Australian Government
Department of Industry, Innovation and Science

Innovation Policy Report

December 2015

The Innovation Policy Report is produced by the Department of Industry, Innovation and Science, and aims to highlight developments in the innovation policy area. It also includes reference to relevant innovation documents and events.

If you would like to subscribe to the Innovation Policy Report, please register your contact details.

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Strategic policy initiatives and new developments

Australia - Government

Council of Australian Governments (COAG) Industry and Skills Council Meeting

The Minister for Industry, Innovation and Science, the Hon Christopher Pyne MP, said innovation was at the heart of the nation's continued growth, and innovation policy was the priority at the November 5 Meeting. The Industry Session of the COAG Industry and Skills Council discussed ways to identify potentially unnecessary or duplicate regulation and legislative frameworks that may be undermining the progress and growth of innovation in Australia.

"The Government will continue to support innovation through its many programmes, but we are always looking for new ideas and ways to continue to build on the innovation agenda which is gathering strong momentum," Mr Pyne said.

DataStart: Growing startups using open government data

DataStart is a public-private partnership to support data-driven innovation and creates opportunities for Australian tech startups to develop sustainable businesses through access to open government data. DataStart is seeking applications from founders and teams across Australia for the pilot program. One team will receive a nine month incubation program with Pollenizer and government assistance with customer discovery, technical support and access to government data. The successful team will also have opportunities to access private investment, networks, platforms and coaching as they create their dream company.

The government has partnered with Australian organisations to support the initiative. DataStart is being sponsored by corporate partners, Google and Optus. PwC Australia is the strategic advisor for the initiative. Support is also being provided by Data61, RoZetta, and AIIA.

Appointment of Dr Alan Finkel AO as Chief Scientist

Dr Alan Finkel AO has been appointed Australia's next Chief Scientist and will commence in the role in January 2016.

He succeeds Professor Ian Chubb AC who has served with distinction since May 2011. Professor Chubb's term concludes at the end of 2015.

Dr Finkel is a prominent engineer, respected neuroscientist, successful entrepreneur and philanthropist with a personal commitment to innovation and commercialisation.

He is currently the Chancellor of Monash University and is President of the Australian Academy of Technological Sciences and Engineering (ATSE).

R&D Tax Incentive Review

The Australian Government is currently reviewing the R&D Tax Incentive in the context of the Tax White Paper. The Centre for International Economics has been engaged to provide independent advice to the R&D Tax Incentive Review. In addition to undertaking a typical periodic programme evaluation, the Government is using the opportunity to see whether the R&D Tax Incentive can play a greater role in supporting innovation in Australia through the taxation system.

A survey of the R&D Tax Incentive registrants is now underway seeking company views on the programme. Approximately 4,000 of the programme's 13,000 registrants have been invited to participate in the survey which is scheduled to conclude on 3 December 2015.

Targeted stakeholder consultations with programme users, peak industry and research organisations, reference groups and government are also underway. These targeted consultations are taking place throughout October and November 2015.

It is anticipated that the Review's findings and any recommendations will be finalised in the first half of 2016 and released to the public along the same timelines as the Tax White Paper.

New Chair of Innovation Australia

Venture capitalist Bill Ferris AC has been appointed Chair of Innovation Australia.

Minister for Industry, Innovation and Science Christopher Pyne congratulated Bill Ferris AC on his appointment to the independent body, which was established by the Government to enhance Australia's innovation performance.

"Innovation is critical to economic development. Australia has strengths but also some challenges. That's why the Government is developing an Innovation and Science Agenda to focus on this key driver of our economy," Mr Pyne said.

"Mr Ferris is the right person to lead Innovation Australia in developing a more innovative culture. A former Chair of Austrade and for 12 years the Chair of the Garvan Institute of Medical Research, Bill is a highly respected veteran of venture capital and private equity in Australasia."

"He has extensive experience in the venture capital field and founded Australia's first venture capital firm in the 1970s. Bill has been a key adviser as we develop the Innovation and Science Agenda, and will continue to be so as we work to implement it."

Mr Ferris has been appointed to the position of Chair for three years and will perform a key role in the Australian Government's new focus on innovation.

Source IP

Source IP has been launched by IP Australia as a digital marketplace for sharing information, indicating licensing preferences and facilitating contact for IP generated by the public research sector in Australia. Source IP is specifically aimed at making it easier for Australian businesses, including small business to access public sector innovation and technology and will strengthen the aims of Australian Government's Industry Innovation and Competitiveness Agenda - particularly the focus on boosting collaboration between science and industry.

Commercialisation grants offered to 20 innovative Australian companies

Entrepreneurs' Programme commercialisation grants have been offered to another 20 innovative Australian companies. The grants will help these companies push their innovative products out into the global marketplace by:

- matching the companies' investments dollar for dollar
- providing experienced Commercialisation Advisers to guide them through the commercialisation process.

The grants will support a range of commercialisation projects, including:

- a kinetic manufacturing 3D printer for industrial markets
- a Wave Energy Converter system
- a reusable arm splint to help people stabilise their broken limbs
- technology that links approved guidelines for pre-pregnancy care to a person's health information.

Find out more about the grant recipients.

IP Australia: New Procurement Panel

IP Australia have established a new procurement panel for innovation to support the public sector's efforts to accelerate innovative solutions including service delivery redesign or prototyping digital solutions. This panel is the outcome of an open tender process that enables all Commonwealth agencies to flexibly access these capabilities. ThinkPlace and Ernst & Young have been selected to provide expertise to enable public sector innovation, design and ICT solution delivery.

Innovation Behaviours for the Public Service – 'Alpha' version

The Australian Public Service Innovation Champions Group has released an 'alpha' version of suggested behaviours for those who are doing or supporting innovative activity. Feedback on the behaviours is being sought to test whether they capture what is needed to successfully innovate within the public service.

Innovative measurement science research with China's National Institute of Metrology

Australia's National Measurement Institute (NMI, within the Department of Industry, Innovation and Science) and China's National Institute of Metrology (NIM) are collaborating on next-generation measurement standards to support industry and innovation. In October 2015 NIM and NMI renewed their Memorandum of Understanding, continuing a partnership begun in 2010 across priority areas of physical, chemical and biological measurement.

Achievements in the first phase of the MoU include a series of scientific exchanges and the development of innovative new technologies for precision measurement, for example next-generation electrical standards for capacitance and for measurements at high voltages and currents. NMI's custom-made equipment and scientific expertise helps ensure the reliable and safe operation of electricity grids in both countries, and the collaboration enhances the support NMI can provide to Australian manufacturers and utilities.

NSW: New cloud computing agreement between NSW Government and Microsoft

At the end of October the NSW Minister for Finance, Services and Property, the Hon Dominic Perrottet, and the NSW Minister for Innovation and Better Regulation, the Hon Victor Dominello, announced a new cloud computing agreement with Microsoft.

The agreement will provide NSW government agencies with access to a suite of new collaborative technologies aimed at breaking down departmental 'silos', providing opportunities for more collaboration and information sharing between departments, and generating efficiencies in the way government services are delivered. Microsoft's cloud services are now available to the NSW Departments of Health; Finance, Services and Innovation; Justice; Family and Community Services; and Planning and Environment.

Minister Dominello said the agreement represented another milestone in the NSW Government's IT reform agenda, as the NSW Government ICT Strategy continues to build capability across the public sector in support of better service delivery, and derive better value for the state's $2 billion annual investment in information and communications technology. The government will continue to monitor the rollout of cloud-based services, with a view to considering additional applications for similar technology across government.

NSW: Mental Health Innovation Fund

On 13 of November 2015 NSW Minister for Mental Health, the Hon Pru Goward, announced a $4 million fund to drive innovation in mental health care and psychosocial supports for people with mental illness, their families and carers. Minister Goward said the Mental Health Innovation Fund will support government and non-government collaboration in improving mental health services."The Innovation Fund will finance innovation projects to improve mental health outcomes so people with mental illness and their families can live a better life."

The Fund aims to support world-class innovations to respond to mental health consumers with complex needs who require services and support from multiple government agencies, including Health, Justice, Education and Communities, Family and Community Services and non-government organisations.

The Innovation Fund will support stand-out projects proposed by collaborations (or consortia) providers. Collaborating partners may include start-ups, non-government organisations, the private sector, local businesses, carers, individuals, working alongside all levels of governments including local, state, and Commonwealth.

Applications for the Fund are now open and will close on 5 February 2016, with successful applicants to be announced in March 2016.

The Innovation Fund will be administered by the NSW Ministry of Health. Questions regarding the application process, eligibility and selection criteria should be directed via email to innovation.fund@doh.health.nsw.gov.au.

NSW: Renminbi Internationalisation and the Evolution of Offshore RMB Centres: Opportunities for Sydney

A new report, released on 4 November 2015, shows how Sydney can drive increased investment and create new jobs by taking advantage of its position as an official offshore renminbi (RMB) centre. The report was prepared by the Australian National University (ANU) and was jointly funded by the NSW Department of Industry, the Sydney Business Chamber and ANU. King & Wood Mallesons and the Financial Services Knowledge Hub provided in-kind support.

The NSW Government played a key role in securing Sydney's status as a key offshore RMB hub in 2014. This report provides an insight in to how to develop Sydney as an offshore hub, including by identifying complementarities between the Australian and Chinese economies that will underpin closer financial relations, and by ensuring Sydney is an attractive place to conduct RMB-denominated business. The report also highlights specific opportunities for the funds management and banking sectors.

The Hon. Anthony Roberts, NSW Minister for Industry, Energy & Resources said that the report provided a valuable contribution to positioning Sydney to maximise the benefits of being an offshore RMB hub, and identified how Sydney could differentiate itself in order to compete with other RMB hubs across the world. Minister Roberts said that “with China a priority market for NSW, and one in five Australian jobs linked to international trade, the NSW government is committed to further developing and expanding Sydney’s RMB activity.” The NSW Government is now considering the report’s recommendations.

SA: Innovation and Collaboration Centre

On 16 November the new Innovation and Collaboration Centre was opened by the Premier Jay Weatherill at the University of South Australia (UniSA). The Centre is a strategic venture between UniSA, Hewlett Packard and the South Australian Government.

The SA Government, through Invest in SA, provided a $5.5 million grant to UniSA to help establish the Centre. The Centre will provide an environment where SMEs and entrepreneurs can access a wide range of services and expertise to help them develop their products and grow their business, and will act as an incubator, exploring new ideas for technology businesses and products to support growth in the technology sector.

The Centre will be designed to combine a range of products from both Hewlett Packard and UniSA in order to provide an integrated range of services and support technology-based incubation and growth. This will include co-location of the Centre with UniSA's Centre for Business Growth and Match Studio, UniSA's innovation and rapid-prototyping facility.

In conjunction with Hewlett Packard, UniSA will also deliver a four-year ICT Honours degree. This will include work placements with Hewlett Packard to further support workforce development and expansion and will support training to help workers move into the ICT sector – including workers displaced from declining industries such as automotive, who are looking to re-skill.

SA: Science Creativity and Education Studio (SciCEd).

The SA Government announced on 16 November that it will be contributing $750 000 over six years to the Science Creativity and Education Studio (SciCEd). The Studio will be located in a purpose-built facility integrated into UniSA's Health Innovation building on North Terrace Health and Biomedical Precinct, co-located with the Hewlett Packard Innovation and Collaboration Centre.

Opening in 2018, the Studio will help raise awareness, understanding and appreciation of science by inviting people to physically interact with the latest science and technology exhibits.

SA: Upper Spencer Gulf and Outback Futures Program

On 12 November the SA Government announced a $7 million economic assistance package for the Upper Spencer Gulf and Outback. Up to $5 million will be made available in the next round of the Regional Development Fund to specifically support projects which will create jobs and drive economic growth in the area. A new Upper Spencer Gulf and Outback Futures Program will make $2 million available for small grants from $50 000 up to $200 000 on a dollar for dollar basis exclusively for the region.

TAS: Entrepreneurial Pathways Program

The Tasmanian Government has committed to provide $500 000 over two years to support entrepreneurial pathways in the commercialisation of new ideas and products. This initiative will provide mentoring, education and training for entrepreneurs and start-ups on the pathways from ideas to market by providing best practice support.

A scoping report undertaken for the Government by peak body Startup Tasmania has identified:

- the Tasmanian startup ecosystem is in its early stages
- a range of support services and education exist across the developmental stages of a start-up business
- current gaps in support, and the optimal conditions for stimulating entrepreneurial growth
- building capability in the short term will mean a stronger foundation for the later stages of growth, and
- building a successful start-up ecosystem is a long-term commitment.

The Office of the Coordinator-General has been actively facilitating discussions with a number of parties willing to support, partner and participate in the development and delivery of a successful entrepreneurship and innovation ecosystem in Tasmania. Interested parties include educational institutions, local and interstate companies, several financial institutions and a major telecommunications company.

A draft sustainable conceptual model has been developed within the Tasmanian context and this is now being tested on key subject-matter experts across the startup industry, the education sector and with policy makers.

TAS: Employment and Home Business Remote Working Hub Action Strategy

The Tasmanian Government is working with local industry as well as TasICT, the peak industry body for the ICT sector, to identify the potential and emerging key benefits of establishing Tasmania as an Employment and Remote Working Hub for Australian companies. The Office of the Coordinator-General has engaged a consultant with specialist enterprise skills and start-up experience to help prepare an Employment and Home Business Remote Working Hub Action Strategy for Tasmania. The consultant is working closely with the ICT industry to develop a collaborative strategy which will be launched this year.

The Office of the Coordinator-General continues to have discussions with national entities looking at Tasmania as a possible location for client service operations. Many have come to realise that Tasmania is a preferable near-shoring option to locate these services due to the cultural identification of clients with our people and the low turnover of staff compared with other national and international locations. As the rollout of the NBN continues, access to skills and resources, independent of location, will continue to grow on the agendas of many companies. Remote working can facilitate lower operational costs to business, in particular by means of digital communications and social media.

New and emerging working models are developing where major disciplines and professions are pooling remote working resources on the internet, providing services that are output-driven and remuneration is by task or project. As ubiquitous high speed digital access becomes increasingly available to Tasmanians, they will be able

to tap into this alternate jobs market that is unencumbered by boundaries and traditional trading limitations.

TAS: Sharing economy

The Tasmanian Government is supportive of initiatives such as Airbnb and Uber and recognises the opportunities that exist in embracing the opportunities presented by the sharing economy. The sharing economy offers greater competition, efficiency and lower transaction costs for consumers. It allows the market to utilise resources that would otherwise be idle, or used in a less productive way, which has potential to lead to increased economic activity and additional income for providers.

Across Tasmania, Airbnb has around 1400 properties listed and Stayz has more than 1000. And incidentally, these properties are filling a shortage of beds available for the record number of tourists coming to Tasmania. Approximately 1000 people have already pre-registered as Uber drivers, and Uber's mobile app has been downloaded by approximately 10 000 people in Tasmania.

A package of legislation is currently being developed in relation to Tasmanian transport services within the sharing economy and the Government will be consulting with key stakeholders and existing businesses to manage the impacts of introducing these new business models.

International

USA: Department of Defense Laboratory Innovation Crowdsourcing

The Combating Terrorism Technical Support Office within the Department of Defense has establishing the Laboratory Innovation Crowdsourcing (LINC) to gather ideas and experiences from government and military employees about how to address specific challenges. Capability gaps are identified, challenges are then posed on the platform, options proposed and discussed, a solution picked and contributions recognised.

USA: New Strategy for American Innovation

The US Government has released an updated Strategy for American Innovation. The Strategy focuses on three aspects:

- The importance of investing in research and development (R&D) and the other building blocks of long-term economic growth, instead of locking in harmful sequestration cuts.
- Strategic areas where focused effort can advance national priorities and help create shared prosperity, including advanced vehicles, smart cities, clean energy, space and new frontiers in computing.
- New efforts to make the US Federal government more innovative to improve performance and create a better environment for innovation by the private

sector and civil society. This includes the Digital Service delivery teams, a network of federal agency innovation labs, and a new Innovation Toolkit.

Assessment of Innovation Performance

Release of the 2015 Australian Innovation System Report

The 2015 Australian Innovation System Report explores innovation through the lens of entrepreneurship by bringing together analyses of the new Expanded Analytical Business Longitudinal Database and customised data outputs from the ABS' Business Characteristics Survey. The report also includes case studies of innovative Australian companies and entrepreneurs; and feature articles by innovation academics.

Like previous years, this sixth AIS report takes a systems approach to monitor and assess the performance of the Australian Innovation System over time and in comparison to other nations. Yet this year's report is mainly informed by the findings of four research papers produced by the Office of Chief Economist on different aspects of innovative entrepreneurship: the role of start-ups in driving employment growth; the role of young firms in enhancing business performance; the role of geographic proximity in stimulating innovative entrepreneurial activity; and the role of specific purpose financing in fostering innovative entrepreneurship.

The report shows, for example, that between 2006 and 2011, the activity of start-ups added 1.44 million full-time-equivalent jobs to the Australian economy, with the bulk of this jobs growth driven by a relatively small number of high-growth start-ups that are found in all sectors of the economy. The report also finds that Australian younger businesses are more likely to report increases over the previous year in sales, profitability, productivity and product range.

While highlighting the tendency of innovation activities toward geographical clustering that facilitates shared access to resources, the report shows that proximity between firms, universities and research institutions correlates with the generation of innovation proxies like patents and trademarks. The report also finds that while equity finance, and particularly venture capital, are crucial for knowledge- and technology-intensive start-ups, the success rates of start-ups in securing this type of finance is relatively low in Australia, particularly with regard to early-stage investments where Australia lags behind leading OECD countries Like US and Israel.

And finally, the report concludes that Australia needs more targeted support for the innovative entrepreneurial ecosystem if high growth innovative start-ups are to thrive. In particular, the report finds that Australia would benefit from more diversity in the models of equity funding for innovative entrepreneurs, and that Australian corporate culture needs to pay more attention to the role of geographic proximity and clusters in nurturing a fertile ecosystem for innovative entrepreneurship.

For more information on data or government initiatives please access the report from the Department's website at: www.industry.gov.au/AISreport.

Global Creativity Index

The 2015 edition of the Global Creativity Index has been released and has ranked Australia as first overall out of the 139 countries included. The Index is a broad-

based measure for advanced economic growth and sustainable prosperity based on the proposed ‘3Ts’ of economic development — talent, technology, and tolerance. The Index is produced by the Martin Prosperity Institute, housed at the University of Toronto’s Rotman School of Management, and follows the inaugural 2011 edition where Australia was ranked fifth.

In the 2015 edition Australia is ranked sixth on technology, first on talent, and fourth on tolerance. Overall the United States ranks second, followed by New Zealand, Canada, Denmark and Finland, Sweden, Iceland, Singapore and the Netherlands.

The Design Economy Report

The UK Design Council has released *The Design Economy Report* which looks at the contributions of design roles across the UK economy. It finds that:

- The UK has the second largest design sector in the world
- Design contributes £71.7 billion of value to the UK economy
- Design creates jobs at three times the national average
- Design roles are 41 per cent more productive than the average.

Events and Conferences

Past

International Mining and Resources Conference

The second International Mining and Resources Conference (IMARC) was held in Melbourne on 10–12 November and was opened by the Hon Lily D'Ambrosio MP, Victorian Minister for Energy and Resources.

IMARC is an international mining event bringing together representatives across the entire mining industry through presentations and workshops. IMARC is where mining leaders, policy makers, financiers, technical experts, innovators and educators explore the current trends in mining and resources. Workshops and presentations focused on global trends in investment and innovation, as well as policy and safety developments in the mining industry.

Innovation and technology was the major theme of the conference. Many companies and research organisations presented their latest developments and deployments of technology. The use of "big data" to reduce costs and to increase safety and productivity is key to continuing to be competitive.

The Hon Josh Frydenberg MP, Minister for Resources, Energy and Northern Australia, delivered a keynote speech at IMARC. Minister Frydenberg's speech covered three main topics, the contribution of the resources sector to the Australian economy, the challenges and opportunities in Australia, and the Australian Government's role and initiatives. The Minister also highlighted that Australia was a leader in innovation in the resources sector and that 60 per cent of mining software is written in Australia.

The Mining Equipment, Technology and Services (METS) Growth Centre, METS Ignited, hosted a lounge and a number of innovation related mini-events at the IMARC.

Quantum Computing

Professor Andrew White presented a public lecture held at the Australian Academy of Science in Canberra on 10 November, highlighting his experiences and research findings in the use and application of quantum computing.

TAS: Innovative Tasmania Awards 2015

The Tasmanian Breath of Fresh Air Film Festival is supported by the Tasmanian Government through sponsorship from Events Tasmania and assistance from Screen Tasmania. The 2015 Festival was held from 4-8 November and was the first year of the Innovative Tasmania Awards, which are also supported by the Australian Innovation Research Centre and Big Picture Tasmania.

Entrants were judged across five broad categories of innovations that have had an impact on Tasmania. The winners of each category are outlined below:

FOOD AND BEVERAGE PRODUCTION

Macquarie Barley, University of Tasmania

A new variety of malt barley developed by the University of Tasmania is to be grown in trials across the State to create unique boutique beers and whiskeys. Researchers in the Tasmanian Institute of Agriculture (TIA) discovered the high quality malt barley through a breeding evaluation program funded by the Grains Research and Development Corporation (GRDC).

Macquarie Barley, named after the Midland river of the same name, is planned to make its debut this growing season. TAP AgriCo (TAP), Tasmania's largest cereal grain storage and handling company, has recently secured a licence to the variety which is to be grown exclusively by local farmers. TAP will selectively contract with local producers and maintain the integrity of the variety ensuring no productive seed leaves the State. If trials are successful locally, the plan would be to expand into overseas markets as an exclusive and rare base malt.

SCIENCE, TECHNOLOGY AND TRANSPORT

Swarm Sensing, CSIRO

Research is being led by CSIRO that aims to improve honey bee pollination and productivity on farms as well as help understand the drivers of bee Colony Collapse Disorder (CCD), a condition decimating honey bee populations worldwide. Up to 5000 sensors, measuring 2.5mm x 2.5 mm are being fitted to the backs of the bees in Hobart, Tasmania, before being released into the wild. It is the first time such large numbers of insects have been used for environmental monitoring.

SPORT, LEISURE AND THE ARTS

NE Mountain Bike Trails, Northern Tasmania

A collective of 12 project partners comprising three tiers of government, community and regional bodies supporting 75km of mountain bike trails, mapping, signage, skills development and marketing are driving regional economic development by offering:

- a platform for innovative business opportunities including bike tours, accommodation, cafes, retail
- revitalisation of regional Tasmania by stimulating economic activity, investment and jobs based on natural advantage
- a construction program developing entrepreneurial skills such as trail building, conservation, trail maintenance and design, and
- the establishment of long-term recreation assets, providing local benefits through participation, events and enhanced liveability.

POLITICS, GOVERNANCE AND SECURITY

Scantex, University of Tasmania

The University of Tasmania (UTAS) has licensed two technologies, Scantex and CEScan, to Melbourne-based technology commercialisation company Grey Innovation. Scantex and CEScan were developed in collaboration with Australian forensic and policing authorities, with support from the United States Department of

Homeland Security. Scantex is designed as a limited version of CEScan for faster detection of homemade explosives.

Although the system is a long way from formal approval for use at airports, a benchtop prototype has been produced that shows its capabilities. The licensing deal with Grey Innovation triggers a new phase of technology development and will deliver a fully-integrated engineered unit in the next two years, which will be suitable for testing through partner organisations in Australia and the United States.

The Scantex system uses technology based on capillary electrophoresis to detect inorganic components of low explosives, and chemiluminescence to detect peroxide explosives. A swab is required to sample the surface, which is inserted into the instrument for analysis.

COMMUNITY AND ENVIRONMENT
Appin Hall Children's Foundation
Appin Hall is a respite, healing and educational facility offering short-term accommodation for children/young adults suffering or recovering from: serious or life-threatening illness, trauma associated with physical, emotional, sexual abuse or grief, medical conditions which can affect social integration, medical treatment, financial hardship, children who may be living with grandparents to escape threatening home circumstances, and young people who are Primary Carers for other family members.

Appin Hall is innovative in that it incorporates a 'Back to the Future' strategy with the objective of teaching young people practical 'old fashioned' skills, once handed down by family/community elders.

The 2015 Economic and Social Outlook Conference

The 10th Economic and Social Outlook Conference was held in Melbourne on 5 -6 November with the theme 'Rebuilding the Foundations for Reform'. The Conference included contributions from political leaders, academics, think tanks, industry groups and other leading policy thinkers. The government's forthcoming Innovation and Science Agenda was a prominent topic of discussion during many of the sessions.

The Conference's sessions considered a wide range of potential policy mechanisms to encourage innovation in the economy including tax levers, academic incentives, enabling infrastructure and the importance of policy to support the adoption, not just the creation, of innovation across the economy.

Chairman of the Productivity Commission Peter Harris also gave an address.

"At the Productivity Commission, we accept that a focus on innovation is a relevant consideration when a nation is thinking of how to lift its capability to generate higher levels of national income.

As Australia should be, given the slow income growth outlook.

But we have some reservations about how this is done."

Driverless Cars Conference

South Australia hosted the International Driverless Cars Conference on 5-6 November 2015. The two-day conference was the first international driverless car conference held in the Southern Hemisphere and successfully hosted over 300 local and international delegates.

The conference provided delegates an opportunity to explore the technology and discuss the research, trials and legislation changes needed to make the driverless car future a reality.

The conference was a lead up event to the history-making Australian Driverless Vehicle Initiative demonstration trials held in Adelaide.

Robotic Technology for Agriculture

Andrew Bate, Chief Executive Officer, SwarmFarm Robotics discussed the role of robotic technology in driving the next wave of innovation across the agriculture industry at this CEDA event in Brisbane on 30 October.

StartupWeek Sydney

The NSW Department of Industry was a major supporter of the inaugural StartupWeek Sydney (23-30 October 2015), a week-long, multi-venue festival which showcased the very latest thinking on innovative research and design. More than 8,000 people took part, with 150 speakers at 63 different events around Sydney.

The festival included conferences, keynote speeches, workshops, panel discussions, networking and tours. The festival aimed to showcase the talents and successes of our existing entrepreneurs and startups with a focus on a greater involvement of women and young people. Another key focus was to to help foster the introductions and conversations that lead to greater investment and commercial engagement between Australian tech startups, investors, government and large organisations.

The Hon Anthony Roberts, NSW Minister for Industry, Energy & Resources kicked off the inaugural StartupWeek Sydney by hosting *Accelerator* at NSW Parliament House, an event that showcased ten startup companies nominated by the five industry-led Knowledge Hubs. The event aimed to:

- Help provide inspiration to corporate and NSW Government leaders and decision-makers on current innovative offerings;
- Provide an opportunity for startups to network with corporate and NSW Government leaders and decision-makers (as well as each other), enabling them to gain fast and first-hand information and connections; and
- Raise awareness of the NSW Knowledge Hubs as a catalyst in supporting industry-led innovation and culture change.

Commonwealth State and Territory Advisory Council on Innovation (CSTACI)

CSTACI met in Canberra on 22 October 2015. Topics for discussion included:

- Innovation data, with presentations on the Expanded Analytical Business Longitudinal Database from the Australian Bureau of Statistics and the National Innovation map from the Department of Industry, Innovation and Science
- The sharing economy, and
- Capital investment, with a presentation from AVCAL.

2015 NSW Tech Entrepreneur of the Year Awards

On 20 October 2015 the 2015 NSW Tech Entrepreneur of the Year Awards were presented at NSW Parliament by the NSW Minister for Innovation and Better Regulation, the Hon. Victor Dominello. The Awards are run by the Pearcey Foundation, a not-for-profit organisation that works to foster the aims and achievements of the Australian technology community and industry. The top award of the night went to Melanie Perkins, co-founder and CEO of Canva.

In total there were seven winners in the 2015 NSW Tech Entrepreneur Awards:

- Melanie Perkins – Canva
- Rolf Hansen, Thomas Enge, Christian Magel, Andreas Perreiter, Peter O'Connell – Amaysim
- Chris and Julie Vonwiller – Appen
- Catriona Wallace – Flamingo, Fifth Quadrant
- David Vitek / Roby Sharon-Zipser – HiPages
- Leon Kamenev, Dan Katz – Menulog
- Matt Symons / Greg Symons – SocietyOne
- James Spenceley – Vocus.

Minister Dominello said "This year's winners represent the fabulous talent that exists in our country. They have been extremely successful, taking different paths to build global businesses, but in the process maintaining their Australian roots and heritage. They prove Australian innovation and entrepreneurship is much very alive and well."

The event also recognised entrepreneurial tech talent at high school and university level.

Policy Hackathon

On 17 October Assistant Minister for Innovation Hon. Wyatt Roy MP and BlueChilli brought together representatives from startups, VC funds, accelerators and other components of the innovation ecosystem, with policy experts from government departments to collaborate in a one-day industry policy hackathon.

Ten ideas were pitched around the themes of culture, capital, co-operation and talent. A write-up of the outcomes has been published by Startup Australia.

ADC Forum Future Summit 2015

The Future Summit 2015, held in Melbourne on 28-29 September, focussed on the theme *Unleashing Entrepreneurial Success - Creating 1000 New Enterprises*.

The Summit brought together leading Australian and international investors, entrepreneurs, innovators, and business and government leaders to consider pathways to an entrepreneurial economy.

The Summit showcased success stories and case studies from Australia and overseas, discussed international best practice and new approaches to support entrepreneurship and startups, and connected stakeholders across the innovation ecosystem.

Key note speakers included the Assistant Minister for Innovation Wyatt Roy MP, Victorian Treasurer the Hon Tim Pallas MP, Mr James Casio (Institute for the Future), Dr Nicholas Gruen (Lateral Economics), and Professor Manuel Trajtenberg, (Member of Parliament, Knesset, Israel). There were also panel discussions with a number of CEOs and founders from successful Australian startups and established businesses including Nitro, Tomcar, PageUp, Redbubble, Ideapod and Aromababy.

Publications and Articles

Boosting High-Impact Entrepreneurship in Australia

A report released by the Office of the Chief Scientist highlights entrepreneurship as the key to a high-growth, innovation-led economy, able to capitalise on Australia's investment in research and skills.

The report, *Boosting High-Impact Entrepreneurship in Australia*, finds that Australia has one of the highest rates of business creation in the world, but few startups have the capacity to grow beyond the local level.

Producing more high-impact entrepreneurs with global ambitions and the ability to disrupt large markets using science and technology will be crucial to Australia's future, the report finds.

Highlighting the priority given to entrepreneurship in the most successful start-up nations, the report calls for new thinking in government and universities.

It identifies a mix of programmes in universities, from harnessing entrepreneurs as role models to hands-on learning through incubators, accelerators and overseas placements, as the best approach.

The Innovation Imperative: Contributing to Productivity, Growth and Well-being

The OECD has released The Innovation Imperative: Contributing to Productivity, Growth and Well-being. This OECD report argues that policy makers can do better in marshalling the power of innovation to help achieve core objectives of public policy. It calls on governments to stop policies that unduly favour incumbents, given that young firms are crucial in driving innovation, job creation and growth. With the digital economy and the sharing economy changing the business landscape by allowing new ideas and business models to emerge, it is more urgent than ever to give young firms the means to experiment with new technologies and organisational models.

The report also calls on policy makers to think long-term to answer major challenges (i.e. climate change and ageing), to provide more grants and fewer tax incentives, and to learn from experience through greater monitoring and evaluation.

The OECD highlights in their report that policy makers should focus their innovation policies in five key action areas:

1. Skilled workforce that can generate new ideas and technologies, implement them and bring them to the market.
2. Sound business environment that encourages investment in technology and in knowledge-based capital that enables innovative firms to experiment with new ideas, technologies and business models.

3. Strong and efficient system for knowledge creation and diffusion that invests in the systematic pursuit of fundamental knowledge and that diffuses knowledge throughout society.
4. Increased access and participation in the digital economy including support for new infrastructure such as broadband, spectrum and new Internet addresses, to encourage digitally enabled innovation.
5. Sound governance and implementation of policy including a commitment to learning from experience , which will help ensure that government action is efficient and reaches its objectives at the least possible cost

By focusing on these key action areas, the report considers it will help governments foster more innovative, productive and prosperous societies, increase well-being, and strengthen the global economy in the process.

OECD Science, Technology and Industry Scoreboard 2015

Science, technology and innovation foster competitiveness, productivity and growth. The Scoreboard covers over 200 indicators and finds that “Downturns tend to accelerate structural change and create new challenges and opportunities. The Science, Technology and Industry Scoreboard 2015 shows how OECD countries and major non‑OECD economies are starting to move beyond the crisis, increasingly investing in the future.”

Other findings include:

- Investment in innovation is intensifying
- Disruptive innovations are enabling the next production revolution
- Scientific excellence relies on research hotspots and collaboration networks
- Frontier innovation is highly concentrated across R&D corporations
- Successful businesses invest in workers’ capabilities.

Frascati Manual 2015

The OECD has released Frascati Manual 2015 Guidelines for Collecting and Reporting Data on Research and Experimental Development. “The internationally recognised methodology for collecting and using R&D statistics, the OECD's Frascati Manual is an essential tool for statisticians and science and innovation policy makers worldwide. It includes definitions of basic concepts, data collection guidelines, and classifications for compiling R&D statistics. This updated edition contains improved guidelines reflecting recent changes in the way R&D takes place and is funded and the wider use of R&D statistics and definitions. It provides new chapters dedicated to the pratical aspects of collecting R&D data in different sectors, as well as new

guidance on capturing different aspects of public support for R&D such as tax incentives."

She Ji: The Journal of Design, Economics, and Innovation

She Ji is a new peer-reviewed, trans-disciplinary design journal with a focus on economics and innovation, design process and design thinking. "Our mission is to enable design innovation in industry, business, non-profit services, and government through economic and social value creation. Innovation requires integrating ideas, economics, and technology to create new knowledge at the intersection of different fields. She Ji provides a unique forum for such inquiry."

Pursuing a hybrid approach

This article shares some insights about different 'hybrid' strategies that companies can pursue to engage with disruptive technologies. "Responding to disruptive innovation may be one of the greatest challenges managers in established firms face. On the one hand, they've been warned that disruption can sneak up and quickly destroy their business. On the other hand, experience tells them that disruptions can take years, sometimes decades, to play out. And sometimes those that threaten—flying cars and robot maids, for example—never occur at all. Research shows that as many companies move too early to adopt disruptive technologies as move too late. Both approaches waste resources, squandering competitive advantage and critical growth opportunities. So how can leaders manage the uncertain transition period from one technology, service, or business model to a newer, sometimes disruptive one?"

Citizens' Jury on Obesity

This article looks at the outcomes of the VicHealth Citizens' Jury on obesity, run by VicHealth. "On the one hand, the costs of obesity and diet-related diseases run into billions, crippling health services across the world. But on the other hand citizens resist many of the policy interventions that might make a difference, partly as they are often unaware of the forces that drive their eating. Conventional surveys don't give people time to reflect on what can be done and only give citizens a tick box to express their view, hiding a lot of nuance and sophisticated arguments from government and industry. Is there a way out? Why not give the evidence to a sample of citizens, and let them decide? It is, after all, their lives and lifestyles."

Innovation Teams Shouldn't Run Like a Well-Oiled Machine

This article suggests that there are four conditions that leaders need to put in place if they want their innovation teams to be resilient:

- A powerful central mission and a loose central structure
- Frequent interaction to maximize learning
- Constant experimentation
- Freedom to look for the next horizon.

The Corporation-Startup Innovation Shift

This article suggests that there has been a fundamental shift in the process of innovation within companies. “Rather than invest in high-risk new technologies in-house, CEOs are forced instead to pay a premium for a proven product with a large user base by acquiring successful startups. In a sense, large corporations have contracted out their R&D departments.”

New Approaches to SME and Entrepreneurship Financing - Broadening the Range of Instruments

The OECD released a report that maps a broad range of external financing techniques to address diverse needs in varying circumstances, including asset-based finance, alternative debt, hybrid instruments, and equity instruments. It also highlights key enabling factors for their development, discusses major market trends and obstacles to SME uptake, and suggests some key areas of policy action to overcome challenges to market development.

Meeting 21st Century Challenges with Science, Technology and Innovation

This OECD report examines policies to help science, technology and innovation (STI) respond to major economic, societal and environmental challenges. It seeks to identify the main unanswered questions about policies for STI including how – and by how much – support for STI contributes to growth and jobs, or what should an agenda for policy-relevant research in this field include?

Enabling the Internet of Things for Australia: Measure, Analyse, Connect, Act – Communications Alliance

The report makes 12 core recommendations to avoid the risks inherent in the development of the Internet of Things (IoT) and facilitate its development in Australia in ways that will drive economic growth and competitiveness. Recommendations include the need to develop a model and principles for IoT data sharing and opening of public data, minimum network/service security guidelines for the IoT service chain, and the use of IPv6 by default on all platforms.

Recommendations for future collaborative work in the context of the Internet of Things Focus Area in Horizon 2020

The European Commission’s Alliance for Internet of Things Innovation (AIOTI) has published its recommendations for future collaborative work in the context of the Internet of Things Focus Area in Horizon 2020". These reports cover the main focus areas of the Internet of Things (IoT) Work Program 2016-2017. The reports are relevant in relation to policy and regulatory issues relating to IoT.

The Economic Contribution of Australia's Research Universities—the UNSW example – Deloitte

This report provides a case study example (the University of New South Wales) to highlight the role of university education as a key enabler of Australia's future economic prosperity, productivity growth and increased living standards. It presents findings on the impact of the operations of a university, skilled graduates, and the role of university research (including the need for future investment in research for labour productivity growth).

Analysis of the impact of robotic systems on employment in the European Union

This study suggests that robots are not "job killers and provides novel empirical evidence that the positive stimulation provided by the further development and diffusion of industrial robot systems is a key enabler for exploiting the competitiveness and growth potentials of the European manufacturing industry".

The David vs. Goliath of Startup Ecosystems

This new Compass (formerly Startup Genome) report presents the first Ecosystem Lifecycle model plus lessons that apply to startups and ecosystem leaders worldwide. It examines the startup life cycle, elements of assessing the ecosystem and case studies of successful startup ecosystems.

Definition of a Research and Innovation Policy Leveraging Cloud Computing and IoT Combination

The study first provides an overview of Europe's Internet of Things (IoT) digital ecosystem, it then focuses on the emerging markets and potential business opportunities and lastly develops a coherent IoT Research and Innovation Strategy by identifying the main research- and innovation-related challenges and suggesting the key investment policy options to achieve a successful strategy implementation including key recommendations.

Robotic Revolution: Separating hype from reality

This article presents key findings from KPMG's 2Q 2015 Global Sourcing Advisoy Pulse Survey and the role of Robotics process automation (RPA) in itegrating automate business processes with AI. In particular, while demand for RPA is considered 'low to non-existent' among many business functions today, the demand picture in the next three years shows a large increase across areas such as IT processes, sourcing and procurement , supply chain and logistics and other functions.

The Missing Entrepreneurs 2015 : Policies for Self-employment and Entrepreneurship

This OECD report is the third edition in a series of annual reports that provide data and policy analysis on inclusive entrepreneurship. The report contains case studies

and data on the scale and scope of entrepreneurship and self-employment activities across EU member states. It also contains special thematic chapters on supporting growth for entrepreneurs from disadvantaged and under-represented groups, effective coaching and mentoring, and the role of public procurement in supporting inclusive entrepreneurship.