



17 #GAMECHANGERS

to ensure Australians attract higher paying jobs



2019 FEDERAL ELECTION **MANIFESTO**

CONTENTS

Introduction

Page 1

01

Establish the \$100m Industry 4.0 skills fund

Page 2

02

Ignite capital investment in Australian early stage high growth tech companies

Page 4

03

Artificial intelligence research and commercialisation as a national priority

Page 8

04

Establishing Australia as a world leader in technology talent

Page 11

05

STEAMing ahead through education

Page 14

06

Smart cities for a smart country

Page 17

Introduction

In the lead-up to the 2019 federal election, ACS members were surveyed on public policy priorities that would advance the national interest. This included identifying the key blockers inhibiting Australia from achieving its potential in the digital economy, as well as the key enablers.

Front of mind included legislative reform of the Assistance and Access Act 2018; to recognise the potential blockers of the Act for an Australian cyber security export industry, as well as the technical limitations and expectations of the Act, and protecting the privacy of our citizens.

Having access to critical productivity-enhancing infrastructure, and arresting Australia's slide in global broadband speed rankings was also commonly identified. All citizens and businesses seek affordable high-speed internet access.

When analysing responses and synthesising key themes, it is clear the ACS community believes Australia's transition to a knowledge and digital economy is not happening with sufficient speed to maintain our historical high standards of living. There are concerns around the digital skills of our workforce, workforce diversity and more generally the process for rapid upskilling and reskilling to ensure our industries are placed higher up the value chain, education and training reform, and the inefficiency of our cities.

ACS therefore asks our political parties and leaders to consider the enclosed 17 #gamechangers to ensure Australians attract higher paying jobs into the future.

01

Establish the \$100m Industry 4.0 skills fund





The Vocational Education and Training (VET) sector provides critical skill development pathways for school leavers looking to enter the workforce. These are minimum standards for entry into industry occupations. To maximise productivity and GDP growth however, Australia needs an additional lever that supports our best talent to achieve global best-in-class status.

The industry-led training system has served Australia well, and will continue to do so in most areas. For some occupations however, the velocity of technological change is moving so fast that the historical notion of a VET qualification providing a specific vocational outcome no longer holds true. The qualification design is based on domestic employer needs in the here and now, supporting companies that may already be in decline. It fails to sufficiently encompass global mega trends in automation and digitisation, and how rapidly some economies are transforming through Industry 4.0 and the Fourth Industrial Revolution. For Australia to maintain our historically higher standards of living, there

is an urgent need to ignite skills development underpinning the Fourth Industrial Revolution.

DATA AT A GLANCE:

- Employer demand for AI-related jobs in Australia has doubled since 2015 and was 50% higher in January 2018 compared to a year earlier (Indeed job search website)
- Australia will need almost 38,000 more data science workers in the next five years (Deloitte Access Economics)
- Australia will need 11,000 more cyber workers over the next decade (AustCyber, 2017)
- Demand for blockchain development skills was recently identified as the fastest-growing skill on the online platform Upwork (Mearian, 2018). Global demand realising sees 14 job openings for every blockchain developer (Stein S. 2018.)

This fund should not be linked to training packages and nationally recognised qualifications, as these are minimum occupation standards.

Nor should it be linked to employer co-contributions as this pegs capability development to immediate need. This fund is about supporting our best talent achieve global best in class status.

It should make accessible micro-credentials in emerging technology areas such as data science, data analysis, machine learning, artificial intelligence, software engineers for blockchain, IoT and edge computing, user experience, user design and cyber security.

The best way to expedite technology and knowledge transfer is through the development of our nation's Human Capital. These Industry 4.0 skills will underpin and rapidly transform Australian industry for the benefit of all Australians, and best position our citizens to attract the higher paying jobs of the future.

Over the 15 years to 2030, the productivity gains resulting from increased automation could boost the Australian economy by \$2.2 trillion and reduce the amount of manual work performed by the average Australian by two hours per week (AlphaBeta, 2017).

RECOMMENDATIONS

That the Australian Government:

1. Establishes the \$100m Industry 4.0 skills fund: the initiative should be quarantined for the existing workforce and would require proof of employment as a condition of eligibility, administered by an independent broker and implemented via a panel of training providers vetted specifically for their best in class expertise in these emerging areas of tech.

02

Ignite capital investment in Australian early stage high growth tech companies





Access to capital remains a critical barrier to growing early stage tech companies in Australia. While there has been improvement in recent years, the Australian tech sector represents just 2.5% of the total value of the ASX, compared to 20% in the US (dominated by the FAANGs), and 30% in China (Alibaba and Tencent).

Our nation needs to uplift our focus on truly innovative technology that can reach a global market – this is not about apps. Australia's deep tech potential needs to be ignited.

In an era where Australian company and personal income tax rates are already high compared to other developed economies, and where Australian Government Debt to GDP rose from a low of -3.8% in 2007-08 to just shy of 30% in 2017-18¹, funding levers are tight.

In today's global economy, capital flows are highly mobile and the investment landscape highly competitive. More than one third of all financial investments in the world are international transactions. It is easy to direct investments to anywhere in the world, thought likely to generate the best return.

Much of the current landscape support for early stage tech companies in Australia is directed at the startup itself including direct grants, R&D tax incentives, employee share schemes, and the Export Market Development Grant.

The total amount of Australian money invested overseas at the end of 2017 was around \$2.3 trillion which includes both direct, portfolio investment and other investment². One clear opportunity for our nation

is to better incentivise investors so that a greater share of Australian private capital is diverted from going overseas and is allocated to early stage Australian tech companies. Within this context, the economics is not one of maintaining budgeted tax receipts, rather one of opportunity cost, and providing greater capital enablers that otherwise wouldn't be there.

Currently investors in Australia have access to the Early-Stage Innovation Company (ESIC) investors tax credit.

¹ <https://www.budget.gov.au/2019-20/content/download/overview.pdf>

² <https://dfat.gov.au/trade/resources/Documents/aust.pdf>

AUSTRALIA'S DIGITAL EXPORTS SET TO GROW

\$192 BILLION BY 2030

DATA AT A GLANCE:

- Startups are expected to contribute \$192 billion to the Australian economy by 2030³
- Firms under six years old account for 17% of total employment but create 47% of new jobs⁴
- Australia's total spend on R&D is 1.87%, well below the OECD average of 2.3%⁵
- Investment in ICT R&D by Australian businesses amounted to 0.14% of GDP in 2015,

compared to 1.7% in Korea and 1.6% in Israel⁶

- Australia also lags behind on private sector startup funding. In 2017-2018, per-capita seed and angel investment in Australia was just \$3.06, compared to \$12.01 in the UK, \$22.37 in Israel and \$25.44 in the US⁷
- The economic opportunity from AI and automation in Australia could be as high as \$2.2 trillion.⁸ Other countries are investing heavily in that economic future. In China, the government's

venture capital fund is committing US\$30 billion to AI development – in addition to state-based contributions. In the US, DARPA alone is committing US\$2 billion to AI development⁹

The UK's Enterprise Investment Scheme (EIS) and Seed Enterprise Investment Scheme (SEIS) are exemplars of encouraging the flow of private capital from taxpaying individuals to eligible and validated early stage tech companies.



³ <https://startupaus.org/document/crossroads-v/>

⁴ <https://startupaus.org/document/crossroads-v/>

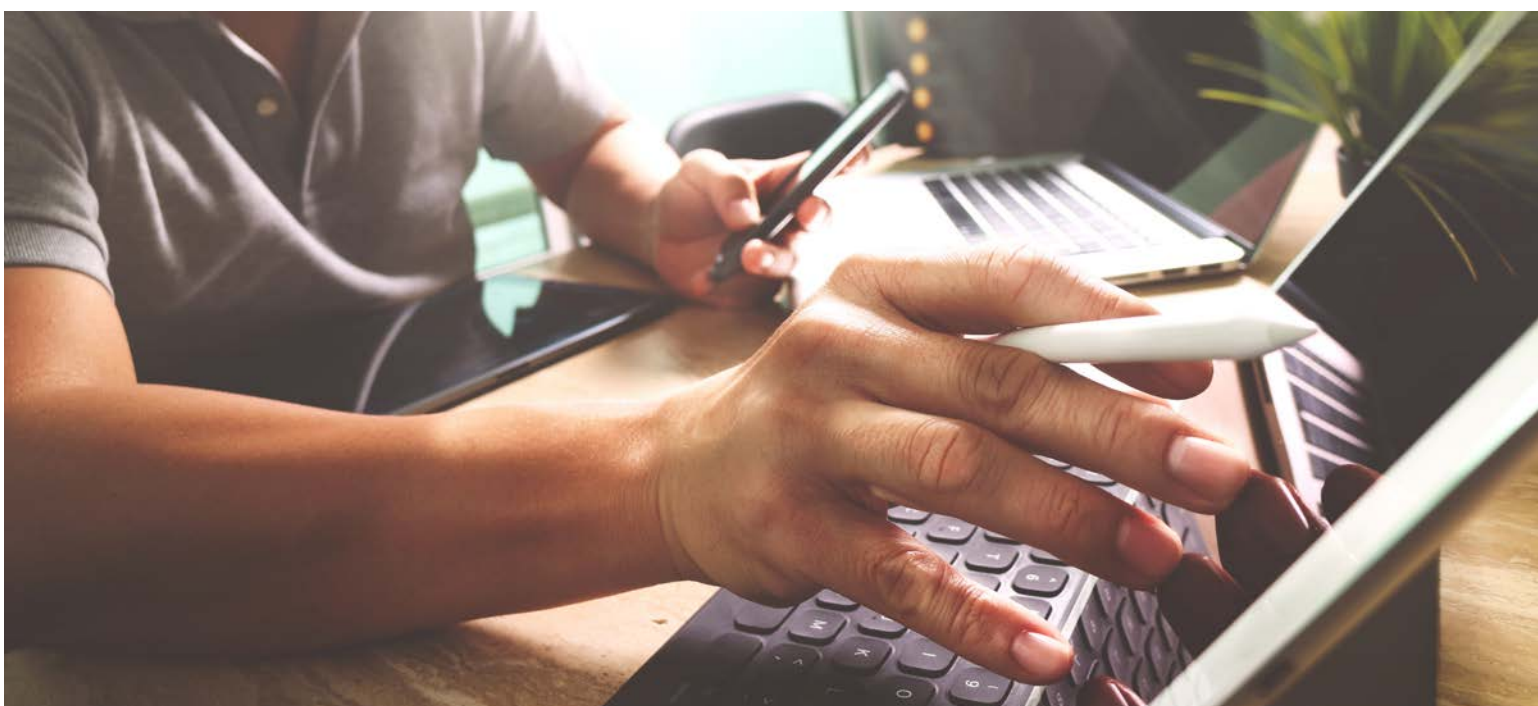
⁵ <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>

⁶ <https://www.acs.org.au/insightsandpublications/reports-publications/digital-pulse-2018.html>

⁷ <https://startupaus.org/document/crossroads-v/>

⁸ <https://mck.co/2KPxeTm>

⁹ <https://theconversation.com/china-is-catching-up-to-the-us-on-artificial-intelligence-research-112119>



EARLY STAGE INVESTMENT AUSTRALIA VS. UK STYLISTED SCENARIO HEADLINE RATES ONLY

	Australia (ESIC) ¹⁰	UK (EIS) ¹¹	UK (SEIS) ¹²
Initial investment (amount assumed)	\$200,000	\$200,000	\$200,000
Income tax relief	20% upfront offset	30% upfront offset	50% upfront offset
Net initial investment	\$160,000	\$140,000	\$100,000
Value of shares after 3 years (10% growth p.a. assumed)	\$266,200	\$266,200	\$266,200
Capital gain after 3 years*	\$106,200	126,200	\$166,200
Effective annual return on net investment after 3 years	18.5%	23.9%	38.6%

* As the shares have been held for over 12 months, investors are exempt from CGT in all three cases.

That the Australian Government:

1. Remodels ESIC to match and better the generous tax relief provided by the UK's Enterprise Investment Scheme (EIS) and Seed Enterprise Investment Scheme (SEIS). This would include broadening the criteria defining an "early stage company" eligible for ESIC investment. Current thresholds of spend profile < \$1m and income < \$200k are limiting as eligibility criteria.
2. Develops a voluntary accord with superannuation funds where accord signatories commit to allocating up to 0.5% of their funds under management to high growth tech startups as a higher risk asset class.
3. Introduces an early stage tech investment initiative within superannuation where individual Australian citizens can allocate up to an additional 2% above the employer compulsory superannuation guarantee – that is removed from concessional contributions cap calculations. This will enable more individual Australians to participate in this higher risk, yet higher growth asset class, while also improving capital flow for early stage tech companies.

¹⁰ <https://www.ato.gov.au/Business/Tax-incentives-for-innovation/In-detail/Tax-incentives-for-early-stage-investors/>

¹¹ <https://www.gov.uk/government/publications/enterprise-investment-scheme-and-capital-gains-tax-hs297-self-assessment-helpsheet/hs297-enterprise-investment-scheme-and-capital-gains-tax-2019#examples-of-the-interaction-between-income-tax-relief-and-disposal-relief-including-disclosure-requirements>

¹² <https://www.gov.uk/government/publications/seed-enterprise-investment-scheme-income-tax-and-capital-gains-tax-reliefs-hs393-self-assessment-helpsheet/hs393-seed-enterprise-investment-scheme-income-tax-and-capital-gains-tax-reliefs-2019>

03

Artificial intelligence research and commercialisation as a national priority



We are yet to see mass deployment of artificial intelligence. Many current applications of AI start with algorithms that evolve into machine learning. Voluminous amounts of data are required to feed the engines that are powering image and speech recognition, natural language processing, predictive analytics and process optimisation.

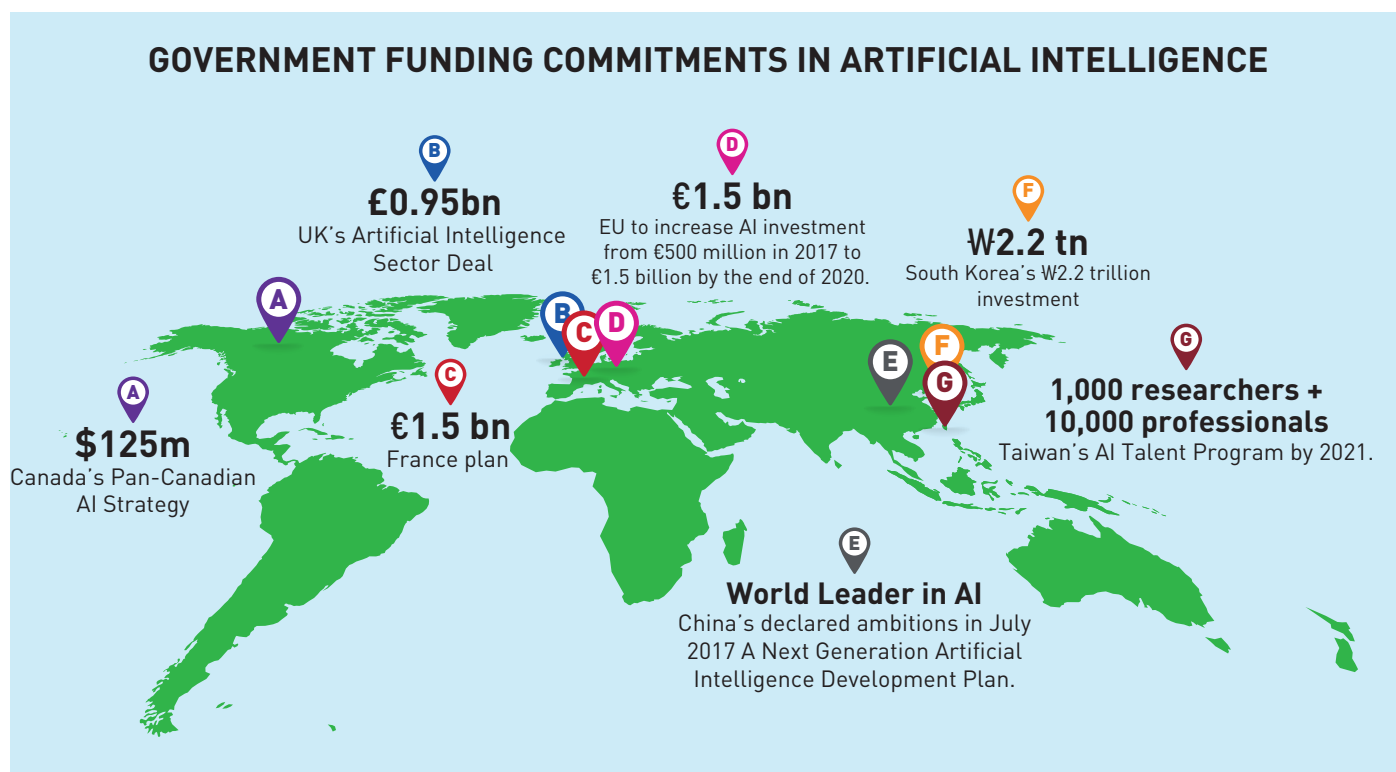
The United Nations predicts the current world population of 7.6 billion will grow by over 13% reaching 8.6 billion in 2030¹³, and

grow further to 9.8 billion by 2050. Smart agriculture promises to improve crop yields through the use of smart sensors and intelligent control systems. The average farm by 2050 will produce 4.1 million data points per day¹⁴. AI will enable real time processing of this data realising efficiencies. This is but one example of the transformative power of AI.

It is important to note however that AI is not a vertical, rather a horizontal. AI has the power to

transform all industries: AI & medicine, AI & mining, AI & finance, AI & transport and logistics, AI & manufacturing, etc.

With the opportunity to become a global leader, Nations have been investing heavily to build their AI capabilities — and Australia is at risk of falling behind in a race that can't be recovered.



DATA AT A GLANCE

- The UK's Artificial Intelligence Sector Deal (£0.95bn) includes funding 8,000 specialist computer science teachers and 1,000 PhDs in Artificial Intelligence by 2025¹⁵
- Canada's Pan-Canadian AI Strategy¹⁶ is a \$125m investment in AI research and innovation to increase the number of AI researchers and skilled graduates
- China's declared ambitions to lead the world in AI in its July 2017 plan, A *Next Generation Artificial Intelligence Development Plan*¹⁷
- The EU's commitment to increase the investment in AI from €500 million in 2017 to €1.5 billion by the end of 2020¹⁸
- France's €1.5 billion plan¹⁹ to transform into a global leader in AI research, training, and industry
- South Korea's ₩2.2 trillion investment²⁰ to strengthen the country's R&D in AI, including a commitment to train 5,000 AI specialists and 600 professionals in AI to address immediate short-term needs
- Taiwan's AI Talent Program²¹ which includes a commitment to develop 1,000 advanced AI researchers and 10,000 AI-related professionals by 2021

¹³ World Population Prospects: The 2017 Revision, published by the UN Department of Economic and Social Affairs

¹⁴ Australia's Digital Pulse 2017

¹⁵ <https://www.gov.uk/government/publications/artificial-intelligence-sector-deal>

¹⁶ https://www.amii.ca/wp-content/uploads/2019/04/ai_annualreport2019_web.pdf

¹⁷ http://www.gov.cn/zhengce/content/2017-07/20/content_5211996.htm

¹⁸ <https://ec.europa.eu/digital-single-market/en/news/communication-artificial-intelligence-europe>

¹⁹ <https://www.gouvernement.fr/en/artificial-intelligence-making-france-a-leader>

²⁰ <https://www.msit.go.kr/web/msipContents/contentsView.do?catelId=mssw311&artId=1382727>

²¹ <https://ai.taiwan.gov.tw/actionplan/ai-talent-program/>



RECOMMENDATIONS

That the Australian Government:

1. Takes an ecosystem approach to developing Australian expertise in artificial intelligence capability. Amplification of funding and access to artificial intelligence researchers should be focused on the D side of R&D, and includes investment to make more Government datasets open.
2. The Australian Government commits both tuition and living stipends to develop 1,000 Artificial Intelligence PhDs. Technology transfer is best done in people's heads, and the fastest way to move AI out of academia and into practice is to train the nation's human capital. These PhDs will go on to establish AI startups, automate and optimise processes in small to medium enterprises and multinationals, and develop entirely new business models. AI is not yet – and unlikely to be for some time – a push button technology. Australia needs postgraduates trained in applying it.

Establishing Australia as a world leader in technology talent



16%

OF AUSTRALIA'S WORKFORCE (APPROX. TWO MILLION PEOPLE) IS EMPLOYED IN THE PUBLIC SECTOR

Skills shortages are real, and particularly exacerbated in areas of technology development. If these gaps are left unaddressed for any length of time, the Australian economy will stagnate.

The traditional notion of the firm, where grouping employees together in hierarchical structures reduces transaction costs, is under challenge from digital platform businesses enabling online market places where purchasers (employers) and providers (employees) can now transact much more efficiently giving rise to freelancer and portfolio work²².

ACS has long held the view that skilled migration should be a source of competitive advantage for Australia. It shouldn't, however, ever be at the expense of the domestic labour market and attracting full workforce participation.

The reality is that Australia is competing with other developed economies for the same pool of globally-mobile migrants. Systems and strategies need to be in place, along with public messaging, that best position Australia to attract the best and brightest migrants who will make the strongest contribution to the nation.

DATA AT A GLANCE:

- 50% of PhD candidates in the US are foreign born
- There are almost two million people employed across three levels of government in Australia, meaning that 16% of our nation's 12.5 million-strong workforce is employed in the public sector

RECOMMENDATIONS

To establish Australia as a world leader in technology talent, there are four recommendations that can set our nation on the path to success:

1. Establish and execute a strategy for attracting multi-nationals to open R&D, engineering centres, high tech and deep tech labs in Australia; as the world's 13th largest economy, Australia has significant purchasing power. To continue to build skilling and reskilling opportunities for our nation's citizens, attracting inbound investment that enables knowledge and skills transfer needs to be a priority area.
2. Public sector employment as an enabler of technology and knowledge transfer; given the size of public sector employment in Australia, it represents a strategic opportunity for enabling knowledge and skills transfer across the broader Australian economy. Recruitment strategies should include specific targets for emerging technology areas such as artificial intelligence, machine learning, Internet of Things, edge computing, data science, cyber security, blockchain and distributed ledger technologies. Similarly, rapid upskilling and retraining for emerging technology

²² Tomorrow's Digitally Enabled Workforce

areas should be a concentrated focus recognising some skills within the Australian public sector may be more readily transferrable to these emerging areas than others.

3. Introduction of the Computer Science Centre of Excellence Visa: A fast-tracked visa allocation of 2,000 set aside for computer science graduates from the top 25 globally ranked computer science universities²³ pending successful security checks. This would involve a new simplified visa approval process providing four-year stay and potential pathway to permanent residency.
4. Introduce a tech entrepreneur stream of the New Enterprise Incentive Scheme (NEIS); NEIS has a long track record of being one of Government's most successful programs. The eligibility criteria to participate in NEIS disadvantages tech entrepreneurs by requiring that a candidate is not already operating on a commercial basis and has an independent structure. Many tech entrepreneurs will pivot numerous times before focusing on a specific product/market fit while maintaining the same business structure.



²³ <https://www.timeshighereducation.com/world-university-rankings/2019/subject-ranking/computer-science>

05
05

STEAMing ahead through education





The ACS Australia's *Digital Pulse 2018* found Australia's ICT competitiveness to be 'middle of the pack'²⁴.

Australia really needs to improve the ICT literacy of its school students²⁵. Only 53% of year 6 students were proficient in ICT literacy in 2017. 54% of Year 10 students were at this level, and both were declining. This is despite Australia having the second highest availability of computers in schools, second only to the Netherlands.

Something is terribly wrong if Australia has the best access to computers in schools, but nearly half our students are ICT illiterate. The nation needs a future focus on development of digital technologies/computer science and apply computational thinking across the curriculum.

75% of the fastest growing occupations require STEM knowledge and skills, with Australian employers characterising employees with STEM skills as the most innovative²⁶. For Australians to attract higher paying jobs in the future, there needs to

be an immediate uplift in the performance of our education system.

The Australian Government has the ability to develop the world's most educated STEAM workforce by 2035.

DATA AT A GLANCE:

- The performance of Australian students in mathematics has witnessed a 15-year decline when slipping behind many of our OECD trading partners²⁷
- Presently only 77.6% of students are completing maths to year 12, compared to 95% in 1986²⁸
- Only one in 10 students study advanced mathematics in year 12²⁹
- Out of 15 countries, Australia ranks 11th in terms of students in tertiary education that study STEM-based subjects. Only 10.6% of undergrads study STEM degrees³⁰
- ICT literacy in particular has been on the decline. In 2015, 48% of year 10 students did not meet the proficient standard in ICT³¹

**AUSTRALIA HAS
THE 2ND HIGHEST
COMPUTER
AVAILABILITY
IN SCHOOLS YET
NEARLY 50% OF OUR
STUDENTS ARE ICT
ILLITERATE**

²⁴ ACS (2018) Australia's Digital Pulse: Driving Australia's international ICT competitiveness and digital growth

²⁵ ACARA (2018) NAP Sample Assessment ICT Literacy Years 6 and 10. https://www.nap.edu.au/docs/default-source/default-document-library/2017napictreport_final.pdf?sfvrsn=2

²⁶ PwC, "A smart move: Future-proofing Australia's workforce by growing skills in science, technology, engineering and maths (STEM)," PricewaterhouseCoopers, Sydney, 2015.

²⁷ Data 61 & ACS Blockchain 2030 - A Look At The Future Of Blockchain In Australia

²⁸ <https://www.smh.com.au/education/significant-scaling-advantage-why-more-hsc-students-are-opting-for-lower-level-maths-20170515-gw505a.html>

²⁹ <https://www.chiefscientist.gov.au/wp-content/uploads/2-Science-and-Maths-in-Australian-Secondary-Schools-datasheet-Web.pdf>

³⁰ https://www.chiefscientist.gov.au/wp-content/uploads/BenchmarkingAustralianSTEM_Web_Nov2014.pdf

³¹ https://research.acer.edu.au/cgi/viewcontent.cgi?article=1028&context=policy_analysis_misc



RECOMMENDATIONS

To develop the world's most educated STEAM workforce by 2035, there are three simple recommendations that can set our nation on the path to success:

1. Mandate mathematics to Year 12 nationally; mathematics is a foundational life skill for all students. Even students taking the base level mathematics subjects through to Year 12 will be a step further ahead than today by being able to apply financial literacy skills for their future working lives.
2. Introduce minimum Australian Tertiary Admissions Rank (ATAR) scores for all teaching degrees; to lift teaching performance, and position the profession as highly skilled and aspirational, a minimum 65 ATAR should be introduced as a pre-requisite to study a teaching degree at University. The entry requirements should also mandate some level of mathematics at Year 12.
3. Fund the development of 3,000 specialist computer science teachers, similar to the program included in the UK's Artificial Intelligence Sector Deal.³²

³² <https://www.gov.uk/government/publications/artificial-intelligence-sector-deal>

Smart cities for a smart country





Beyond the hype, the concept of smart cities is about people. How can Australia lift the standards of living and the quality of life of its people? More than two-thirds of Australians live in a capital city³³.

Smart cities are not just about energy efficiency and reducing the environmental footprint. Quality of life indicators include enhancing economic prosperity by attracting more businesses and higher paying jobs, creating safer communities, reducing congestion, reducing friction in transportation by integrating public and private multi-modal transport opportunities, building affordable housing within 45 minutes of central business districts, improving workforce effectiveness, and improving digital equity through reliable digital connectivity.

As highlighted in ACS' report *Australia's IoT Opportunity: Driving Future Growth*, one of the most critical realisations of the past two years is that the highest value of an IoT solution no longer lies in smartly combining sophisticated sensors and actuators. Rather, it is analysing patterns of large volumes of data with optimal automation through software applications that bring the solution to life.

Smart cities are powered by advancements in big data, and there is no single dataset panacea for enabling a smart city strategy. It requires multiple data sets to optimise efficiencies, strong data governance, a strong data strategy, and a strong cyber security posture.

Most of all, trust needs to be established while articulating and

delivering benefit. Data sharing needs to preserve privacy, be transparent as to goals, and have non-digital fail safes in place to redress any instances where things go wrong.

DATA AT A GLANCE:

- Following the development of the 2016 Federal Smart Cities Plan, the number of businesses and communities not yet starting their smart city journey has reduced from 20% in 2017 to 13% in 2018. Of these businesses almost 35% plan to focus on smart infrastructure (roads, bridges etc.)
- Even a 25% uptake of automated vehicles can reduce journey times by 20% and journey variability by almost 80%

³³ 2071.0 - Census of Population and Housing: Reflecting Australia - Stories from the Census, 2016

- Current use of the adaptive traffic control systems SCATS (Sydney Coordinated Adaptive Traffic System) has been found to deliver savings of 28% in travel time, 25% less stops and a reduction of approximately 15% in the emissions of certain greenhouse gases
- With \$27.7 to \$37.3 billion at risk by 2030 due to the economic costs of congestion, it is imperative that smart city solutions continue to be explored and enacted on. Smart city solutions could be a means to keeping Australia on the low end of this range, which effectively represents economic benefits of almost \$10 billion which would not otherwise be captured by GDP

ECONOMIC COSTS OF CONGESTION SET TO RISE TO

\$37.3

BILLION BY 2030





RECOMMENDATIONS

To realise the potential of smart cities to improve living standards, and the quality of life for Australia's people, there are four recommendations:

1. Create a new National Smart City Authority, that will oversee the modernisation of our nation's cities and align interests and co-operative arrangements across all three tiers of government. It will report to the Minister for Infrastructure and work in partnership with Infrastructure Australia. The agency will:
 - a. Work with manufacturers to test and deploy autonomous vehicles in Australian cities. Autonomous vehicles will be safer, cleaner and cheaper to operate than traditional vehicles, and are poised to make necessary commutes less burdensome for all citizens. We should encourage and accelerate their adoption in Australia, and work to resolve any regulatory and technical issues with their deployment as soon as possible.
 - b. Create a national IoT strategy. IoT devices will be a core feature of the cities of tomorrow, with smart sensors and devices deployed around the city to monitor and manage traffic flows, energy management, water supply, warning systems and more. Rather than ad-hoc deployment of incompatible systems across the country, the Federal Government should create an IoT authority that evaluates, develops and mandates common systems and solutions to ensure that deployed IoT systems are consistent, interoperable and secure from cyber threats.
2. The development of a national Smart City Strategy: aligning interests and co-operative arrangements across all three tiers of government; Federal, State, and Local Government. For example, 5G represents a significant opportunity. Local Councils cannot create alone the enablers to fully realise the opportunities presented by 5G. These enablers include data platforms (including data sharing platforms), coordinating plans for deployment of micro-sites and sensors, and alignment on plans for infrastructure deployment (mandating shared towers and shared trenches). Development of a national Smart City Strategy will align and expedite optimising these enablers.
3. Include data sharing and mandating the sharing of physical assets in Commonwealth Government procurement contracts. For industries where the government is the key client, procurement contracts must include access to agreed datasets, including assuring continuous supply and real-time access. Examples of success can be seen in NSW with insurer participation in Compulsory Third Party reforms, the fuel check app, and ANZ bank providing to NSW government de-identified aggregated data of customer transaction during major events. As contained in recommendation two, infrastructure deployment also needs to be included into contracts such as mandating of shared towers and shared trenches to fully enable 5G.
4. Compulsory data sharing in Commonwealth Infrastructure funding arrangements to fast-track IoT adoption – Data sharing is the innovation enabler in the digital economy. The Commonwealth is in the unique position of being able to apply a data sharing lever to funding arrangements, ensuring consistency and standardisation of data classification, privacy, ethics and security. Incentive mechanisms may even mandate the use of specific elements of technology. For example, Graphene is a promising material that may be embedded into roads for sensing purposes.

About ACS

ACS is the professional association for Australia's technology sector. More than 45,000 ACS members work in business, education, government and the community. ACS has a vision for Australia to be a world leader in technology talent, fostering innovation and creating new forms of value. We are firmly vested in the innovative creation and adoption of best of breed technology in Australia, and we strive to create the environment and provide the opportunities for members and partners to succeed.

ACS works to ensure IT professionals are recognised as drivers of innovation in our society, relevant across all sectors, and to promote the formulation of effective policies on ICT and related matters.

Visit acs.org.au for more information.

**Approximately 50,000 Australians aged 18-24
will vote for the first time.**

THINK AHEAD. CREATE THE FUTURE. CHANGE THE WORLD.



ACS

International Tower One
Level 27, 100 Barangaroo Avenue
Sydney NSW 2000

P: 02 9299 3666

F: 02 9299 3997

E: info@acs.org.au

W: acs.org.au