Innovation Policy Report

March 2013

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A Plan for Australian Jobs: the Australian Government's Industry and Innovation Statement

On 17 February 2013 the Australian Government released "A Plan for Australian Jobs" – its Industry and Innovation Statement.

A Plan for Australian Jobs outlines $1 billion worth of investment to support and create Australian jobs and to support the future of Australian industry.

The Plan responds to the 2012 report of the non-Government members of the Prime Minister's Taskforce on Manufacturing. It builds on the Government's December 2012 announcements to support Australia's manufacturing sector by strenghtening Australia's anti-dumping and countervailing systems, appointment of an Automotive Supplier Advocate and establishment of the industry-led Manufactuing Leaders Group.

Innovation is critical to growing and maintaining world-class businesses and capabilities across all sectors of the economy.

The Plan details how the Government will work in partnership with industry to ensure Australian firms get fair access to major projects, drive business growth and innovation in areas of competitive advantage, and grow small and medium businesses.

The Plan oulines three core strategies:

- 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.

The Government will extend Australian Industry Participation (AIP) arrangements to help Australian firms obtain the opportunity to supply to major projects. Measures include new legislation to require AIP Plans for all

projects with a capital expenditure of $500 million or more and establishment of a new AIP Authority to raise the profile of AIP activites, coordinate activities arising from AIP Plans and help firms gain access to opportunities.

The Government will invest $504.5 million in establishing up to 10 Industry Innovation Precincts. These Precincts will drive collaboration between businesses, researchers and other elements of the innovation system to share knowledge, deploy technology, create products and services and take advantage of business opportunities. Led by industry, these Precincts are designed to build critical mass and create a cohort of world-class growth-oriented businesses.

Up to five Precincts will be focused on industries where Australia is already a world leader and up to five Precincts will be established in areas of emerging opportunity with global potential.

The first two Precincts will focus on Australia's manufacturing and food sectors, and build on Australia's existing competitive advantages in these industries. Up to another eight Industry Innovation Precincts will be selected through a competitive process in 2013 and established in 2014.

The Venture Australia package of measures is designed to grow the new high growth firms of tomorrow by expanding and strengthening the Australian Venture Capital market. The initative includes a new $350 million round of funding for the Innovation Investment Fund. In addition two existing tax concession programs – Early Stage Venture Capital Limited Partnerships and Venture Capital Limited Partnerships – will be enhanced, with changes to improve tax incentives for a variety of investor types.

The Enterprise Solutions Program will help small to medium companies develop innovative solutions to problems identified by government agencies. Governments can play a critical role in encouraging innovation due to their considerable purchasing power, but procurement policies must be flexible enough to allow companies to compete. The Enterprise Solutions Program will assist companies overcome key barriers to providing solutions for government agencies, including: limited access to finance; limited access to skills and expertise; the cost of early product development; and uncertainty in market demand.

More information on the Industry and Innovation Statement and its associated initiatives can be found at:
http://aussiejobs.innovation.gov.au/Pages/default.aspx

Departmental Developments

NEW: National Research Investment Plan

The National Research Investment Plan (investment plan), developed by the Australian Research Committee (ARCom) was agreed by the Australian Government and released on 28 November 2012. The investment plan sets out a range of actions needed to ensure that Australia has a strong, cohesive research fabric, while also being able to focus its efforts to conduct research in areas of national priority.

It is the first in a series of three year plans and provides a set of principles and a strategic framework against which future major strategic research funding decisions can be taken. In summary, the planning process comprises:

- the objective of guiding Australian Government 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.

The work of ARCom in 2013 will focus on implementing the actions outlined in the investment plan, including:

- developing a set of strategic research priorities;
- providing advice on assessing research impact and opening access to the outputs of research; and
- preparing advice on key issues facing the research system, including research career pathways and barriers to collaboration.

NEW: Top Breakthrough Actions for Innovation

Australia's Chief Scientist Professor Ian Chubb has released five breakthrough actions governments could take to make Australia a more innovative nation. These actions were developed after consultation with organisations, peak bodies, and individuals across the government, industry and science sectors.

The top breakthrough actions that are required are as follows:

1. Establish an Australian Innovation Council

It is proposed that the Australian Government establish an Australian Innovation Council.

The council would have responsibility for strategy, funding programs, assessing capacity in both innovation and related R&D; and advising Ministers through the Australian Research Committee, or ARCom. It would work with research funding agencies to harmonise relevant effort.

2. Strengthen business access to publicly funded research expertise, infrastructure and data

Business must have open access to publicly funded expertise, infrastructure and research data, especially in areas of national priority. To facilitate access to skilled personnel and infrastructure, the Australia Government should establish a National Innovation Voucher pilot program.

3. Encourage mobility of researchers between academia and business or other enterprises

Policies need to ensure that researchers are encouraged to engage with areas, where academic publications are not the primary focus, and are not disadvantaged in academia as a result.

4. Harmonise IP frameworks across the publicly funded research sector

Arguments about IP are a major obstacle in potential researcher-industry partnerships. IP policies among publicly funded research organisations should be standardised and simplified to foster collaboration within and between sectors.

5. Emphasise the role of STEM education in changing the culture

The Australian Government should influence educational outcomes and through that the prevailing culture in science, technology, engineering and mathematics (STEM), by significantly expanding opportunities for work placements for STEM students.

Future Policy for Future Technologies

The HC Coombs Policy Forum, in collaboration with the Department of Industry, Innovation, Science, Research and Tertiary Education hosted a workshop "**Future Policy for Future Technologies**: What is Australia's capability to take advantage of the opportunities arising from emerging enabling technologies?" on 21 February 2013. It was supported through the National Enabling Technologies Strategy.

This workshop represented a prime opportunity for stakeholders to discuss the future of enabling technologies, particularly nanotechnology and biotechnology, with a focus on foresighting, commercialisation and technology transfer, and how enabling technologies fit into the wider innovation system.

The workshop received keynote addresses from:

- Dr Don Russell, Secretary of DIISRTE, speaking on 'Industry and Innovation: enabling technologies, productivity and Australia's future';
- Professor Ian Chubb, Australia's Chief Scientist, who gave a talk on 'Setting strategic research priorities: where Australia should aim to be'; and
- Dr Erol Harvey, CEO MiniFab and former member of the Future Manufacturing Industry Innovation Council (FMIIC), who gave a talk on 'Research and Development: 5 risks in translational research'.

There followed three panel discussions on:

- **A strong knowledge platform in and outside of government** - know what's coming, plan for it, develop our niche;
- **Connecting Australia's innovation ecosystem** -|collaboration, coordination, building value chains; and
- **Fostering Research Translation** - commercialisation, interdisciplinary, operating in global markets.

These panel sessions involved wide-ranging and vigorous discussion on a variety of issues, with a report being prepared to capture the main elements of the day. The workshop was recorded and a video will be available on the HC Coombs Policy Forum website in the coming weeks. Following the workshop was a networking event, where delegates had the opportunity to further discuss the outcomes of the day.

The audience included representatives from government and various regulatory bodies, as well as researchers and industry representatives.

Research Workforce Strategy

The Research Workforce Strategy (RWS) is a 10 year strategic framework intended to focus and prioritise activity in support of the research workforce over the next decade. It will ensure Australia is well placed to meet the future demand for research skills in the innovation economy.

Investment in priority areas of the RWS has been made with several projects funded. Two of these projects have recently published their findings:

Research Skills for an Innovative Future: Business Views and Needs final report

This report, produced by the Business/Higher Education Roundtable, summarises the proceedings of two workshops designed to bring together business and university representatives to discuss the value of Higher Degree by Research graduates as employees within their organisations. Business employers offer an important perspective to the implementation of the Australian Government's Research Workforce Strategy.

Career support for researchers: understanding needs and developing a best practice approach

The department contracted Australian Council of Learned Academies, to develop a report examining best practice approaches for research career support across disciplines and career stages. This report was informed by a survey, a series of workshops, and written submissions.

Ten broad elements were identified, which participants believe contribute to best practice in career pathways in research.

National Developments

Australian Research Council

Excellence in Research for Australia (ERA)

The results of the ERA 2012 evaluations were released on 6 December 2012. The former Minister for Teriary Education, Skills, Science and Research, Senator the Hon Chris Evans, announced that the next round of ERA will take place in 2015.

ERA 2012 results confirm that researchers at Australian universities compete with the world's best in a wide range of disciplines. The results demonstrate that world standard research performance occurs at Australian universities of all kinds, in all states and territories. The ratings achieved by Australian universities were higher overall than in ERA 2010, and the range of fields of research assessed was wider.

In the lead up to the next round of ERA in 2015, the Australian Research Council will conduct consultations with the sector, and consider additional indicators of research application and collaboration that could be used to better understand the broader impacts of university research.

6th ISPIM Innovation Symposium

The 6th ISPIM Innovation Symposium – Innovation in the Asian Century – will be held in Melbourne, on 8-11 December 2013. Organised by the International Society of Professional Innovation Management (ISPIM), and hosted by the Victorian Universities Innovation Management Network (VUIMN), this event will bring together around 250 innovation experts from 35 countries. The three-day programme includes: Industry-Leading Keynote Speakers; Luminary Speakers; "Hot Topic" Roundtable Discussions; Facilitated Themed Sessions with Academic and Practitioner Presentations; Special Interest Groups; Academic Research Development Sessions. The final day of the event is dedicated to "Experience Innovation in Melbourne" and includes Company Visits, Presentations, Discussion Panels and Workshops. As with all ISPIM events, there is an emphasis on discussion and networking.

With the Australian Government identifying Asia as a core pillar in its own economic strategy, the 2013 ISPIM Innovation Symposium focuses on "Innovation in the Asian Century".

A call for submissions from academic, research, consulting, industry, intermediary and policy organisations has been released. Submissions should focus on the following general themes or the Symposium focus theme:

- Innovation in the Asian Century (Symposium Focus Theme);
- Business Models, Entrepreneurship & Financing Innovation;
- Collaboration for Innovation (including Open Innovation);
- Creativity & Idea Generation;
- Green, Public & Social Innovation;
- Innovation Training, Teaching & Coaching;

- Methods, Tools & Measurement for Innovation;
- Networks & Clusters of Innovation;
- Service Innovation;
- Strategic Foresight, Strategic Agility & Future Orientation; and
- Transferring Knowledge for Innovation.

Submission outlines are due by 12 September.

More information on the Symposium and the submission process is available at http://symposium.ispim.org

ISPIM is a network of researchers, industrialists, consultants and public bodies who share an interest in innovation management.

Board of Taxation report into Venture Capital released

The Government's response to the Board of Taxation report into venture capital was announced by the Prime Minister, the Deputy Prime Minister and Treasurer and the Minister for Industry and Innovation as part of the Venture Australia package, which forms an element of the Government's Industry and Innovation Statement.

The Government has agreed with all the Board's recommendations, and proposes making additional improvements. These changes form part of the Government's response to the 2012 Review of Venture Capital and Entrepreneurial Skills. The changes comprise:

- Lowering the minimum investment capital required for entry into the Early Stage Venture Capital Limited Partnerships (ESVCLP) program from $10 million to $5 million to facilitate increased funding from "angel" investors;
- Administering the Ventural Capital Limited Partnerships and ESVCLP programs as a single regime to provide clearer entry for investors and managers wishing to use these investment vehicles; and
- Phasing out the Pooled Development Fund (PDF) program over a number of years in consultation with stakeholders. The PDF program has been closed to new registrants since 2007.

Venture Australia also includes a new $350 million round of equity funding for the Innovation Investment Fund program to attract private sector investment into this high growth and high risk area.

Kraft Foods Asia Pacific Confectionery Centre of Excellence

Stage one of Kraft Foods Asia-Pacific Confectionery Centre of Excellence, supported by the Victorian government, commenced on 8 February in Melbourne.

The world-class globally competitive research represents a significant boost for Victorian food manufacturing innovation and will be staffed by the largest food research and development team in Australia.

The establishment of the Centre for Excellence is to expand Kraft's market from 20 million Australian consumers to a market of 1.6 billion consumers

across the Asia-Pacific, as well as accelerate the development of high quality, innovative food products to Asia.

The Asia-Pacific Confectionary Centre for Excellence will contribute to:

- positioning Victoria as a leading food manufacturing centre in the Asia-Pacific region, with the capacity and capability to supply a global market;
- attracting, developing and retaining talent in food innovation and manufacturing;
- securing Victoria's position as Australia's manufacturing and R&D Centre for the food industry and build on its international reputation;
- creating an environment to attract further investment around this regional hub; and
- partnering with supply chain partners and other small to medium enterprises (SMEs) to develop manufacturing capabilities.

Kraft is also creating an open innovation centre which will connect with food SMEs across Victoria to build capability across the industry, and will work with local universities and the CSIRO.

Clean Energy Storage Study

The Marchment Hill Consulting report 'Energy Storage in Australia - Commercial Opportunities, Barriers and Policy Options', released on 31 January by the Clean Energy Council, found that by 2030the market for energy storage technology in Australia will be equivalent to several coal-fired power stations.

The report examines the commercial potential of six energy storage applications, or sub-markets, in Australia: Supporting Fringe and Remote Electricity Systems; Network Support; Market Participation; Grid Stability; Residential Storage Systems; and Business Storage Systems.

Key findings of the report include:

- Based on current trends and projected costs, the market for storage is expected to be approximately 3000 megawatts by 2030, equivalent to the output of several large coal-fired power stations;
- The most economic markets for storage in the short term will be remote areas and the fringes of the electricity grid, where power is often expensive and unreliable'
- As storage becomes more cost-competitive in future, there is likely to be an emerging and rapidly growing market in large grids; and
- The cost of storage could drop by more than half by the end of the decade, and is expected to fall from approximately $800 to $550 per kilowatt.

Storage is emerging as a potential means to support existing networks, facilitate the efficient operation of electricity markets, improve the stability of the grid as it becomes more dependent on intermittent renewable generation sources, provide for the needs of remote communities, and meet needs of residential and commercial customers.

Springboard: Australia 2013 selection results announced

The Springboard: Australia 2013 selection results were reported by the Australian on 13 February 2013. Springboard: Australia 2013 is part of Springboard's 24th venture forum, an annual program supporting and promoting women-led emerging growth companies seeking equity investments and/or strategic partnerships. The program includes recruitment and selection of 5-10 emerging growth companies from Australia, a two month coaching program, virtual access and in-person events, a venture forum event, where the companies present their opportunities to active investors and strategic partners, and additional presentation opportunities in other scheduled and affiliated sessions in the USA throughout 2013, as well as induction of all selected companies into the Springboard alumnae network. Eight Australian women from more than 100 applicants were selected for the Program, which is aimed to facilitate the candidates raising "formal capital, equity capital".

The Australian Steel Innovation Award 2013 Nominations

The Australian Steel Innovation Award celebrates the innovative production or use of Australian steel in projects or processes, recognising the best practices and people in the manufacturing industry.

Last year saw 'Dematic' take out the award for its Precision Storage Systems for automated materials handling. The logistics automation company has a turnover of $160 million and employs 385 people across Australia and New Zealand. Steel components in Dematic storage products are manufactured from high tensile grades of steel supplied by BlueScope at advanced production facilities in Australia and incorporate the latest innovations in production technologies. Key features of Dematic's innovation in steel storage components include their modularity, patented components, being globally standardised and the design being optimised with regard to steel content and structural efficiency.

Finalists for the 2012 Australian Steel Innovation award included Melvelle Equipment Corp for its Seized Rail Fastener Remover (Pandrol PR & E Clip) and Leussink Engineering for its steel rolling mill refurbishment project.

The Australian Steel Innovation award is one of thirteen Manufacturers' Monthly Endeavour Awards which, being independently judged, recognise the essential role manufacturing plays in Australia's economy and are the only national awards program specifically for Australia's manufacturing industry.

The 2013 Monthly Manufacturing Endeavour Awards nominations closed on 27 February.

Business Innovation and Investment visa

Under the Business Innovation and Investment Program, on 24 November, the Business Innovation and Investment visa commenced. The Significant

Investor visa stream comprises Provisional Significant Investor visa (visa 188), and the Permanent Significant Investor visa (visa 888).

The purpose of the visa is to provide a boost to the Australian economy and to compete effectively for high net worth individuals seeking investment migration. Migrant investors will be required to invest AUD $5million into complying investments for a minimum of four years before being eligible to apply for a permanent visa.

To be eligible for the Permanent Significant Investor visa (visa 888), applicants must have held visa 188, in which they are required to invest $5million into complying investments for a minimum of four years; and must be nominated by a State or Territory government.

Complying investments for the Significant Investor visa include:

- Commonwealth, State or Territory government bonds;
- Australian Securities and Investment Commission regulated managed funds with a mandate for investing in Australia; and
- Direct Investment into Australian proprietary companies.

There is no maximum amount of investment for the Significant Investor stream under the provisional subclass 188 visa or the permanent subclass 888 visa.

Investments in property are not considered as complying investment. However the Visa does allow investment in ASIC regulated managed funds which invest in real estate in Australia. The Visa also allows investment in ASIC regulated managed funds including infrastructure projects in Australia; Australian agribusiness; cash held by Australian deposit taking institutions; bonds, equity, hybrids or other corporate debt in companies and trusts listed on an Australian Stock Exchange; bonds or term deposits issued by Australian financial institutions.

Export Finance and Insurance Corporation reforms to help business in Asia

Small to medium enterprises (SMEs) exporting to Asia will benefit from changes to the Export Finance and Insurance Corporation (EFIC).

Legislation will be introduced this year to amend the Export Finance and Insurance Corporation Act 1991, so more of EFIC's resources are devoted to SMEs looking to expand overseas. The legislation is the Government's response to the Productivity Commission's report on Australia's export credit arrangements. The changes are also part of a commitment in the “Australia in the Asian Century” White Paper to direct more of EFIC's resources to SMEs looking to expand into the emerging and frontier markets of Asia.

EFIC will apply a new market failure test that will help it determine an exporter's eligibility for its financial products and services. It will also be given new powers to better support Australian manufacturing and service businesses participate in global and regional value chains.

South Australia

Development of Science, Research and Industry Innovation Policy

The South Australian Premier's Science and Industry Council has been leading the consultation process to help shape a new Science, Research and Industry Innovation Strategy for South Australia.

A consultation paper was released on 3 December 2012 seeking feedback and exploring ideas to contribute to the development of a new five year strategy to build South Australia's research capability and to support industries and the wider community. A number of community engagement forums were conducted during December, with the consultation period closing on 31 January 2013.

The discussions held at three public events, along with a number of contributions made via email will help identify the future key priorities for science, research and industry innovation in South Australia.

South Australia's Chief Scientist will work with the Premier's Science and Industry Council to develop a set of recommendations to be delivered to the South Australian Government. Copies of the consultation paper and, when available, the list of recommendations can be found on the Department of Further Education, Employment, Science and Technology (DFEEST) website at http://www.dfeest.sa.gov.au/science-research/

Tasmania

Improvements in procurement practices

During 2012, theTreasurer's Instructions were amended to provide greater flexibility to Heads of Agencies in relation to procurement within the Tasmanian Government.

Where specific circumstances exist, agencies may directly source, or seek limited submissions in relation to goods and services procurement (TI 1114), or building and construction procurement/roads and bridges procurement (TI 1217) from a supplier or suppliers, without the need to seek quotations or call for tenders.

Release of simplified procurement documentation - goods and services

As part of the ongoing enhancement of procurement policies and processes, the Tasmanian Crown Solicitor, in consulation with the Department of Treasury and Finance, has prepared a suite of templates and simplified procurement documentation for use in low risk/low value procurement of goods and services.

The use of this less complex documentation will assist both agencies and suppliers by reducing the burden on both parties in relation to the procurement activities undertaken by the Tasmanian Government.

Sense-T Program

Sense-T is the world's first economy-wide intelligent sensor network. Based in Tasmania, it aggregates historical and spatial data with real-time sensor data from across the state. Information will be available through easy-to-use apps to help businesses, governments and communities better manage their resources – to help them do more with less.

Tasmania is the perfect location for Sense-T. It is small enough to capture information from across the whole economy and big enough to make meaningful analyses. It will also be the first state with full coverage under the National Broadband Network, which will provide high speed broadband to every premises. Sense-T is already working on projects involving aquaculture, viticulture, food supply, carbon markets and logistics.

Sense-T is a partnership program between the University of Tasmania, the Tasmanian Government, CSIRO and IBM. It establishes Tasmania as a centre for technology and research excellence, where shared data drives new approaches to social, environmental and economic sustainability.

International Developments

Global

GE Innovation Barometer 2013

The GE Innovation Barometer 2013 was released on 17 January. It is the largest global survey of business executives dedicated to innovation. The report investigates the opinions of business leaders towards innovation in their country, as well as internationally.

It surveyed over 3,000 senior business executives in 25 countries, who are actively engaged in the management of their firm's innovation strategy.

As viewed by other countries, Australia's ranking as an innovative economy has improved from 16th in 2012 to 13th (out of the 25) in 2013.

Findings from Australian business executives include that:

- Innovation continues to be a strategic priority for business (89%);
- The most important abilities to innovate successfully are considered to be understanding customers and anticipating market evolutions (83%), and attracting and retaining innovative people (83%);
- 54% consider that Australia has a strongly innovation conducive environment; and
- The number who felt that Government support for innovation was efficient or coordinated was 23%, down from 30% in 2012, which is in line with global trends.

Global findings identified include:

- Businesses continue to see innovation as a strategic priority (91%);
- Collaboration is perceived as the key to increased business innovation success, with emerging markets embracing the collaborative innovation trend more strongly than western, developed economies;
- Access to new technology and the possibility to enter new markets are the biggest drivers of collaboration, while IP theft, lack of trust and fear of talent poaching are the biggest deterrents;
- Perception of government support for innovation is declining globally; and
- There is a call for governments to better foster innovation through action on: talent and education, reduce bureaucracy, IP protection, and support for the development of stronger venture capital.

EU

EU Innovative Activity Survey

Eurostat, the European Union's statistical office, released the Seventh Community Innovation Survey on 11 January 2013. The Report provides data in relation to the period 2008-2010. The survey found that Germany, Luxembourg and Belgium have the highest proportions of enterprises with innovative activity in the EU, with levels of 79%, 68% and 61%, respectively.

The survey also measured levels of cooperation across two years and found that only 27% of European enterprises with innovative products and

processes cooperated with European partners, such as other companies, universities or public research institutes, while the remaining 73% innovated using only their own resources. Cyprus was found to have the highest level of innovation cooperation (62%), followed by Austria (51%), Slovenia (45%), Lithuania and Hungary (both 43%).

Graphene and Human Brain Project win research excellence awards

The European Commission announced the winners of a multi-billion euro competition of Future and Emerging Technologies on 28 January 2013. The winning Graphene, and Human Brain initiatives are set to receive one billion euros each, to deliver 10 years of research at the crossroads of science and technology. Each initiative involves researchers from at least 15 EU Member States and nearly 200 research institutes.

"Graphene" will investigate and exploit the unique properties of a carbon-based material which is a unique combination of physical and chemical properties, including that of being 100 to 300 times stronger than steel.

The "Human Brain Project" will create the world's largest experimental facility for developing the most detailed model of the brain, for studying how the human brain works and ultimately to develop personalised treatment of neurological and related diseases. This research lays the scientific and technical foundations for medical progress that has the potential to dramatically improve the quality of human life.

The Great Innovation Debate

The issue of 'the great innovation debate' was raised by the Economist of 12-18 January 2013. Some academics and entrepreneurs claim that although the expenditure on R&D in the last decades has been greater than ever before, modern science has failed to create anything comparable in impact to such inventions as the toilet, cars, planes, the telephone, radio and antibiotics. The concern is that if the rate of innovation, and its spread, slows down, so too will the economies' growth rate.

However, the current pattern is not all gloom and doom, with significant breakthroughs in the area of human health and life expectancy, the impact that IT is having, and the fact that globalisation has led to an increased pool of inventors. Besides, many inventions, while currently offering only modest improvements, are likely to have a huger impact over time, for example, as companies learn to use the technologies. Governments too can support innovation through reduction of unnecessary red tape, reform of public sector and investing wisely.

Japan

Companies selected to receive subsidies to increase Foreign Direct Investment

On 6 February 2013, the Ministry of Economy, Trade and Industry (METI) announced the 2012/13 results of the 'Subsidy Program for Projects Promoting Asian Site Location in Japan' initiative. The initiative provides

financial subsidies to international companies establishing research and development centres or global headquarters in Japan. It is part of efforts to increase the rate of foreign direct investment to Japan. The Act on Special Measures for Promotion of Research and Development by Certified Multinational Enterprises came into force in November 2012. This Act aims to attract inflows of technologies and expertise to Japan.

Four companies have been selected - three from the US, and one from France. The program is intended to attract and concentrate high-value-added business operations that match the strength of the Japanese economy by supporting global companies' establishment of new high-value-added business locations in Japan. METI expects this program to improve Japan's status as an Asian business center.

United Kingdom

Innovation Social Frontiers: The Next Edge of Social Innovation Research

Nesta has issued an open call for research paper proposals on social innovation. In partnership with Glasgow Caledonian University and the Tepsie project, Nesta is looking for research that will push knowledge and practice of social innovation, and set a collective research agenda for the next ten years.

Social innovation refers to innovations that are both social in their ends and in their means. In other words, it covers new ideas (products, services and models) that simultaneously meet socially recognised social needs and create new social relationships (collaborations) that are good for society and enhance society's capability to act.

Social innovation is an emerging field, with empirical knowledge about how social innovation happens, and how policy supports it, relatively limited. While there are a growing number of research institutions and individuals focusing on social innovation,Nesta argues that these networks remain fragmented, limiting the opportunities for refining and deepening the knowledge and evidence base.

Nesta asserts that without understanding what social innovation is, and how it can be used to address major social challenges, there is a risk that the term becomes misunderstood and misappropriated. As interest from policymakers grows, deepening knowledge about how social innovation works, and should be supported, is critical.

The Research Proposal submissions process closed on 1 March 2013, and will be evaluated by an expert panel of academics and practitioners engaged in social innovation. Winning submissions will be announced in April and invited to present at a major international research conference to be held in the UK on 14 to 15 November 2013.

This will form the start of an international network of social innovation researchers, building on the work of Tepsie and other European Union research projects on social innovation. Papers will be published by Nesta and partners following the event.

US and Canada

Canadian Government Venture Capital Action Plan

The Canadian Government announced a major package of venture capital related policy initiatives entitled the Venture Capital Action Plan on 14 January 2013. The major components of the plan are:

- $250 million to establish two new, large private sector-led national funds of funds in partnership with institutional and corporate strategic investors, as well as interested provinces;
- Up to $100 million to recapitalize existing large private sector-led funds of funds, in partnership with willing provinces;
- An aggregate investment of up to $50 million in three to five existing high-performing venture capital funds in Canada; and
- Promote a vibrant venture capital environment in Canada rooted in a strong entrepreneurial culture and well-established networks that link investors to innovative companies.

US: National Network for Manufacturing Innovation: A Preliminary Design

A report, National Network for Manufacturing Innovation: A Preliminary Design, which is based on the input of nearly 900 stakeholders and describes an approach for implementing and managing a proposed National Network for Manufacturing Institutes, was released on 16 January 2013 by the US National Science and Technology Council (NSTC).

This new report was developed by the NSTC's Advanced Manufacturing National Program Office, which comprises representatives from federal agencies working to strengthen the US manufacturing sector. It was previewed at a workshop where industry, academic, government and other participants had the opportunity to discuss key components, including the framework for the competitive process and the criteria for selecting the Institutes of Manufacturing Innovation (IMI).

The Report is designed to accelerate the development and adoption of cutting-edge manufacturing technologies. It recommends that each of the IMIs be led by US non-profit organisations and have diverse funding sources and an independent Board of Directors composed predominantly of industry representatives. IMI partners would include private industry, academic and technical training organizations, government agencies and unions, among others. Federal matching funds for IMIs would be disbursed over a five-to-seven-year period, after which the institutes would be self-sustaining.

The report proposes that the preliminary activities of the IMIs include:

- Applied research, development and demonstration projects that reduce the cost and risk of developing and implementing new technologies in advanced manufacturing;
- Education and training at all levels;
- Development of innovative methodologies and practices for increasing the capabilities and capacity for supply chain expansion and integration;

- Engagement with small and medium-sized manufacturing enterprises, as well as large Original Equipment Manufacturers; and
- Access to shared facility infrastructure, with the goal of scaling up production from laboratory demonstrations and making technologies ready for manufacture.

Pilot Program to Streamline US Government Contracting Process

On 17 January 2013, the Small Business Administration, launched a pilot version of RFP-EZ, a new online marketplace specifically built to buy high end professional services from small businesses in the technology sector.

The new program aims to make it easier for such businesses to find and bid on low-dollar contracts from federal agencies because the process for selling to the government is viewed by many tech companies as too long and too complicated. It is claimed that RFP-EZ will allow the government to source low-cost, high-impact solutions from innovative US technology companies and this will result in better and less expensive products and services for the government, as well as increased opportunities for high-growth start-ups.

RFP-EZ is the first of five high-impact projects being developed under the Presidential Innovation Fellows program, which teams innovators from the private sector, non-profits and academia with government employees to collaborate on solutions to deliver significant results.

US – R&D Expenditure 2011

The US National Science Foundation's National Centre for Science and Engineering Statistics issued an analysis InfoBrief in January 2013 on research and development (R&D) expenditures in the US in 2010 and 2011.

The R&D performed in the US totalled an estimated $406.7 billion (current dollars) in 2010, an increase of $2.9 billion (+0.7%) over the 2009 total, and the preliminary estimate for total US R&D in 2011 is $414 billion, a rise of $7.3 billion (+1.8%) on 2010. However this growth is described as "weak" when compared to growth rates for gross domestic product (GDP) in those same years as these growth rates were well behind the pace of gross GDP expansion in both 2010 and 2011 (4.2% and 3.9%, respectively).

Besides, there is a concern that when the R&D expenditure figures are adjusted for inflation, they show that on a constant dollar basis, US total R&D in 2009, 2010, and 2011 remains below the 2008 level. The same is true for R&D performance by the business sector, which accounts for just over two-thirds of all U.S. R&D performance.

The business sector remained the largest performer of R&D in the US, accounting for $283.8 billion (68.5% of the total) in 2011, with preliminary estimates showing that it grew from $279 billion in 2010. In the 20-year period from 1991 to 2011, the business sector's annual share of US national R&D has ranged from 68% to 74%.

Universities and colleges performed $63.1 billion (15.2%) of US R&D in 2011, and in the 2006-2011 period the academic sector has had an annual growth

of 5.2%. Over the 20-year period of 1991-2011, the sector's annual share of US R&D has ranged from 11% to 15%.

The federal R&D total was up only barely in 2011 (an increase of $0.5 billion over the prior year).

Tax Credits for Clean Energy Manufacturers

The Department of Energy has announced the availability of $150 million in Advanced Energy Manufacturing Tax Credits for clean energy and energy efficiency manufacturing projects across the US. Since 2009, the Advanced Energy Manufacturing Tax Credit program has supported innovative manufacturers that boost U.S. competitiveness in the global race for clean energy. The Advanced Energy Manufacturing Tax Credit continue the U.S. commitment to American-made energy, increasing energy security, and creating jobs. The Advanced Energy Manufacturing Tax Credit was established by the American Recovery and Reinvestment Act to support investment in domestic, clean energy and energy efficiency manufacturing facilities through a competitively-awarded 30% investment tax credit.

During the initial round, $2.3 billion was provided in credits to 183 projects across the US. The $150 million in tax credits are being made available now because they were not used by the previous award recipients. These remaining tax credits will be allocated on a competitive basis. Over the past four years, the US has more than doubled clean, renewable energy generation from wind, solar, and geothermal sources, and has boosted its position as a global leader in clean energy.

Small Business Administration names first licensee in early stage capital initiative

The US Small Business Administration (SBA) named Hatteras Venture Partners (HVP) as the first licensee in the Early Stage Innovation Funds (ESIF) initiative, part of its Small Business Investment Company capital investment program. HVP is a venture capital company that focuses on seed and early-stage opportunities in biopharmaceuticals, medical devices, diagnostics and related opportunities in human medicine. The ESIF aims to fill the gap in availability of funding between $1 million and $4 million that is often encountered by early stage high-growth companies. Up to $1 billion has been committed in guaranteed leverage over a 5-year period and licensees can receive up to a maximum of $50 million in SBA-guaranteed funding to match their privately raised capital.

US National Science Foundation and Switzerland sign a Research Partnership Agreement

On 25 January 2013, the US National Science Foundation (NSF) announced a new research partnership with Switzerland through Graduate Research Opportunities Worldwide (GROW). GROW is a coordinated effort that enhances international collaborative research opportunities for NSF Graduate Research Fellows. There are currently GROW agreements between NSF and science agencies in Denmark, Finland, France, Japan, Norway, Singapore, Sweden and South Korea.

Under GROW, a streamlined and well-coordinated process has been developed to connect NSF Graduate Research Fellows to a number of strategically selected educational and research institutions around the world. This partnership is expected to open new mobility opportunities for young, talented researchers while strengthening the academic ties between the two countries.

Education and Skills Update

Making study in Asia more accessible

Study in Asia will be more affordable for Australian university students from 2014.

The Higher Education Support Amendment (Asian Century) Bill 2013, introduced into Parliament on 14 February 2013, will provide greater financial assistance through the OS-HELP scheme for students wanting to undertake part of their study in Asia. The legislation will respond to changes to the OS-HELP loan scheme announced in late 2012 as part of the Government's response to the Australia in the Asian Century White Paper.

The expanded loan scheme means more students across all disciplines will be able to develop the Asian literacy skills they will need by experiencing Asia first-hand. While a growing number of students are undertaking part of their study in Asia, currently only one in eight OS-HELP loans are for study in Asia.

Mr Bowen said the OS-HELP provided low cost loans to assist eligible students to pay expenses associated with undertaking overseas study as part of their higher education, including travel and accommodation costs. The measure is in addition to the $37 million AsiaBound Grants Program for students undertaking short or semester length study opportunities, and for preparatory Asian language study. As language can be a barrier to for many students travelling to Asia, the Government is also introducing a new loan worth up to $1,000 for intensive Asian language training taken in preparation for study in Asia.