



Australian Government
**Department of Industry,
Innovation and Science**

Innovation and Science Policy Report

February 2016

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

If you would like to subscribe to the Innovation and Science Policy Report, please [register your contact details](#).

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Introduction

The Innovation and Science Policy Report (the report) highlights new developments in Australian innovation, science and research policy and provides a regular update on progress against ongoing policy priorities across Government.

On 7 December 2015 the Minister for Industry, Innovation and Science, the Hon Christopher Pyne MP and the Prime Minister, the Hon Malcolm Turnbull MP launched the National Innovation and Science Agenda (the Agenda). It is a blueprint for a more innovative and entrepreneurial Australia that will transform Australia into a leading innovation nation and position us to seize the next wave of economic prosperity.

As part of the Agenda, the Government announced Innovation and Science Australia (ISA), a new, independent statutory body with a mandate to provide strategic whole-of-government advice to the Government on all science, research and innovation matters. ISA will replace and redefine the functions of Innovation Australia, and the Government will introduce legislation to establish ISA later this year.

Further information on the role of ISA can be found on the website:

<http://www.innovation.gov.au/>

While the report will continue to focus on new developments and substantive actions within the Industry portfolio, reports on developments by key Australian stakeholders, and relevant international initiatives and reports, it has been broadened to encompass innovation, science and research policy, aligning it to the Agenda and ISA's future mandate.

The report is compiled by the Commercialisation Policy Branch of the department and input is sought from across the portfolio. Historically, the report has been presented every 6-8 weeks to the Innovation Australia Board at their meeting, and it is expected that this will continue for ISA.

It is intended that the day after the report's presentation to Innovation Australia (and ISA), the report is circulated to its distribution list of over 350 subscribers which, at present, includes members of the Commonwealth, State and Territory Advisory Council on Innovation (CSTACI), government employees and academics. It is also made publically available on the department's web site:

<http://www.industry.gov.au/innovation/reportsandstudies/Pages/InnovationPolicyReport.aspx>

1. Strategic policy initiatives and new developments

Australia

Australian Government Public Data Policy Statement

On 7 December the Prime Minister issued the [Australian Government Public Data Policy Statement](#). The Policy recognises that the data held by the Australian Government is a strategic national resource and commits Australian Government agencies to optimise the use and reuse of data, to release non-sensitive data as open by default, and to collaborate with the private and research sectors to extend the value of public data for the benefit of the Australian public. Publication of appropriately anonymised government data will stimulate innovation and enable economic outcomes

Contact Officer: Nick Yazidjoglou, Strategic Data Team
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Public Sector Data Management

In 2015 the Secretary of the Department of the Prime Minister and Cabinet (PM&C) commissioned an in-house study into how public sector data can be better used to achieve efficiencies for government, enable better service delivery and properly be used by the private sector to stimulate economic activity.

Outcomes of the project include a report of findings, and a roadmap to support the APS to make better use of public data. A copy of the report can be found here: <https://www.dpmc.gov.au/pmc/about-pmc/core-priorities/public-data-branch-within-dpmc/public-sector-data-management-project>

R&D Tax Review Issues Paper

The Australian Government committed to undertaking a review of the Research and Development (R&D) Tax Incentive programme in launching the National Innovation and Science Agenda. The Review is identifying opportunities to improve the effectiveness and integrity of the programme, including how the programme's focus can be sharpened to encourage additional R&D.

While earlier stakeholder consultations are being considered by the review, interested parties may provide additional input to the Review Panel. An Issues paper has been developed by the Panel to aid this process and is available to download. Additional input is due by close of business Monday, 29 February 2016.

Further information can be found on the Review website:

<http://www.business.gov.au/grants-and-assistance/innovation-rd/RD-TaxIncentive/Pages/randd-tax-incentive-review.aspx>

Statement on Innovation Cooperation with Israel

In December 2015, the Minister for Industry, Innovation and Science, the Hon Christopher Pyne MP, met with Israel's Chief Scientist of the Ministry of Economy in Tel Aviv. A key outcome of the discussion was the signing of a *Statement on Innovation Cooperation* with Israel.

Minister Pyne said the signing of the Statement was timely, given the very recent release of the Government's National Innovation and Science Agenda.

"This Statement signals our two countries' intention to continue to negotiate on two treaties – one on furthering our relationships in Industrial Research and Development, and one on collaboration in Science and Technology."

The full media release, including the text of the Statement, is available here:

<http://minister.industry.gov.au/ministers/pyne/media-releases/innovation-focus-talks-israeli-chief-scientist>

Faster research-industry collaborative project grants

A continuous application process for the ARC *Linkage Projects* scheme was announced in December 2015, as part of the Government's National Innovation and Science Agenda, to improve the responsiveness of the scheme to the needs of industry, business and other end-users.

The current annual application process will move to a continuous application scheme from 1 July 2016, with high-quality proposals being expedited to the Minister for decision. A closer connect between funding application and outcome announcement will allow industry and business to collaborate more readily, particularly with regard to budgets and forward planning.

Contact Officer: Ms Leanne Harvey (leanne.harvey@arc.gov.au)

Gender equality in research

In November 2015, the ARC released its *Gender Equality in Research Statement* and *Gender Equality in Research Action Plan 2015–16*. The statement outlines the principles and expectations for gender equality within administering organisations receiving funding under the National Competitive Grants Programme, and the plan sets out the ARC's activities concerning gender equality in the coming year.

The ARC has also developed a *Gender Equality in Research* webpage as a resource to outline ARC's support for women, along with detailed gender disaggregated data and stories highlighting the achievements of women in research and successful gender initiatives undertaken as part ARC funded fellowships.

Contact Officer: Ms Leanne Harvey (leanne.harvey@arc.gov.au)

ARC Future Fellowships 2015

In December 2015 the Minister for Education and Training announced funding for 50 Fellows across Australia. The funding of \$38.6 million will help the nation innovate, invent and apply new ideas across key research areas, forming part of the Turnbull Government's Innovation Agenda.

Contact Officer: Ms Leanne Harvey (leanne.harvey@arc.gov.au)

ERA 2015

In December 2015 the Australian Research Council (ARC) published volume 1 of its inaugural *State of Australian University Research 2015–16* report, which includes the outcomes of Excellence in Research for Australia (ERA) 2015. ERA is the quality assurance mechanism for Australia's investment in university research and measures the quality of research produced by Australian universities against world standards. It uses expert review of a broad range of indicators of research (both quantitative and qualitative) to provide ratings of discipline areas in each university.

ERA 2015 outcomes show that Australia's universities continue to produce high quality research across a wide range of disciplines. The overall research quality is improving and reflects the role that ERA plays in focusing universities on research quality. For example, of the disciplines assessed for individual universities in both ERA 2015 and the previous round, ERA 2012, the vast majority maintained or improved their ratings. Fifty six per cent maintained the same rating and a further 35.5 per cent improved their rating by one or more. There was also steady growth in Australia's university research activity between the ERA 2012 and ERA 2015 rounds as the number of research outputs submitted increased five per cent from the previous round to over 430,000.

Contact Officer: Ms Leanne Harvey (leanne.harvey@arc.gov.au)

ANSTO delegation to JAPAN Proton Accelerator Complex

In March 2016, a delegation from the Australian Nuclear Science and Technology Organisation (ANSTO) will visit the Japan Proton Accelerator Research Complex (J-PARC) to develop a program of collaborative work between the two organisations.

J-PARC is a world-leading high-intensity proton accelerator research facility, operated by the Japan Atomic Energy Agency (JAEA) and the KEK High Energy Accelerator Research Organization. ANSTO and J-PARC have a long-established relationship that was recently formalised with the signing of a memorandum of understanding (MOU). The MOU provides for staff exchange, knowledge sharing and collaborative research.

Contact Officer: Jarrod Powell, ANSTO (jarrodp@ansto.gov.au)

SA: 'Internet of Things' Cluster

The establishment of an Internet of Things (IoT) in Resources Cluster was announced by Minister Kyam Maher on 5 January 2016. The cluster will encourage innovation, facilitate collaboration and support access to new markets. \$750,000 over three years will fund the cluster designed to connect machines, devices and people to streamline the flow of information and to allow real-time decisions. Led by the Australian Information Industry Association, the cluster will be comprised of technology firms, research organisations and supply chain operators in the mining and energy resources sector.

Contact Officer: Andrew Dunbar (andrew.dunbar@sa.gov.au)

SA: Business Transformation Voucher Program

Four South Australian manufacturers have shared \$155,000 in State Government funding through the State Government's \$4.5 million Business Transformation Voucher Program to enhance local manufacturers' profitability through diversification and innovation. The vouchers can be used to engage independent experts to help identify improvements in manufacturing processes, marketing and brand strategy, business models, management, training, mentoring, and export capability.

Contact Officer: Andrew Dunbar (andrew.dunbar@sa.gov.au)

SA: PACE Supply Chain Development Program

On 3 December the State Government launched a new PACE (Plan for Accelerating Exploration) Supply Chain Development Program to support South Australian companies to connect and build relationships with large international resource and tier one companies. The Program will be delivered through collaboration between RESA, Austmine and the Department of State Development. It will build on already established international partnerships the State Government has cultivated with Sweden, China, Canada and Chile.

Contact Officer: Andrew Dunbar (andrew.dunbar@sa.gov.au)

SA: PACE Copper

On 30 November Mineral Resources and Energy Minister Tom Koutsantonis launched a new \$20 million initiative to encourage further exploration and investment in South Australia's Copper Belt over the next two years. The initiative will provide explorers with the analytical tools needed to better target the next elusive major discovery that then leads to a pipeline of projects. The initial focus will be on developing fundamental geological data that will culminate in a major regional drilling campaign, in collaboration with the Deep Exploration Technologies Cooperative Research Centre.

Contact Officer: Andrew Dunbar (andrew.dunbar@sa.gov.au)

SA: The Adelaide Smart City Studio

In September 2014, Adelaide was the first Australian city to sign on to the establishment of an 'Internet of Things (IoT) Innovation Hub' through a partnership between the State Government, the Adelaide City Council and telecommunications equipment giant Cisco. This has resulted in the official opening of the 'Adelaide Smart City Studio' on 26 November 2015. The Adelaide Smart City Studio will provide facilities for local companies to interact and exchange ideas with global ICT companies such as Cisco, Microsoft, NEC and HP as well as universities and other innovation centres around the world.

Contact Officer: Andrew Dunbar (andrew.dunbar@sa.gov.au)

QLD: Advance Queensland

The Queensland Government's \$180 million Advance Queensland comprehensive suite of programs continues to be rolled out. This initiative will create jobs now and for the future.

The programs in Advance Queensland will see industry, research organisations and government working together to take great ideas, turn them into investment-ready proposals, attract investment and create jobs.

Details on the Advance Queensland programs are available on the website at <http://advanceqld.initiatives.qld.gov.au>. Alternatively enquiries can be emailed to advancequeensland@dsiti.qld.gov.au.

QLD: Business Development Fund

Queensland businesses at the forefront of commercialising cutting edge research or innovative ideas, products or services have an opportunity to access \$40 million of investment to help unlock their innovative potential.

Through the Business Development Fund, the Queensland Government will invest between \$125,000 and \$2.5 million in a Queensland business to assist them turn their ideas and innovations into a commercial reality.

Contact Officer: Jozef Latten, Queensland Treasury,
jozef.latten@treasury.qld.gov.au.

QLD: Research Fellowships and PhD Scholarships

The first round of these programs have now closed, with applications currently being assessed.

The Advance Queensland Aboriginal and Torres Strait Islander Research Fellowships and PhD Scholarships launched on 11 September 2015, closed on 30 October 2015. The

- Aboriginal and Torres Strait Islander Research Fellowships offer funding of \$240,000 over three years to support innovative research by early-career Aboriginal and/or Torres Strait Islander researchers that will benefit Queensland.
- Aboriginal and Torres Strait Islander PhD Scholarships offer funding of \$120,000 over three years to support Aboriginal and/or Torres Strait Islander research graduates in undertaking PhD research that will benefit Queensland.

The Advance Queensland Women's Academic Fund remains open and continues to attract interest from applicants for maternity, carer and lecture funding.

Contact Officer: Stephen Lamb, Department of Science, Information Technology and Innovation, Email: stephen.lamb@dsiti.qld.gov.au.

QLD: Knowledge Transfer Partnership Program

The aim of this program is to support collaboration and knowledge transfer by enabling small and medium size business to partner with universities to select graduates for specific projects in the businesses.

The first round provided funding to 22 businesses to partner with six universities. Round two closed on 29 January 2016 and round three will be closing on 22 April 2016. KTP provides up to \$50,000 per project to help businesses with the cost of hiring a graduate to work on an innovative project.

Contact Officer: Michele Loeken, Department of Science, Information Technology and Innovation (michele.loeken@dsiti.qld.gov.au)

QLD: Community Digital Champions

On 3 November 2015, the Minister for Science and Innovation, Leeanne Enoch, launched the [Advance Queensland Community Digital Champions](#) program and announced the inaugural champions as advocates of digital technologies in their respective communities.

The program's first round closes 19 February 2016. Nominations are sought from community organisations, Queensland Government Agencies, local councils, industry groups, chambers of commerce and educational institutions.

Opportunities for inaugural champions to share their digital knowledge with others in their communities are currently being identified, in liaison with their supporting/nominating groups.

The Advance Queensland Community Digital Champions program encourages Queenslanders to explore and enjoy the benefits of the digital age, through the stories and activities of inspirational digitally savvy champions. The program supports the \$180 million Advance Queensland suite of programs launched in August 2015, which are designed to create the knowledge-based jobs of the future and drive productivity improvements. For more information and information on the inaugural champions: www.qld.gov.au/digitalchampions.

Contact Officer: Michelle Carter, Department of Science, Information Technology and Innovation (michelle.carter@dsiti.qld.gov.au)

QLD: Women's Academic Fund

This program opened in August 2015 to attract interest from applicants for maternity, career and lecture funding. The program is a continuous funding program with applicants able to apply at any stage. The program will cease once the funding allocation is fully committed.

Contact Officer: Stephen Lamb, Department of Science, Information Technology and Innovation (stephen.lamb@dsiti.qld.gov.au)

QLD: Innovation Partnerships

This program is currently open with applications closing on 26 February 2016. Up to \$1.5 million is available per project to support collaborative research projects.

Contact Officer: Stephen Lamb, Department of Science, Information Technology and Innovation (stephen.lamb@dsiti.qld.gov.au)

QLD: Global Partnership Awards

The Advance Queensland Global Partnership Awards supports our best and brightest minds to collaborate, creating international partnerships and connecting our startup system with leading entrepreneurs. The program will give researchers, scientists and up and coming entrepreneurs a chance to learn from the successes of their international peers and help attract entrepreneurs and investors from overseas.

The Global Partnership Awards includes the:

- Innovation and Market Insight program - which will attract high profile entrepreneurs and investors 'in residence' to Queensland as well as continuing to support opportunities for local entrepreneurs to visit overseas markets and hot spots, such as the Startup Catalyst visit to Silicon Valley by 20 local startups.
- International Innovation Partnerships program – which will establish medium to long term strategic relationships with global research or innovation organisations. The Queensland Creative Entrepreneurship partnership with YouTube is the first collaboration under this category. The program will also provide opportunities to build joint investments with leading global research institutions or universities to support collaborative R&D such as the recent extension of Queensland-Chinese Academy of Sciences Collaborative Fund.

Contact Officers: Karen Thompson, Department of Science, Information Technology and Innovation (karen.thompson@dsiti.qld.gov.au) and

Kylie Hickling, Department of Science, Information Technology and Innovation (kylie.hickling@dsiti.qld.gov.au)

QLD: Visiting Entrepreneur Program

The Visiting Entrepreneur Program (VEP) commenced in April 2013. It is a co-funded (50/50) joint initiative between the Queensland Government and Brisbane Marketing.

It is designed to engage high profile, internationally successful entrepreneurs with Queensland businesses through a series of locally hosted events and activities to educate and mentor high growth potential firms.

The latest visiting entrepreneur, Danny Maher, engaged with local startups from the Gold Coast to Cairns during November 2015. Danny is the Chief Executive Officer of Opmantek, a globally successful open source software company producing a network management information system (NIMS).

Opmantek, based on the Gold Coast, is Australian ICT Exporter of the Year and a Queensland iAwards winner.

Contact Officer: Kylie Hickling, Department of Science, Information Technology and Innovation, kylie.hickling@dsiti.qld.gov.au.

QLD: Envisioning our digITal future

Megatrends including population growth, technological change and changing customer expectations are driving disruption to traditional government service delivery models.

The Department of Science, Information Technology and Innovation has launched a new initiative, [Envisioning our digITal future](#) to co-design a digital strategic vision for Queensland's future that exploits the potential of IT.

As a first step, a workshop hosted by the PwC Innovation Hub is being held in late November with government, industry and academia.

Contact Officer: Andy Stokes, Queensland Government Chief Information Office (Andy.Stokes@ggcio.qld.gov.au)

QLD: Global search for Digital Archiving Services

Queensland State Archives (QSA) has begun a global search for a provider to develop the state's first digital archive. QSA has released an [Expression of Interest](#) seeking a prime contractor to deliver, as far as possible, an end-to-end digital archiving solution As-A-Service. As well as breaking away from more traditional in-house built and operated digital archiving solutions, the Queensland Government has taken an innovative approach to sourcing appropriate services, using a multi-stage, interactive procurement process.

The process is designed to encourage maximum flexibility and stimulate market growth in a future growth industry. It should promote competition in the market, encourage innovation and provide opportunities for Small to Medium Enterprise involvement. The EOI was open on QTender until 28 January 2016. Responses are now being evaluated.

Contact Officer: Ingrid MacDonald, Department of Science, Information Technology and Innovation (Ingrid.MacDonald@archives.qld.gov.au)

QLD: Queensland and Federal Government explore opportunities to deliver joined-up services to seniors

The Queensland Government is partnering with the Australian Government to explore ways to deliver a one-stop online shop for older residents to access the benefits and services available to them as they approach retirement. The jurisdictions will be working together with older Australians to understand how they can improve

access to entitlements and help eligible older Queenslanders access the support they need to stay healthy and active for longer.

Contact Officer: Fiona Armstrong, One-Stop Shop Strategy and Implementation Office, Department of Science, Information Technology and Innovation, (fiona.armstrong@dsiti.qld.gov.au)

QLD: Smithsonian Programs

A Memorandum of Understanding currently exists between the Queensland Government and the Smithsonian Institution in the United States.

The main aim of this Memorandum is the exchange of skills and knowledge between Queensland and the Smithsonian Institution to grow science, educational and cultural capabilities.

Under the Memorandum, Queensland offers two Smithsonian linked fellowships programs.

The Queensland–Smithsonian Fellowships Program supports collaborative projects between the Queensland Government and the Smithsonian Institution. It supports fellows from Queensland's research, education and cultural sectors to visit a Smithsonian Institution facility in the United States and complete a project.

Fellowships of up to \$25,000 are awarded for a diverse range of projects, including those in the natural sciences, social sciences, the arts, education or museum management. Fellows will increase their knowledge and skills in areas of mutual interest with the Smithsonian Institution, and apply these to benefit their work and their home organisations in Queensland.

The Queensland-Cooper Hewitt Fellowship Program provides funding of up to \$20,000 for a registered Queensland school teacher to complete a learning project in design-led education at the Cooper Hewitt Smithsonian Design Museum in New York.

The fellow will gain experience in classroom, community and online strategies for delivering quality design-led education. The fellowship fosters the exchange of knowledge and skills between the Cooper Hewitt, Smithsonian Design Museum, and Queensland teaching communities.

Both programs opened in October 2015. Applications close on 11 December 2015.

Contact Officer: Stephen Lamb, Department of Science, Information Technology and Innovation (stephen.lamb@dsiti.qld.gov.au)

QLD: Startup Catalyst 2015

Startup Catalyst, led by Steve Baxter of River City Labs and supported by the Queensland Government's Startup Queensland fund, is an annual event taking 20 young Queenslanders to Silicon Valley in the United States.

The visit exposes young entrepreneurs to the high-growth business culture for which Silicon Valley is renowned.

Startup Catalyst 2015 was held from 28 September to 7 October 2015. The group visited the offices of global technology companies such as 99 Designs, Amazon Web Services and Twitter, and attended networking events with United States based startup founders and student entrepreneurs.

Startup Catalyst assists the participants to meet with fellow Australians who are operating startups in Silicon Valley and take part in educational events to equip them to understand what is involved in launching a globally successful technology startup.

Contact Officer: Mel Wagner, Department of Science, Information Technology and Innovation (mel.wagner@dsiti.qld.gov.au)

NSW: Rental bonds system goes digital

In December 2015 a new online system for the NSW rental bonds system was launched by Minister for Innovation and Better Regulation Victor Dominello.

"Each year NSW Fair Trading processes around 540,000 paper-based applications for the deposit and refund of residential bond monies," Mr Dominello said.

"We are doing away with this cumbersome process by cutting out the middle man and enabling tenants to lodge their bond directly to NSW Fair Trading through an electronic transfer system."

NSW's Rental Bonds Online is the only scheme in Australia where tenant bond money is deposited directly to the government, providing tenants with greater confidence that their bond money is securely held in trust. The new online scheme is expected to reduce red tape for tenants, private landlords and real estate agents by approximately \$20 million per year.

Since a pilot began in July 2015, over 2,000 real estate agencies and private landlords have signed up to the new service, with more than 7,000 active accounts established and over \$5 million worth of bond money lodged.

Rental Bonds Online is mobile friendly and voluntary for tenants who can opt for paper based lodgements if they wish. The service also allows tenants to record and

save their bond history online, which they can opt to use to support future tenancy applications.

www.fairtrading.nsw.gov.au/RentalBondsOnline

NSW: Collaborative Economy Position Paper

The NSW Government released a [position paper](#) announcing a framework for regulating the collaborative economy and responding to disruption within the traditional economy. The paper acknowledges the importance of the collaborative or peer-to-peer sector, which contributed \$504 million to NSW's economy last year.

Minister Dominello said international experience showed that where governments have embraced the collaborative economy and adopted sensible regulation, it has provided a significant boost for local startups and entrepreneurs. "We are living in the information age and it is vital that government policies embrace new technologies and enable businesses to operate with certainty."

In consultation with industry, the NSW Government has released a set of principles that will underpin the policy and provide safeguards to consumers and businesses.

The NSW Government's position is set out under five guiding principles: supporting a culture of innovation; fit for purpose regulation in the digital age; customer protection and safety; promoting competition; and agile government procurement.

A [Deloitte Access Economics report](#) estimates that more than 50 per cent of NSW consumers have used a digitally enabled shared product or service that includes transport, accommodation, education, employment and finance.

In the last year, 45,000 people earned income from the collaborative economy. Globally, it is predicted that the collaborative economy will grow from current US\$15 billion to \$335 billion by 2025. "The economic benefits relating to the collaborative economy are already significant and will continue to grow, as more consumers choose to link or share directly with providers via online and mobile platforms," Mr Dominello said.

DIGITAL+2016: NSW ICT strategy update

At the end of 2015 Minister Dominello released a final update to the NSW Government's ICT Strategy, announcing a whole-of-government innovation policy would underpin a new approach.

The NSW ICT Strategy, released in 2012, has focused on key areas such as customer service, procurement reform, open data, transition to cloud, data centre consolidation and cyber security. The NSW Government is committed to a new approach that goes beyond the ICT Strategy and drives innovation across all areas

of government policy. Consultation on a whole-of-government innovation policy will commence in early 2016.

Mr Dominello also announced the appointment of a new Digital Government Advisory Panel that will play a pivotal role in shaping the government's approach to future ICT reform. Panel members include Martin Stewart-Weeks (Chair), Marie Johnson, Dr Ian Reinecke, Greg Stone, Joanne Jacobs, Adrian Turner and Kelly Bayer Rosmarin.

The Digital+ 2016 update is available at www.finance.nsw.gov.au/ict.

NSW: Trials for rail collision detection device begin in Sydney

Sydney Trains has begun a series of trials to test a new NSW-designed device that could prevent costly and lengthy delays and improve the reliability of the rail system. The Sydney-based company Australian Rail Technology developed the Pantograph Collision Detection System (PCDS) to assist in quickly finding and responding to faults in the pantograph or overhead wiring system of trains. This was made possible with a grant from Innovate NSW.

The pantograph is mounted on the roof of an electric train or tram to collect power through an overhead wire. However, from time to time, faults in the overhead wiring can cause the wiring to become entangled with the pantograph – potentially shutting down the line for many hours while the problem is detected and repaired. This scenario also means passengers can be trapped in the train because of concerns about exposed live wires.

The solar-powered device detects excessive vibrations that could indicate an upcoming issue - potentially allowing the train driver to lower the pantograph or to trigger maintenance checks on the overhead wiring. This local innovation offers enormous potential for Sydney Trains and the travelling public.

With one million customers using Sydney Trains each weekday and 287 million journeys per year on the network, the potential for this small device to offer early detection of faults - which could save time, money and inconvenience - is very encouraging.

Innovate NSW: innovate.nsw@industry.nsw.gov.au or (02) 9338 6792

NSW: Medical marijuana clinical trials

NSW Premier Mike Baird and Tasmanian Premier Will Hodgman signed a Memorandum of Understanding (MoU) late last year, which will see both states work collaboratively on clinical trials, innovative research and the capacity for cultivating cannabis for medicinal and scientific purposes. The MoU will combine Tasmania's research strengths and proven track record in regulating poppy cultivation with the findings from NSW's Centre for Medicinal Cannabis Research and Innovation.

NSW has also announced three clinical trials targeting:

- Children with severe, drug-resistant epilepsy
- Adults with terminal illness
- Adults with chemotherapy-induced nausea and vomiting.

NSW Premier Mike Baird said it was important that decisions motivated by compassion were supported by strong science. “There is a strong willingness and determination to learn as much as we can about the potential therapeutic benefits of cannabis so we can make decisions based on evidence, that provide safe and effective relief for patients who are suffering from a range of serious illnesses,” Mr Baird said.

Both state governments will work closely with the Australian, and other state and territory governments to achieve national regulation.

NSW: Shark monitoring trials have begun in NSW

The first shark monitoring trial has begun at Coffs Harbour. The trial is testing the effectiveness of drone technology in reducing shark attacks by feeding images back to the operator in real time, using GPS coordinates.

Minister for Primary Industries Niall Blair said there was no easy way to reduce risks for swimmers and surfers. “We are delivering on a commitment to test the best science available, including new technologies, as we try to find an effective long-term solution to keep our beaches safe,” Mr Blair said.

The trial in Coffs Harbour is the first of several to get underway across NSW’s beaches this summer. Other technology that will be trialled includes:

- Smart drum lines: recommended in an independent report into shark technologies and favoured during a recent shark summit in Sydney. The first line will be deployed at Ballina.
- Listening stations: to provide real time tracking data of tagged sharks positioned at beaches in Ballina, Byron Bay, Tweed Heads, Lennox Head, Evans Head, Yamba, Coffs Harbour, South West Rocks, Port Macquarie, and Forster. Ten others are planned to follow once these are built.

The trials are part of the NSW Government’s \$16 million [shark strategy](#).

TAS: Sense-T Sensing Tourist Travel Project

On 18 December 2015, the Federal Minister for Tourism and International Education, Senator the Hon Richard Colbeck, and Tasmanian Premier, Will Hodgman MP, launched Sense-T’s Sensing Tourist Travel Project in Hobart.

Based at the University of Tasmania, Sense-T is a partnership between the University, CSIRO and the Tasmanian Government, and is also funded by the Australian Government. Sense-T is working to create an economy-side sensor network and digital view of the State to provide a shared resource for communities, businesses and industries to improve their efficiency, productivity and sustainability.

The Sense-T Sensing Tourist Travel Project will use real-time sensor-generated data to track where different cohorts of tourists travel; and how they make travel decisions. The tourism industry is an important contributor to the Tasmanian economy and an industry that is experiencing growth. This project will provide further data to contribute to the Government and industry's understanding of visitor needs, expectations and travel preferences.

The Sensing Tourist Travel Project is one of 14 industry research projects currently being undertaken by Sense -T. Funding for the projects includes \$6 million through the Australian Government's Tasmanian Jobs and Growth Plan, \$5 million contributed by the Tasmanian Government, as well as funding contributed by CSIRO and other research and industry partners.

Contact Officer: Anne Beach, Senior Policy Officer, Department of State Growth
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International

ARPA-E NODES Program Innovation Projects

In December 2015 the U.S. Department of Energy [announced \\$33 million to fund 12 innovation projects as part of the Advanced Research Projects Agency-Energy \(ARPA-E\) Network Optimised Distribution Energy Systems \(NODES\) program.](#)

NODES project teams will develop innovative technologies that coordinate load and generation on the electric grid to create a virtual storage systems, and seek to improve the overall efficient and reliability of the U.S. electric grid. The goal of the program is to enable more than 50% renewable power on the grid.

ISRAEL: Startup Visas

Israel will soon start allowing entrepreneurs from around the world to come to Tel Aviv for 24 months in order to develop innovative projects.

Entrepreneurs who wish to stay in Israel and open a startup company can be granted a special Expert Visa extendable for up to five years. Additionally, entrepreneurs and their company may apply to receive reimbursement for their work and additional support.

Contact Officer: Kylie Hickling, Department of Science, Information Technology and Innovation, kylie.hickling@dsiti.qld.gov.au.

USA: Visa Waiver Program

The USA has implemented a Visa Waiver Program (VWP) that enables nationals of 37 countries, including Australia, New Zealand, and the U.K., to travel to the United States (including Canada, Mexico and adjacent islands) for tourism or business for stays of 90 days or less without obtaining a visa, if certain requirements are met, including holding a valid passport and having sufficient funds to support themselves - http://canberra.usembassy.gov/visa_waiver_prog.html

Contact Officer: Kylie Hickling, Department of Science, Information Technology and Innovation, kylie.hickling@dsiti.qld.gov.au.

CHINA: Queensland – Chinese Academy of Sciences Collaborative Science Fund

Queensland has a long standing relationship with the Chinese Academy of Sciences (CAS), China's peak scientific research organisation responsible for leading and delivering China's research and development agenda.

On 17 and 18 November 2015, Queensland hosted a high-level delegation from CAS which resulted in the signing of an extended Statement of Intent (SOI) between Queensland and CAS. The SOI supports three rounds of funding for the Queensland-Chinese Academy of Sciences Collaborative Science Fund (Q-CAS Fund).

Under the Q-CAS Fund, \$125,000 is available to Queensland recipients, over a maximum of two years, with their Chinese partners also receiving \$125,000 from CAS. The Q-CAS Fund fosters high-level research collaborations and industry networks in:

- agricultural biotechnology and food research – including food safety
- human health – including immunology and neuroscience
- energy.

Contact Officer: Nina Shen, Department of Science, Information Technology and Innovation, Email: nina.shen@dsiti.qld.gov.au.

IRELAND: New Science Strategy, *Innovation 2020*

In December 2015 the Irish Government published its new strategy for research and development, science and technology. The strategy sets out a vision for Ireland as “a *Global Innovation Leader* driving a strong sustainable economy and a better society”.

A copy of the publication can be found here:

<https://www.djei.ie/en/Publications/Publication-files/Innovation-2020.pdf>

CANADA: Innovation Challenges and Opportunities report

In December In November 2016 the Science, Technology and Innovation Council (STIC) released *State of the Nation 2014*, a major report that concludes that Canada's poor business innovation performance represents the country's most profound and urgent science, technology and innovation (ST&I) challenge. A copy of *State of the Nation 2014* can be found here: <http://www.stic-csti.ca/eic/site/stic-csti.nsf/eng/00088.html>

WALES: SBRI Innovation Accelerator programme competitions announced

The new Small Business Research Initiative (SBRI) Innovation Accelerator programme will launch a series of competitions next year in collaboration with InnovateUK when SMEs can bid for R&D funding to develop technology-driven solutions for specific challenges facing the public sector. The Welsh government has invested two million pounds in the programme. Further information about SBRI funding opportunities can be found at:

<http://gov.wales/newsroom/businessandeconomy/2015/151204-boost-for-smes/?lang=en>

2. Assessment of Innovation, Science and Research Performance

Measuring impact and engagement in university research

Impact and Engagement in Research for Australia (IERA)

Impact and Engagement in Research for Australia (IERA) was announced in December 2015 as part of the Government's *National Innovation and Science Agenda*. For the first time, Australia will introduce a systematic national assessment to measure the impacts and engagement of Australia's university research. The assessment is intended to incentivise universities to improve their collaborations with industry and focus on research that delivers direct benefits for Australia.

A new system to assess the engagement of university researchers with end users, and to measure the commercial, economic, social and other impacts of research was announced in December 2015 as part of the Government's *National Innovation and Science Agenda*. For the first time, Australia will introduce a systematic national assessment to measure the impacts and engagement of Australia's university research. The assessment will be conducted by the ARC and is intended to

incentivise universities to improve their collaborations with industry and focus on research that delivers direct benefits for Australia.

The assessment will report on impact and engagement at a university level by discipline and the evaluations will be conducted by university and industry experts. A pilot exercise will be conducted in 2017. The first full assessment will be conducted by the ARC in 2018, as a companion exercise to Excellence in Research for Australia (ERA) which evaluates university research quality. The ARC, in collaboration with the Department of Education and Training, will work with committees of experts on research evaluation including industry representatives, and other end-users of research to develop the national assessment framework.

Contact Officer: Ms Leanne Harvey (leanne.harvey@arc.gov.au)

QLD: Regional Queensland Startup Ecosystem Mapping Report

The South East Queensland Startup Ecosystem Report (released in September 2014) maps the innovation hubs, critical issues and opportunities for collaboration between startup ecosystem stakeholders across South East Queensland.

The Regional Queensland Startup Ecosystem Report, which is expected to be released in February 2016, will complement the South East Queensland Startup Ecosystem report and establish a benchmark to measure future growth of the Queensland startup ecosystems as well as the effectiveness of government support.

Contact Officer: Kylie Hickling, Department of Science, Information Technology and Innovation, kylie.hickling@dsiti.qld.gov.au.

3. Events and Conferences

Upcoming

Australian Research Council (ARC) launch events

A number of events are scheduled for the beginning of 2016 relating to the official opening or launch of ARC Industrial Transformation Training Centres and Research Hubs.

Contact: Ms Leanne Harvey (leanne.harvey@arc.gov.au)

Past

International Atomic Energy Agency (IAEA) Workshop: Compendium for Introducing Nuclear Science and Technology to Secondary Schools

In December, ANSTO hosted over 20 participants, primarily from South East Asia for a five day workshop regarding nuclear science and technology education for secondary school students. The group has developed resources for secondary school STEM teachers and educators, which have been used in pilot programs in secondary schools in Indonesia, Malaysia, Philippines and the UAE. The aim of this workshop was to evaluate the success of the pilot program and review the curriculum with lessons learnt from the pilot.

Contact Officer: Cassandra Casey, Australian Nuclear Science and Technology Organisation csd@ansto.gov.au

NSW: Demo Day – Citi Mobile Challenge Asia Pacific 2015

In November last year Sydney was one of just four major cities to host a Demo Day for finalists in the Asia Pacific challenge, the others being Bengaluru in India, Singapore and Hong Kong. As a global fintech hub, Sydney was the perfect location for one of the Demo Days.

The Citi Mobile Challenge provides start-ups with a 10 minute opportunity to convince industry experts that their start-up can provide a major improvement for Citibank and its global customers. The finalists were competing for the chance to take their technologies into production with Citibank's support, plus a share of \$100,000 in cash awards along with other benefits.

The Financial Services Knowledge Hub, an industry-led collaborative partnership initiated by the NSW Government that seeks to grow our State's financial services industry, was instrumental in the planning, co-ordination and judging of the Sydney Demo Day. The University of Wollongong's incubator program, iAccelerate, was also a strategic partner for the Citi Mobile Challenge.

Of the 17 companies which pitched at the Demo Day, six were Sydney-based startups. Sydney's Simply Wall St was one of the four main winners of the challenge alongside InstaPaisa (India), SmartLoan (Hong Kong), and WePay (Singapore). Simply Wall St also won the award for Best Data Visualisation Solution and fellow Sydney startup Ezidox won the award for Most Innovative Productivity Solution.

Further information is available at: <http://www.citimobilechallenge.com/events/apac-2015/>

NSW: Innovation boot camp

Late last year the NSW Parliament hosted an innovation boot camp. Computer coding skills, an interactive Internet of Things project, and imagining a technology future, were all discussed at the event.

The event was the first of its kind to be held in NSW Parliament, and was organised by Intel and attended by Ministers and MPs, start-ups, and students from six primary and secondary schools that are actively developing their own technology solutions.

The NSW Government is embracing innovation and digital disruption as the way forward in developing better solutions to our economic and social challenges, and to meet the needs of our tech savvy, connected citizens.

Intel has developed a program on innovation in education, particularly around STEM (science, technology, engineering and maths) subjects and using technology to deepen critical thinking. Last year it launched a pilot with 15 NSW schools to encourage students to create and invent their own technology with programmable Intel Galileo boards.

The boot camp featured presentations from some of the students on how they are developing their own technology solutions, including coding and 3D printed robots, to address a range of issues.

Managing Director of Intel Kate Burleigh said innovation would drive the NSW economy forward over the next few decades. “Being tech creators rather than mere consumers, challenging established paradigms, taking risks, generating new business models, valuing data, being entrepreneurial. All these qualities drive innovation and they’re about to be in great demand in NSW,” Ms Burleigh said.

Further information is available at: <https://www.finance.nsw.gov.au/about-us/media-releases/nsw-parliament-hosts-innovation-boot-camp>

4. Publications and Articles

APS Innovation Snapshot

The Department of Industry, Innovation and Science has released an inaugural ‘[APS Innovation Snapshot](#)’, an online publication looking at innovation within the Australian Public Service (APS). The report notes the theme of ‘Government as an Exemplar’ under the National Innovation and Science Agenda and highlights a number of examples of innovation happening already with the APS. The report also looks at some of the international developments happening in public sector innovation, and includes some reflections about the experience of innovating within the public sector.

Contact officer: Alex Roberts/Rob Thomas, Department of Industry, Innovation and Science, psi@industry.gov.au.

State of Australian University Research 2015-16

The Australian Research Council (ARC) published Volume 1 of its inaugural *State of Australian University Research 2015–16* report on 4 December 2015, as part of the outcomes of the ERA 2015 evaluations.

The report can be found here: <http://www.arc.gov.au/era-reports>

The Global Risks Report 2016

The Global Risks Report 2016, released on 14 January 2016 by the World Economic Forum, features perspectives from nearly 750 experts on the perceived impact and likelihood of 29 prevalent global risks over a 10-year timeframe. The risks are divided into five categories: economic, environmental, geopolitical, societal and technological. Sub-topics include *Climate Change and the Risks to Food Security* and *Global Disease Outbreaks*. A copy of the report can be found here <http://www.weforum.org/reports/the-global-risks-report-2016>

The importance of recent advances in the physical, mathematical and biological sciences to the Australian economy

[This report](#) finds that advances in the physical, mathematical and biological sciences amount to 26% of Australian economic activity or about \$330 billion per year and account for 10% of Australian employment or about 1.172 million jobs. This is a synthesis report that integrates the results from two reports commissioned by the Office of the Chief Scientist: 1) The Importance of the Advanced Physical and Mathematical Sciences to the Australian Economy; and (2) The Importance of the Advanced Biological Sciences to the Australian Economy. Both reports are available on the Chief Scientist's web site: <http://www.chiefscientist.gov.au/>

The report discusses the importance of advances in the biological sciences to the Australian economy over the last 30 years. It estimates that the Australian economy would be 4.2 per cent to 5.9 per cent smaller and the burden of disease would be 18 per cent to 34 per cent higher if advances in the biological sciences over the last 30 years had not occurred.

STEM Programme Index 2016

The report [SPI 2016 – STEM Programme Index 2016](#) is a guide to business and university STEM initiatives for Australian schools and students.