The launch of the Social Innovation Europe initiative

On 17 March 2011, The European Commission acted on its commitment to provide expertise and a networked 'virtual hub' for social entrepreneurs and the public and third sectors by launching the [Social Innovation Europe initiative](#) in Brussels. The Innovation Union, Europe 2020 flagship, recognised social innovation as "an important new field which should be nurtured".

Social Innovation Europe is being run by a consortium of European partners including the Danish Technological Institute and Euclid Network, and led by the Social Innovation eXchange (SIX) at the Young Foundation, UK. The initiative is financed under the EU's [Competitiveness and Innovation Programme](#) (CIP), which aims to encourage the competitiveness of European enterprises.

Through a series of gatherings, and a new online resource, Social Innovation Europe is expected to:

- connect projects and people who can share experiences and learn from each other;
- develop an easily accessible resource bank - to find about other projects, organisations and ways of working;
- develop a resource bank of up to date policies at local and national levels and provide information on funding opportunities;
- facilitate new relationships between civil society, governments, public sector institutions and relevant private sector bodies;
- develop concrete recommendations in financing and in upscaling/mainstreaming of social innovation in Europe

## NEW: New Chief Scientist

Professor Chubb was formally appointed to his new role by Innovation Minister Kim Carr at Parliament House in Canberra on the 19th of April. Professor Chubb has had a distinguished career in higher education and research and recently retired after a decade as vice-chancellor of the Australian National University.

Professor Chubb was Vice-Chancellor of Flinders University of South Australia for six years and the Senior Deputy Vice-Chancellor of Monash University for two years. He was also Chair of the Higher Education Council (the Commonwealth Government's peak advisory body on higher education) from September 1990 to December 1994 and was, until mid-1994, the Deputy Chair of the National Board of Employment, Education and Training (the Commonwealth's peak advisory body on all matters related to the Employment, Education and Training portfolio). During 1993, he was Interim Chair and then Deputy Chair of the Committee for Quality Assurance in Higher Education.

Professor Chubb will provide advice on science and technology issues that impact on Australia and the world and begins his three year term on May 23, 2011.

## CSTACI Framework of Principles for Innovation Initiatives Teleconference

CSTACI Framework of Principles for Innovation Initiatives Work is being undertaken to develop a Handbook of examples of the implementation of the Framework of Principles for Innovation Initiatives (the Framework). The Handbook will showcase examples of use of the Framework and allow members to share experiences in using the Framework and any lessons learnt.

The Department of Innovation is developing the template and contribution guidelines to be considered out of session by the Steering Group. It was agreed that the template be linked as far as possible to existing work on the CSTACI database of Innovation Initiatives. The Handbook template will be tested for 6 months and a review of the template will be conducted at the end of the testing period.

Selected cases from the handbook may be published via other means such as the Innovation Showcase.

The Steering Group also agreed to add the Framework as an additional resource to the APS Innovation toolkit when it is launched.

## CSTACI Innovation Indicators Teleconference

A teleconference of the Commonwealth, State and Territory Advisory Council on Innovation (CSTACI) Innovation Indicators Working Group was held on Tuesday 22 March.

The work being undertaken on developing indicators to measure the OECD Green Growth Strategy was reported on. The indicators proposed are aimed at monitoring the move towards greener growth, and monitoring the opportunities to harness the potential of the transition to green growth.

The OECD proposes a measurement framework for green growth indicators that explores four inter-related groups of indicators.

These include indicators reflecting the environmental efficiency of production and consumption. For example indicators of the natural asset base would include indicators monitoring the environmental quality of life as well as indicators describing policy responses and economic opportunities.

Other items covered included a paper from the Australian Bureau of Statistics on Developing cost estimates for state/territory innovation statistics.

## Intellectual property reform update

Recent debate about the patent system in Australia has centred on concerns that people are being allowed to patent discoveries and abstract ideas rather than inventions, that the threshold of inventiveness in Australia is too low, that the existence of patents hampers innovation in some technological fields, and that

undesirable, unethical or offensive inventions can be patented. The Government is conducting a number of processes to address these concerns.

## Government response to Gene Patents and other reports

In its 2010 report, Gene Patents, the Senate Community Affairs References Committee considered the impacts of gene patents on healthcare, medical research and the health and well-being of Australians.

The Government intends, by the middle of 2011, to release a combined response to the recommendations of the Gene Patents report, as well as to the December 2010 Advisory Council on Intellectual Property report on Patentable Subject Matter and 2004 Australian Law Reform Commission report on Genes and Ingenuity: Gene Patenting and Human Health.

## Patent Amendment (Human Genes and Biological Materials) Bill

The Senate Legal and Constitutional Affairs Committee (the Committee) is conducting an inquiry into the Patent Amendment (Human Genes and Biological Materials) Bill 2010 (Private Members' Bill) introduced by Senators Coonan, Heffernan, Siewert and Xenophon. The Private Members' Bill aims to amend the Patents Act 1990 to prevent the patenting of human genes and biological materials existing in nature.

The Committee is due to release its report on 16 June 2011. The Government will respond to this inquiry in due course.

## Intellectual Property Laws (Raising the Bar) Amendment Bill 2011

[IP Australia](#) is in the process of finalising the Intellectual Property Laws (Raising the Bar) Amendment Bill 2011 (the Bill). The Bill has been the subject of extensive public consultations over a two year period and provides for a number of changes to raise the standards for grant of a patent thereby more closely aligning Australia's patent law with major global trading partners' standards for patentability. The Bill will also introduce a statutory exemption from infringements for experimental and regulatory approval activities relating to a patented invention.

IP Australia released an exposure draft of the Bill in December 2010 and it is scheduled to be introduced in the Winter 2011 Parliamentary sitting period.

## National Enabling Technologies Strategy - Public Attitude Research

A study of public attitudes towards nanotechnology will be undertaken before July 2011. This is the sixth annual tracking study of community attitudes towards nanotechnology. By the end of 2011 the existing separate public attitude studies in nanotechnology and biotechnology will be merged.

### Public Engagement

Workshops on public engagement principles to develop a set of consensual principles for public engagement have now been held with NGOs, Industry, Government, Researchers and a workshop with members of the general public will be held on the weekend of 30 April – 1 May. After that, representatives of each stakeholder group will come together for the final multi-stakeholder workshop in June 2011.

The Department is collaborating on a major conference on the role of social media in science communications, with the company Media 140, being held in Brisbane on 27 April. The conference is being supported by the ABC, New Scientists and Cosmos magazine.

A public forum on Synthetic Biology was held in Sydney on 4 April, and support funding was provided to the Royal Institute Australia to hold a similar forum in Adelaide on 7 April 2011.

### Education

A draft of the new online high schools education resource for enabling technologies is expected to be completed by the end of June 2011. The new resource will replace the existing resources AccessNano and Biotechnology Online, and is developed in line with the new Australian Science Curriculum.

A partnership with CSIRO Education is seeing the development of two education outreach programs for secondary schools dealing with biotechnology and nanotechnology.

### Information and Engagement

A brochure on nanotechnology safety has been developed.

## Release of Biotech Business Indicators Report (Q4, 2010)

Using publicly available industry and market data, the Department of Innovation, Industry, Science and Research produces [Biotech Business Indicators](#) (BBI), a quarterly summary of key statistics about the commercial and investment activities of Australian biotech companies listed on the Australian Securities Exchange (ASX).

During the fourth quarter of 2010 (Q4 2010), the Australian biotech sector continued the strong recovery from the global financial crisis that was recorded in Q3 2010, showing a further increase in market capitalisation of 14.8 per cent, from \$21.4 billion to \$24.5 billion. The upturn was widespread across the biotech

sector, with two thirds of all active companies improving their market capitalisation.

On a global level, several ASX-listed biotechs were successful in establishing partnerships with various organisations, as well as winning grants and market approvals for their products.

## Climate Ready case studies

The Department will conduct at least three detailed case studies on completed Climate Ready projects to explore project success and customer progress and activities towards addressing the effects of climate change.

The case studies will be prepared between May and June 2011. This will involve face to face meetings with customers to review the short and medium outcomes of the supported project and impacts relating to firm growth, productivity improvements, human capital knowledge gains and innovative activity during the Climate Ready project.

Innovation Australia Climate Ready Committee Members will participate in the visits with Innovation Policy and AusIndustry Officers. Participants for the case studies will be sought from regional and metro areas across Australia.

## R&D Tax Credit update

The Tax Laws Amendment (Research and Development) Bill 2010 was passed by the House of Representatives on 22 November 2010. The Bills are awaiting debate in the Senate. Regulations and Decision Making Principles concerning various matters of administration of the new R&D Tax Credit are currently being drafted.

## Review of Industry and Other (Category 3) Funding for Higher Education Providers update

In the second half of 2011, the Department of Innovation, Industry, Science and Research (DIISR) will commence a review of Industry and Other Funding (Category 3) within the Higher Education Research Data Collection (HERDC). The department will conduct the review with the assistance of a technical working group of the Higher Education Research Data Advisory Committee (HERDAC).

Currently the department is in the process of developing draft terms of reference for the review, to be considered for endorsement at the next meeting of HERDAC. In the third quarter of 2011, the department will release a consultation paper, with appropriate framing questions, to the sector for comment. The department will prepare advice to the Minister on outcomes from the review by October 2011.

## Sustainable Research Excellence (SRE) in Universities update

The department is working with the Higher Education Research Data Advisory Committee (HERDAC) and its technical working group to progress development of the 2012 SRE funding methodology. For the first time, this will include a performance moderator derived from the results of Excellence in Research for Australia (ERA).

A consultation paper on options for the inclusion of ERA in the SRE funding model (developed with the assistance of the Australian Research Council) will be the focus of consultation with higher education providers in mid-2011.

## Research Workforce Strategy update

The Australian Government indicated in Powering Ideas: An Innovation Agenda for the 21st Century that it would develop a research workforce strategy, to “address expected shortfalls in the supply of research-qualified people”.

The final strategy document, [Research Skills for an Innovative Future](#), was launched on 19 April 2011. Further information on the strategy can be found on the DIISR website:

## Cooperative Research Centres (CRC) Program update

The CRC Program supports end-user driven research collaborations to address major challenges facing Australia, many of which are global challenges.

Applications for the 14th selection round close on 1 July 2011. Potential applicants are strongly encouraged to discuss their application with the department. The [CRC Committee](#) will make its funding recommendations to the Minister by late November 2011.

The [CRC Association \(CRCA\)](#), the peak organisation representing CRCs, will hold its annual conference in Brisbane from 17-19 May. The conference brings together researchers, educators and industry to network and gain further insight into the CRC program and its achievements. The department is the exclusive sponsor of the Gala Awards Dinner, a key event of the conference program. The department will also host an exhibition booth at the conference where AusIndustry and Enterprise Connect representatives will be available to network with delegates. Staff from the CRC Program Branch will also be available for one-on-one meetings with potential applicants.

## University Mission-based Compacts update

Compact meetings with institutions were completed on 18 April. The department is currently finalising compact agreements with each university. All compacts are expected to be agreed by June 2011.

Compacts will detail [public funding commitments and reciprocal institutional commitments](#). They will support universities to pursue their distinctive missions and contribute to the Australian Government's aspirations for the higher education sector as whole.

## NATIONAL DEVELOPMENTS

### Building Innovation Capacity: The Role of Human Capital Formation in Enterprises

Andy Smith, University of Ballarat, Australia, Jerry Courvisanos, University of Ballarat, Australia, Steve McEachern, ANU, Australia, Jackie Tuck, University of Ballarat, Australia

[This paper](#) describes a project which seeks to identify the role of human capital formation in promoting innovation in Australian enterprises and the ways in which enterprises can improve their human resource management and learning and development practices to improve their innovation performance.

There are a number of factors that affect enterprises' ability to innovate. These include internal factors such as the ability to detect technological changes in the environment, the development of core competencies from which innovation can develop and external factors such as the maturity of the market which the enterprise serves and the impact of government policy to stimulate innovation.

A range of studies have suggested that human factors within the enterprise are critical to innovation. Thus the ability of enterprises to innovate depends on the effective management of human resources and, in particular, the learning and development practices that enable enterprises to increase the skills of workers to innovate (human capital formation).

Studies in Denmark and Spain have shown that better human resource management and learning and development practices increase enterprise innovation. However, these studies have not established exactly what practices enterprises need to put in place to improve their "innovation capacity".

### Trade Policy Review of Australia - WTO

The WTO released its [Trade Policy Review of Australia](#) in March 2011 which encompasses an analysis of the Australian trade policies and practices. While overall the report is highly positive about the Australian economy it contains some warnings for the future.

The review found that Australia has one of the most open economies in the world with "an exceptionally high degree of transparency". The report notes that Australia did far better than most developed economies during the Global Financial Crisis, crediting this to strong demand for commodities from China, proactive policy by the Australian Government and a stable banking sector.

Despite this, and noting that Australia has one of the most competitive economies in the world, the report states that Australia has experienced a marked decline in multi-factor productivity (MFP) growth. This was at -1.8% in 08/09 and 0.0 in 09/10. In the first cycle of this decade to 2003/04, average annual MFP growth was at the long-term average of 1.3%. However, since then (noting that we are

currently in a partially completed cycle), MFP growth has fallen to an annual average of -0.2%.

It states that this is a key determinant of Australian enterprises international competitiveness and domestic living standards in the longer term, and should be addressed. The report attributes the drop in productivity to three sectors; agriculture, mining, and electricity, gas, and water.

In the agricultural sector average annual MFP growth in agriculture, forestry and fishing fell from 3.4% (1998/99-2003/04) to minus 1.4% (2003/04-2007/08). The report attributes this to the effects of extended drought, which had a severe and long term effect on the sector. Despite this the report notes that “Australian farmers among the most efficient and therefore most self-sufficient in the world”, receiving the second lowest level of government support in the OECD.

The mining sector's average MFP growth rate dropped to minus 4.8% (2003/04-2007/08), the lowest of all sectors of the economy. The report accepted the Productivity Commissions explanation of this drop, which was the combined effects of depletion of in-situ mineral resource deposits and the export prices boom had led to lags between capital expenditures and corresponding increases in mining output.

Close behind the mining sector was the utilities sector, with average MFP growth rate for electricity, gas, and water supply activities dropping to -4.2% (2003/04-2007/08). Manufacturing also recorded a drop in MFP (-0.8%).

The report states that there is growing concern about the increasing dependence on mining income “which may amplify the business cycle, as the economy will become more vulnerable to swings in its highly favourable terms of trade”. It also questions why “little of the nearly \$A17.5 billion of gross annual Commonwealth assistance to industry is regularly evaluated to determine whether such assistance yields value for money”.

Despite these issues overall the WTO has a positive view of the Australian economy, and it is highly complementary of the continuing effort to make the economy open and internationally competitive.

## Garnaut Climate Change Review Update Paper 7 – Low Emissions Technology and the Innovation Challenge

In November 2010, Professor Ross Garnaut was commissioned by the Australian Government to provide an independent update to his [2008 Climate Change Review](#). The [seventh paper](#) in the series of eight Update Papers, titled Low Emissions Technology and the Innovation Challenge, was released on Wednesday 23 March 2011.

Update Paper Seven supports the provision of funding for innovation to facilitate the transition to a low emissions future. The update advocates that Australia has a part in the global innovation effort in transitioning to a low-emissions economy through:

- basic research focusing on areas where we have comparative advantage in research capacity and strong national interest in application;
- commercialisation, following business priorities backed by investment commitment; and
- reducing other costs of innovation by expanding relevant high-level education and removing regulatory and legal barriers to new activities.

In relation to innovation, the paper:

- provides a strong economic justification for innovation support based on reducing the transition costs to a lower carbon economy;
- proposes a premium on the tax credit for low emissions research;
- proposes new principles for the design of R&D schemes (page 30) based on a survey of business people that found problems ranging from failure to expend funds, heavy compliance, and poor design of objectives;
- suggests that industry transitional support for innovation is required over the next 10 years; and
- recommends a package of measures be established to support innovation in Australia including:
  - increasing support for public and private basic research;
  - market-led support for private demonstration and commercialisation;
  - low emissions commitment of \$2-3 billion per year (including expenditure in current programs); and
  - strong and independent governance arrangements.

## Release of research paper on IT and innovation - ABS

In 2009, the ABS presented some preliminary findings from an analytical research project that was exploring the relationship between IT intensity and Innovation. [The paper](#) from this work “Research Paper: Business Innovation and the Use of Information and Communications Technology, Mar 2011” was released on 3 March 2011. The paper investigates the hypothesis that there is a relationship between the intensity of the use of ICT by business and innovation. The definition of innovation is that defined in the OECD Guidelines for Collecting and Interpreting Innovation Data (2005) - a definition which refers to product, process, organisation and marketing innovations. The paper is based on 2005-06 and 2006-07 ABS Business Longitudinal Database data.

The analysis finds a strong relationship between ICT intensity and innovative activity at the firm level. Businesses which use sophisticated types of ICT are significantly more likely to undertake innovation of any type. The more intense ICT users are likely to undertake more types of innovation, more novel innovations and are more likely to develop the innovation internally. The effect of ICT on innovation holds when controlling for a range of other business characteristics, such as employment size and industry division.

The ICT variables which were found to be most strongly related to innovative activity were having a web presence and on-line ordering facilities.

# INTERNATIONAL DEVELOPMENTS

## OECD Government at a Glance 2011

The OECD Government at a Glance 2011 is expected to be released in May 2011.

While most of the report will focus on general government structure, governance, fiscal strategies etc., there are two special features that will be relevant to innovation policy:

### Special Feature on Government's role in promoting R&D

There will be a cross country comparison of Government Budget Appropriations or Outlays on R&D (GBAORD) at a percentage of total government spend and a breakdown of public support by socio-economic objectives.

The section looks at how governments of OECD countries have adjusted their strategies to encourage R&D and to promote innovation following the global financial crisis.

### Special Feature on Green Procurement in public procurement policies

The section will include some survey results of the member countries on their implementation of green procurement policies.

Green procurement is defined by the European Commission as "a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured."

## StartUp Britain

StartUp Britain, launched 28 March 2011, is a new campaign by entrepreneurs for entrepreneurs with British Government support. The initiative is a response from the private sector to the Government's call for an enterprise led recovery, and is designed to accelerate enterprise in the UK.

Whilst the British government endorses the initiative (Prime Minister David Cameron is taking a leading role in the launch), it is not providing up front funding. Instead, around 60 leading UK brands are contributing their services at a discounted rate for up-and-coming business endeavours. The Government has listed several policy changes it would like to implement to foster enterprise and drive new business growth, thus increasing employment and business competitiveness.

The face of the StartUp Britain campaign is a unique [web portal](#). This is clearly aimed at helping the aspiring entrepreneur. There are prominently featured sections on "starting" and "growing"; a series of "top tips", "find a great idea"; and

£1,500 of useful offers ranging from free business cards to mentoring to cut-price commercial insurance.

The initiative is billed as the first ever portal to bring together in one place the wide range of existing resources, and will enable new businesses to access the package of support pledged to StartUp Britain from international brands.

## SBA launches Entrepreneurial Mentor Corps initiative

An initiative to mobilize current successful business owners to mentor and support startups and entrepreneurs to help them become the next generation of great US companies was launched by the Small Business Administration (SBA) in February.

Through EMC's ([Entrepreneurial Mentor Corps](#)) clean energy pilot, four regional 'accelerators' will identify and match mentors with 100 clean energy startups, to help them grow their revenue quickly, create jobs, and attract outside financing while avoiding pitfalls that often challenge such startups. Accelerators are entities that offer services ranging from mentoring and technical assistance to business guidance and focused networking. EMC's clean energy pilot is a partnership of SBA, Department of Energy (DOE) and the Advanced Research Projects Agency-Energy (ARPA-E). Eligibility for the clean energy pilot will be limited initially to startups that have received funding from DOE or ARPA-E.

Part of the White House's Startup America initiative, EMC aims to support over 1,000 startup and early-stage firms across the US, and SBA is partnering with the Kauffman Foundation to identify entities and mentoring best practices.

## Economist Article – Taming the Leviathan

The 19 March 2011 edition of the Economist Magazine included a report on public sector reform. The article discusses the increasing cost and size the public sector over the past 50 years. It observes that since 1960 Government spending in developed nations has risen from an average of 28.4 percent to 47.7 percent of GDP today. The article examines ideas for improvement in service delivery without increasing expenditure through the adoption of new technology and better management.

## Skills for innovation & research report – OECD

This report aims to clearly identify the links between innovation and specific skill sets. It examines the role of education and training in developing skills relating to innovation and how those skills directly translate into innovative outcomes.

However, the report identifies the difficulty in making explicit links between specific skills and innovation. Despite the difficulty in finding specific linkages the report did make a few findings. The report found that there is consistent growth in tertiary education in OECD member countries. This is not necessarily quantifiable in tangible benefits as the report notes that "Formal knowledge, as reflected in qualifications and credentials, may ... play only a small role in enabling workers to

operate successfully on the job; instead, workers' knowledge and skills derived from experience may be crucial".

Simply 'up qualifying' people, that is increasing the level of their formal qualifications rather than specific training does not produce the productivity benefits expected. The evidence shows that advanced tertiary education does not directly flow into the private sector, with the vast majority of doctorate holders across the OECD working in the public sector. While figures do show that a tertiary education significantly increases a person's employability, the report does not necessarily demonstrate a link between formal educational attainment and innovation growth.

In contrast, the report found that innovative firms are far more likely to offer external or internal job specific or technical training to staff and indicates that developing knowledge and skill sets within a firm has a positive correlation with innovative outcomes. This is perhaps the strongest message in the report.

The report also examines the mismatch between innovation policies that focus on a science-based 'discovery' model of innovation and the reality of innovation in many countries, where adoption of existing innovations is the predominant form of activity. The report suggests that these two types of innovation require different skill sets and different approaches. However, the types of skill sets and difference of approaches required are not explicitly defined, reflecting the difficulties in linking specific skills and innovation outcomes.

It also explores how R&D intensity increases in all industries as an economy gets closer to the technological frontier. This implies that there is greater pressure on developed countries to train highly skilled workers than in developing countries where cheap labour provides impetus to industry.

The report questions how innovation will be measured as developed economies move increasingly towards a service sector base, an area the report acknowledged as lacking methodology.

The report can be obtained from the [OECD bookshop](#), and the executive summary can also be found [here](#).

## Knowledge, Networks and Nations – Global Scientific Collaboration in the 21st Century

The UK Royal Society released [a report](#) in March 2011 titled, Knowledge, Networks and Nations – Global Scientific Collaboration in the 21st Century. The report was led by a high-level Advisory Group of leaders and experts in international science and science policy and draws on evidence, analysis and consultation with scientists and policy makers from around the world.

The report surveys the global scientific and innovation landscape in 2011, showing that collaboration has never been more important. International scientific and innovation collaboration is essential to addressing the cause and deal with the impacts of many 'global challenges' for example climate change and food security.

The report makes five key recommendations:

- Support for international science should be maintained and strengthened;
- Internationally collaborative science should be encouraged, supported and facilitated;
- National and international strategies for science are required to address global challenges;
- International capacity building is crucial to ensure the impacts of scientific research are shared globally; and
- Better indicators are required in order to properly evaluate global science.

## Madrid Institute For Advanced Studies – Working Paper – When local interaction does not suffice: Sources of firm innovation in urban Norway

[This paper](#) by the Madrid Institute For Advanced Studies, published in February 2011, presents findings from a survey of firms in the five largest Norwegian city-regions – Oslo, Bergen, Stavanger, Trondheim and Kristiansand - to determine the geographic sources of innovation in firms and to identify how individual firms access specific sources of knowledge.

Key findings from the survey indicate that firm innovation in urban Norway is mainly driven by global connections, rather than locally based collaborations. The study found that the most innovative firms are more likely to have a larger network of international collaborative partners compared to less innovative firms. The report suggests that local and even national interaction seems to be irrelevant for innovation development.

Furthermore, the study found that that managerial attitudes towards collaboration and international connections impact on the level of international engagement undertaken by a firm. Open-minded managers (defined by the potential for learning, accepting change and new ideas from foreign cultures and cultural competence to connect with people from other countries) have a greater diversity of international partners and rely more on global connections, whereas managers with higher levels of regional trust depend more on local, and to a lesser extent, collaborative partnerships with national contacts.

## International Knowledge-Based Bio-Economy: update

The Bioeconomy is an economy that generates sustainable growth by using renewable biological resources, as opposed to petro-chemical resources, as inputs to industrial processes.

Australia is participating in an international Knowledge-Based Bio-Economy (KBBE) collaboration with the European Commission, Canada and New Zealand.

The KBBE forum aims to share knowledge on policy strategies and actions, create new knowledge to address the societal challenges related to the bioeconomy, and

foster collaboration and joint activities to promote innovation in the bioeconomy sectors.

There are four KBBE workstreams: biotechnologies for biorefineries and biobased materials, food and health, fisheries and aquaculture, and sustainable agriculture.

A scientific workshop on sustainable agriculture will be held in Palmerston North, New Zealand on 13-16 June 2011. The workshop will provide the opportunity for countries to outline their research priorities in this area and identify areas for future research collaboration. The workshop is expected to include discussions in the areas of: production and efficiency, consumers and society, energy requirements and environmental impacts, and, legislation and policy.

The next annual International KBBE Forum will be held in Canada on 5-7 October 2011.

## Australia-India Strategic Research Fund

Approximately \$4.8 million in new grants will be awarded under Round 5 of the Australia-India Strategic Research Fund (AISRF) in May. Round 5 saw the highest number of applications under the Science and Technology Fund (136) and Biotechnology Fund (60) components. This was a 22% increase on applications received in previous years. It is expected that about 16 new collaborative research projects in areas including vaccines and medical diagnostics, transgenic crops and marker assisted breeding, marine science, nanotechnology and earth sciences will be funded. The majority of projects are of three years duration and will involve leading Australian (including CSIRO, the ANU, the University of Melbourne, UNSW) and Indian ( Raman Research Institute, Indian Institute of Science, Indian Institute of Technology Bombay, International Centre for Genetic Engineering and Biotechnology) research institutions.

The first round of the Grand Challenge Fund component of the AISRF progressed to stage 2 (full applications) after 73 EOIs were assessed by a joint Australian-Indian peer review panel. The GC Fund will support large collaborative research projects that demonstrate a clear path to end use and address practical problems in the areas of food and water security and the environment. Successful projects (expected to be announced in August) will receive up to \$3 million from the Australian government, with the Government of India providing matching funding.

The Secretary will co-chair the annual Joint Science and Technology and Joint Biotechnology committee meetings with India's departments of Science and Technology and Biotechnology in Delhi on 28 and 29 April. The meetings provide an opportunity to review progress in the implementation of the AISRF, which is Australia's largest bilateral fund for science and technology collaboration, within the broader context of the bilateral science relationship. The meetings enable consideration of AISRF policy and program design and shape activities over the coming 12 months.