
Report on

IP Management
by Government in Australia

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ABBREVIATIONS

Acronyms

ANAO	Australian National Audit Office
ANSTO	Australian Nuclear Science and Technology Organisation
CRC	Cooperative Research Center
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DST	Defence Science and Technology Group, a part of the Australian Commonwealth Department of Defence, formerly DSTO
DSTO	Defence Science and Technology Organisation, now called DST
GITC	Government Information Technology Conditions
PBR	Plant Breeders' Rights
PRO	Public Research Organisations (defined for the purposes of this Report in section 2)
WIPO	World Intellectual Property Organisation

Governments

ACT	Government of the Australian Capital Territory
CWTH	Government of the Commonwealth of Australia
QLD	Government of the State of Queensland
NSW	Government of the State of New South Wales
NT	Government of the Northern Territory
SA	Government of the State of South Australia
TAS	Government of the State of Tasmania
VIC	Government of the State of Victoria
WA	Government of the State of Western Australia

Other Abbreviations

Agency	refers to Government departments and agencies, their wholly owned companies, and statutory corporations established by legislation
IP	refers to intellectual property
PSI	refers to public sector information
TTO	refers to a technology transfer office.

Hyperlinks

Blue coloured references contain hyperlinks to the reference.

1. INTRODUCTION

WIPO is investigating the experience of Member States in the management of IP by Government. Based on the understanding gained through this investigation WIPO will determine the appropriate programs of assistance, if any that may be developed for the benefit of Member States.

This Report on IP Management by Government in Australia has been prepared as part of WIPO's investigation, and addresses the specific areas that are the subject of that investigation. This Report is divided into sections that correspond to the investigation's Terms of Reference.

2. SCOPE

Australia being a federation of six states and having two territories, it has a total of 9 Governments:

1. Commonwealth of Australia
2. State of Queensland
3. State of New South Wales
4. State of Victoria
5. State of Tasmania
6. State of South Australia
7. State of Western Australia
8. Australian Capital Territory
9. Northern Territory.



Each of these 9 Governments have departments and agencies and many have formed statutory corporations. All can collectively be called “the Australian Government.”

The Commonwealth and State and Territory Governments inquired into, developed, and implemented IP policies, and IP management processes, very much in tandem with each other. In fact the initiatives of one Government very much influenced the initiatives of the others. Given the proximity of the Governments to each other, their cooperation with each other on many levels, and their responding to the developing IP landscape in Australia at approximately the same time, this “in-tandem progress” is not surprising. This report therefore draws upon the actions and initiatives of all 9 Governments.

As briefed, this report also covers public research organisations (“PROs”) that are funded by Government, but does not cover universities, even though all Australian universities are funded by Governments. For the purposes of this report, PROs:

1. are research institutes that are separate legal entities, such as statutory corporations
2. excludes administrative units of a university which are often also called an “institute,” of which there are many, although they are not separate legal entities, and have no legal identity or governance separate from the university.

3. LEGAL, REGULATORY & POLICY FRAMEWORK

3.1 Legal and Regulatory

There is no legislation or other law or regulation operating in Australia or any State or Territory which creates a legal framework for the management of IP or its commercialisation by Government or PROs. For that matter, there is no such legislation or other law or regulation in relation to universities either.¹

3.2 Parts of Government where creating IP is a core function

There are parts of Government that create IP as part of their core function. Being creators of IP, it would be expected that these parts of Government would always have been mindful of IP, its identification, management, protection, and commercialisation. Examples of some of these parts of Government include:

¹ No Australian jurisdiction has any “Bayh-Dole – type” legislation.

1. Commonwealth Scientific and Industrial Research Organisation (CSIRO) is a Commonwealth funded independent PRO, created by statute. It undertakes research in all fields of science. Today it employs 5,767 staff, of which 3,648 are researchers.²
2. Defence Science and Technology Group (DST), (formerly Defence Science and Technology Organisation (DSTO)), a part of the CWTH Department of Defence, not a separate legal entity. It undertakes research and development in the defence and national security fields. It employs some 2,300 persons, which are predominantly scientists and engineers.³
3. Australian Nuclear Science and Technology Organisation (ANSTO), a part of the CWTH Department of Industry, Science and Technology, not a separate legal entity. It undertakes nuclear science related research. It employs some 1,269 persons, of which some 800 are research, engineering and technical staff.⁴

Being creators of IP, it would be expected that all three would have an awareness of the IP they generated, along with policies and processes to manage that IP.

However, until the early 1990s CSIRO, DSTO and ANSTO predominantly undertook curiosity inspired research, and focused on academic publication and institutional recognition through academic publication. In this climate, the identification of IP, and its management, protection, and commercialisation were not always priorities. Sometimes, their need was not even recognised, and antagonism to IP management and commercialisation to varying degrees was not unknown.

There were pockets within those organisations where there was a high awareness of the IP created, and there were staff devoted to the management, protection, and commercialisation of IP. This was particularly so within those divisions in CSIRO undertaking biomedical research. But at the same time, there were larger pockets where there was no such awareness and no staff to deal with IP.

These are not criticisms. The same observations can be made about universities and PROs, and Governments in other States up to the early 1990s.

From the mid 1990s however, CSIRO, DSTO and ANSTO increasingly became mindful about IP. From this time an awareness of IP, and correspondingly, an awareness of the need to identify it, manage it, protect it, and commercialise it, can be recognised. Amongst the indicators of this are:

1. for the first time, CSIRO adopted an IP Policy in the mid 1990s, whilst still grappling with the notion that its staff, being public sector employees, might expect a share of the commercialisation revenue received from the commercialisation of their inventions, as occurred at universities, a matter which at the time did not sit comfortably with CSIRO as a public sector institution employing public sector staff
2. a significant growth in the number of business development staff, and full time in-house lawyers employed by CSIRO, whose role was to manage, protect, and commercialise IP
3. ANSTO establishing a TTO in 2003.

This is not explained by a single catalytic event such as a law being passed, or a policy being promulgated. Instead, it is explained by a maturing IP landscape in Australia from the mid 1990s onwards, which particularly picked up pace from the late 1990s and into the 2000s.

This maturing “intellectual property climate” was assisted by many factors, amongst which were:

1. The CWTH Government’s 1997 innovation policy *Going for Growth*,⁵ which introduced many fiscal and policy measures, and changed existing ones, aimed at innovation making a greater economic contribution
2. the National Innovation Summit in 2000, organised by the Australian Government and the Business Council of Australia, which brought together stakeholders from every economic sector to focus on Australia’s science and

² [CSIRO Annual Report 2017-2018](#) page 14

³ [DST webpage](#)

⁴ [ANSTO Annual Report 2017-2018](#) page 100

⁵ No online or hardcopy can be located.

technology capability, and to formulate initiatives to improve Australia's innovation performance, which ranked poorly amongst OECD countries⁶

3. a review of Australia's scientific capability in 2000 by its Chief Scientist, culminating in *The Chance to Change: A Public Discussion Paper by the Chief Scientist*⁷
4. an aggressive Cwth Government Innovation Policy in 2001, [Backing Australia's Ability](#), by which \$2.9 billion was committed over 5 years for innovation and commercialisation in the nation, expanded in 2004 by the [Backing Australia's Ability Innovation Report 2003-2004](#) when \$5.3 billion was committed for the following 7 years
5. the release in 2001 by the National Health and Medical Research Council, the largest provider of research funding for medical research, of the [National Principles of IP Management for Publicly Funded Research](#), with the mandatory requirement that institutions seeking research funding must have intellectual property policies in place or be disentitled to research grant funding, and the simultaneous release by the Australian Research Council, the largest provider of research funding for all other research, of its identical [National Principles of IP Management for Publicly Funded Research](#), imposing the same obligation⁸
6. the recognition that science and technology could contribute significantly to economic growth and prosperity and this becoming part of the political agenda, and the subject of much Government policy and initiatives
7. in particular, Government public statements about the role of universities and PROs in that economic growth and prosperity
8. fiscal and concessional loan initiatives to foster research and development by Australian industry
9. grant funding initiatives aimed specifically at research and development collaborations between universities and Australian industry
10. policies to catalyse a venture capital sector in Australia (for example, establishing the Innovation Investment Fund Program by which the first venture capital funds in Australia received co-investment from the Australian Government⁹)
11. declining Government funding for universities, with Government directing universities to seek alternative income sources, and universities therefore considering the potential revenue that could be earned from commercialising their IP
12. universities observing the successes of US university technology transfer
13. universities establishing TTOs.

In this landscape the management, identification, protection, and commercialisation of IP was increasingly focused upon by the research community. CSIRO (a PRO), DSTO (part of a Government Department) and ANSTO (also part of a Government Department) always considered themselves part of the Australian research community. It is not surprising therefore that in this maturing IP climate, as universities in Australia increasingly became focused on the IP they created, and its identification, management, protection and commercialisation, so also did every other actor in the research community. This included PROs like CSIRO, as well as Government Departments that considered themselves to be PROs, like DSTO and ANSTO.

As the IP climate matured, the number of an organisation's staff dedicated to managing, protecting, and commercialising IP increased, and their experiences developed their skills and expertise. Again, this was not just so in universities, but in the whole research community, including PROs like CSIRO, as well as Government Departments that considered themselves to be PROs.

⁶ Audit Office of New South Wales, [Performance Audit Report: Management of Intellectual Property](#), 13 September 2001, page 16

⁷ No online or hardcopy can be found.

⁸ The consequence of being disentitled to research funding does not appear in the current edition of the Guidelines as all grant recipients now have IP policies. The mandatory requirement is still mentioned in the Guidelines - see paragraph 6(d) in each document.

⁹ [IIF program, Policies and Practices Direction No. 1 of 1997](#)

Amongst those parts of Government where research and the creation of IP is a core function, their development of policies, and capability to identify, manage, protect and commercialise IP took place at the same pace as its development in the rest of the research sector, such as at universities.

3.3 Government learns some harsh IP management lessons

Apart from those few sections of Government where research and the creation of IP was a core function, the earliest interest by Government on the management of its own IP occurred in the late 1990s.

Up to this time:

“the development of IP within public sectors has not been well recognised nor extensively commercialised... The reasons public sectors have not traditionally exploited intellectual capital to best effect are most likely associated with the perception that the latter is not a core function of government, together with the lack of skills, experience and expertise necessary to identify and promulgate intellectual property.”¹⁰

Experiences from two WA Government projects in the 1990s resulted in the WA Government learning some harsh IP management lessons. The first was the Pink Lady experience (See the Pink Lady Case Study in Appendix 2). The second was the Universal Catheter Holding Device experience (See the Case Study in Appendix 3).

The absence of a Government IP Policy, and the absence of IP management processes is blamed for the Pink Lady and Universal Catheter Holding Device experiences and harsh lessons.¹¹ WA is not singled out, as the CWTH and the States had similar experiences.

In 1997 WA released its Public Sector Intellectual Property Management Policy and formed a Government Intellectual Property Council. This policy lasted only a few years, and in 2000, the WA Government’s Cabinet approved a replacement IP Policy.¹²

The extent to which the experiences in these two projects influenced WA’s Government IP Policy initiatives is not known, but they must certainly have made some contribution.

The WA 1997 and 2000 IP policies are understood to have been the first whole-of-government IP policies by an Australian Government.

3.4 Performance audit investigations and reports

It is most unlikely that the Pink Lady experience and the Universal Catheter Holding Device experience were the catalysing events that led to a number of performance audits by the Auditors-General of the CWTH and of a number of States. These performance audits were not undertaken because of any misconduct that had taken place that needed to be investigated. They were undertaken as part of the Auditors-General’s normal statutory functions.

By way of example, the CWTH Auditor-General is an independent officer of the CWTH Parliament,¹³ and so is not managed by nor accountable to the Government, but to the Parliament. Apart from conducting financial audits, the Auditor-General also conducts performance audits of CWTH Agencies.¹⁴ A performance audit is a review or examination of any aspect of the operations of CWTH Agencies.¹⁵ The Auditor-General may undertake a performance review of any Government Department of its own initiative,¹⁶ and of CWTH companies and statutory corporations if requested by a Parliamentary Committee.¹⁷ Each Australian State and Territory has an Auditor-General with similar statutory powers and functions.

¹⁰ Barret, Patrick - Auditor-General for Australia, Speech 26 February 2002 “[Management of Intellectual Property in the Public Sector](#)” page 8,

¹¹ Auditor General for Western Australia, [Public Sector Performance Report](#) 1999, page 32f

¹² Neither an online nor a hardcopy version of these 1997 and 2000 policies can be located. The information in this paragraph is drawn from Barret, *ibid*, page 8, and Auditor General for Western Australia, [Public Sector Performance Report](#) 1999, page 29f

¹³ Section 8(1) Auditor-General Act 1997

¹⁴ Section 17(1) Auditor-General Act 1997.

¹⁵ Section 5 Auditor-General Act 1997.

¹⁶ Section 17(1) Auditor-General Act 1997.

¹⁷ Section 17(1) Auditor-General Act 1997.

There was no single event to which the earliest of these performance audits can be attributed. Amongst the matters that put the management of IP by Government on the agenda for these performance audits place were:

1. the maturing IP climate described in section 3.2
2. introspection by Government: if Government had formulated and implemented policies to foster science and technology's economic role to Australian industry and higher education sector, to meet the same objectives consideration needed to be given to the role that Government, as an actor in the economy could play, not just as a regular and policy maker
3. increasing public sector awareness of the value of the knowledge residing within the public sector. As one commentator was quoted by the CWTH Auditor-General:

“It is hard to imagine what the Government’s combined knowledge and experiences would be worth if they could be fully utilised. Getting to it, sharing it and putting it to work is the critical issue for the government today.”¹⁸

4. awareness of the UK’s White Paper *The Future Management of Crown Copyright* which stated:

“public sector information assets have potential, not only in supporting the business of government, but also in supporting the economy as a whole.”¹⁹

3.5 SA: Auditor-General’s Report 1996-1997

The earliest IP related performance audit was undertaken by SA’s Auditor General,²⁰ which commented:

“Intellectual property and government information represent major government assets. In many cases, significant expenditure has been committed to the development of these assets and they should be managed in accordance with prudent commercial, financial and budgetary practices.”²¹

3.6 NSW: Performance Audit Report–Management of IP, 2001

In its [Performance Audit Report: Management of Intellectual Property](#) the NSW Auditor-General gave a snapshot of public sector IP management in that State up to 2001:

“In the past:

- the implementation of a coordinated approach to the management of IP across the public sector has not been a priority
- agencies have been separately responsible for the management of IP
- little emphasis has been given to protecting or profiting from IP.”²²

This snapshot alludes to the lack of coordination and fragmented responsibility across Government, with little emphasis on the protection of IP, or profiting from IP. It also alludes to IP predominantly being published and being freely

¹⁸ Desenberg, Jon, 2000, *Moving Past the Information Age: Getting Started with Knowledge Management*, iMP Magazine, July 21, quoted in Barret, Patrick - Auditor-General for Australia, Speech 26 February 2002 “[Management of Intellectual Property in the Public Sector](#)” page 10,

¹⁹ Minister for the Cabinet Office 1999, *The Future Management of Crown Copyright*, Her Majesty’s Stationery Office, London, quoted in Barret, Patrick - Auditor-General for Australia, Speech 26 February 2002 “[Management of Intellectual Property in the Public Sector](#)” page 8,

²⁰ South Australian Auditor-General’s Report 1996–97, *Managing Intellectual Property Assets and Government Information When Outsourcing*, Adelaide, 1997. Neither an online version nor a hardcopy was able to be located.

²¹ Barret, Patrick - Auditor-General for Australia, Speech 26 February 2002 “[Management of Intellectual Property in the Public Sector](#)” page 2, quoting South Australian Auditor-General’s Report 1996–97, *Managing Intellectual Property Assets and Government Information When Outsourcing*, Adelaide, 1997.

²² Audit Office of New South Wales, [Performance Audit Report: Management of Intellectual Property](#), 13 September 2001, page 11

available. This of course usually means that there is no protection of IP, which lacking protection will usually not be commercialised, and therefore will not benefit the community.

Amongst the Auditor-General's finding were:

1. there was no whole-of-government requirement for Departments and Agencies to have an IP policy
2. 8 out of 14 Government Departments and Agencies reviewed did not have an IP policy
3. of the 6 that did have an IP policy, 3 admitted that the policy was not a formal one, nor was it comprehensive.²³

According to the Auditor-General, amongst the factors that limited Government IP management and the uptake of IP were:

1. lack of Government support for IP management, by there being a lack of policy and resources to deal with IP and its management²⁴
2. lack of awareness or even understanding of what IP is, lack of awareness of IP actually held, and lack of systems and processes to deal with it²⁵
3. legislation²⁶ which imposed standards and accountability upon Government, and the control, management and use of Government assets and resources, being silent about IP²⁷
4. rigid and risk-averse cultures that discouraged the development of IP²⁸
5. concerns amongst Government department decision-makers about transparency and probity²⁹
6. uncertainty about a Department or agency's mandate in relation to IP, and therefore whether they were allowed to commercialise IP³⁰
7. where there were policies about the establishment of IP rights, there were no policies or guidance in relation to innovation, identifying and reporting innovation outcomes, managing IP, etc³¹
8. the absence of expertise and skills in relation to all these matters.³²

The Auditor-General recommended:

“The diversity and complexity of IP require a clearer framework for the coordination of IP issues across government. It is recommended that a whole-of-government response to the management of IP:

- establish accountability for the development of the government-wide framework for IP management
- improve the coordination of Agencies involved in developing aspects of whole-of-government IP policy
- champion the implementation of the IP policy framework
- integrate IP management with other management and whole-of-government policies. These include risk, information, procurement and human resource management
- provide the public sector with a "model IP policy" or IP guidelines to support the management of IP by Agencies
- foster and encourage innovation across the public sector
- clarify the mandate of Agencies to develop and commercialise IP
- ensure legal and commercial IP expertise is available to Agencies
- improve awareness among Agencies of all significant issues affecting IP

Each agency should be required to:

- develop policies to manage IP that are compatible with the agency's corporate objectives
- maintain a register of IP assets and, where appropriate, to account for those assets.”³³

²³ Ibid, page 26

²⁴ Ibid page 60

²⁵ Ibid pages 3 and 60

²⁶ Public Finance and Audit Act 1983 and the Public Sector Management Act 1988

²⁷ Audit Office of New South Wales, [Performance Audit Report: Management of Intellectual Property](#), 13 September 2001, pages 15-16

²⁸ Ibid, page 31

²⁹ Ibid, page 31

³⁰ Ibid, page 57

³¹ Ibid page 19

³² Ibid page 19

³³ Ibid page 5

At the same time as releasing the report, the Auditor-General also released the [Better Practice Guide – Management of Intellectual Property](#) to assist Government departments and Agencies develop an IP policy, and processes to manage their IP.

The Government's response to the performance report, shortly after the report's release, was to set up a working group to address the report's recommendations. This was overseen by the Premier's Department. The working group established a focus group comprised of 40 NSW Government Agencies. An IP framework document was prepared by 2003 for comment by Agencies. The [Intellectual Property Management Framework for the NSW Public Sector](#) was then released in 2005.

Also in 2005 the NSW Auditor-General undertook a follow up investigation and report, the [Follow-up of Performance Audit: Management of Intellectual Property](#). The report highlighted significant steps forward by a number of NSW Government Departments and Agencies, predominantly those whose core functions included research and development, namely:

1. NSW Agriculture (agricultural research)
2. Sydney Water (water utility which also undertook water quality related research)
3. Department of Health (medical research undertaken at public hospitals).³⁴

These did not wait for the Premier's working group to release [Intellectual Property Management Framework for the NSW Public Sector](#), but having a research and development core function, proceeded straight away to address the performance audit report's recommendations.

3.7 CWTH: IP Policies and Practices in CWTH Agencies, 2004

The CWTH Auditor-General undertook a performance audit of the CWTH Government in 2004, the [Intellectual Property Policies and Practices in CWTH Agencies, Performance Audit Report](#).

The audit included a survey of 74 CWTH Agencies.³⁵ 30% of these Agencies reported already having an IP policy in place, but this still left 70% with no IP policy at all.³⁶

Seven Agencies were the subject of closer investigation. Of these, 6 had IP policies in place that were specific to the IP needs of the agency, and also had staff in roles managing IP.³⁷ Four of these 6 (CSIRO, ANSTO, Department of Defence, Grains Research and Development Corporation) all had IP as their core business, so their early focus on IP management is not surprising.

Most alarmingly, the survey reported that over 50% of the surveyed Agencies had no systems in place to identify the IP assets that they owned, used or controlled.³⁸

Twenty-six Agencies reported having commercialised IP within the preceding 2 years, but only 13 were able to estimate the revenue from that commercialisation. Excluding CSIRO whose commercialisation income in the 2001-2002 financial year was \$17.6 million, the remaining 12 had commercialisation revenue of between \$4,000 and \$2 million, with the average between them being \$349,000.³⁹

The Auditor-General was of the opinion that the management of IP was not a matter just for the parts of Government where IP was a core function (such as CSIRO, ANSTO, Department of Defence etc), but was a matter that all Agencies needed to be concerned about:

“Although, most Agencies are not involved in the generation and commercialisation of intellectual property, management of intellectual property is nevertheless an important part of agency operations. By considering risks and ownership issues in decisions to distribute, acquire and internally manage intellectual property,

³⁴ Audit Office of New South Wales, Auditor-General's Performance Audit Report [Follow-up of Performance Audit: Management of Intellectual Property](#), 2005, pages 11-13

³⁵ Ibid, page 18.

³⁶ Ibid, page 19.

³⁷ Ibid, page 19.

³⁸ Ibid, page 20.

³⁹ Ibid, page 21.

Agencies are better able to fulfil their management and accountability obligations, and ensure that agency resources are put to productive and efficient use.”⁴⁰

Indeed, the Auditor-General felt that this was a statutory responsibility:

“Commonwealth agencies are entrusted with the stewardship of significant Commonwealth resources, including intellectual property. In those Agencies subject to the *Financial Management and Accountability Act 1997* (FMA Act), the obligation upon all agency heads for the ‘efficient, effective and ethical’ use of Commonwealth resources applies to the management of intellectual property in the same way as it does to any other Commonwealth resource.”⁴¹

Noted as well were the strong economic reasons for Governments to manage their IP, including:

- “stimulating economic growth, industry development, improved competitiveness and even increased employment prospects by the transfer of IP to the private sector;
- encouraging the adoption of agency IP by the wider community thereby benefiting the public; and
- generating revenues from agency IP as an additional source of agency operating revenue.”⁴²

The Auditor-General did not believe that there could be a single solution or “one size fits all” approach to the management of IP, recognising that different sections of Government had different needs in relation to the particular IP relevant to them:

“Due to the diverse nature of agency activities, types of intellectual property managed and the extent to which intellectual property is critical to core business, strategies for intellectual property management will differ between agencies and sometimes within an agency.”⁴³

The Auditor-General concluded by making 2 recommendation:

1. each Government agency formulate its own IP policy, and put in place the required IP management systems, for its own specific needs⁴⁴
2. the formulation of a whole-of-government framework for the management of IP to assist Agencies to do so.⁴⁵

3.8 Snapshot of public sector IP management policies in 2018

The CWTH and the States of QLD, NSW, VIC and SA:

1. have a whole-of-government policy that records IP principles that need to be reflected in the IP policies of Agencies, and these whole-of-government policies are publicly available on the internet
2. devolve the responsibility to agencies to develop their own individually customised and relevant IP policy to meet their own needs and requirements, and these
 - (a) typically are not publicly available in relation to Government Departments, with some exceptions, such as the QLD Department of Health
 - (b) are available in relation to PROs, on their websites.

WA has a whole-of-government IP policy which is available on the internet. Although it does not expressly devolve to Agencies the responsibility to develop individually customised and relevant policies, this is nevertheless understood to be the practice.

These policies, with hyperlinks are identified in Column A of the Table in Appendix 7.

⁴⁰ Ibid, page 57.

⁴¹ Ibid, page 36.

⁴² Ibid, pages 39-40.

⁴³ Ibid, page 37.

⁴⁴ Ibid, page 57.

⁴⁵ Ibid, page 59.

4. EXPERIENCE OF GOVERNMENT FUNDED RESEARCH RECIPIENTS

4.1 Government departments involved in research

There are relatively few Government departments that are engaged in undertaking research themselves. Government Departments in Australia predominantly fund research to be undertaken by universities and PROs. Some exceptions are:

1. DST and ANSTO which are a part of Commonwealth Departments
2. State Governments' Departments of Agriculture
3. Agencies that undertake research as a subsidiary activity to their core activity (such as Sydney Water which is the water supplier for metropolitan Sydney, and undertakes water quality related research).

DST and its predecessor organisations have mostly been concerned with curiosity driven research, and to some extent have engaged in user-driven research sought by Australia's defence forces. It claims a large number of innovations in use by defence forces.⁴⁶

State Governments' Departments of Agriculture have historically undertaken research and development aimed at benefitting the agricultural industries in their States. Much of this research has been bio-security related. A lot of it has also focused on breeding new varieties of fruit, vegetables, crops, and pastures, that are bred for superior characteristics such as appearance, taste, rate of growth, yield, etc, to make these industries in their own State more competitive. The high cost of developing new varieties, particularly undertaking field trials, has meant that for this industry, for competitiveness to be achieved, the development and the cost needs to be borne by Government.

A large part of the IP that State Governments' Departments of Agriculture have generated has from its inception been intended to become the subject of industry adoption. Industry adoption refers to the Departments' practice of disseminating IP to industry, for free, so that the industry benefits immediately from the free access to this IP, as well as the economy, and consumers. This is often done with IP that concerns improved farming practices, pest management, disease management, improving crop quality and yields, local farming challenges such as salinity, etc. Dissemination of this type of IP often occurs through field days, training, exhibitions etc.

It is much harder to find innovations in Agencies whose core business does not include research.

This may be attributable to:

1. the lack of IP awareness in Agencies, as well as the lack of an IP management infrastructure within Agencies, until relatively recently
2. if there have been innovations, news of them has not been disseminated⁴⁷
3. anecdotally, Departments of Health, lacking capability, resources, and perhaps even interest in commercialising an innovation, such as surgical instruments, have been willing to assign the relevant IP to the employee innovator.

Given these comments it is unsurprising that patenting by Government Departments in Australia is modest.

The following Table indicates the number of PCT applications filed by Governments in Australia in the last 3 completed calendar years:⁴⁸

	2015	2016	2017
CWTH	4	5	3
QLD	0	0	0
NSW	0	0	0
VIC	0	0	0
TAS	0	0	0
SA	0	0	0
WA	0	0	0
ACT	0	0	0
NT	0	0	0

⁴⁶ <https://www.dst.defence.gov.au/discover-dsto/our-innovations>

⁴⁷ In my experience a high probability of this.

⁴⁸ Patent searches undertaken 2 December 2018

This is not to suggest that no patenting at all is pursued by Governments in Australia. The last 3 PCT applications filed by Australian Governments were:⁴⁹ No PCT filings have been made by SA, TAS, ACT or NT.

CWTH	2018 WO/2018/191777 2017 WO/2017/136872 2017 WO/2017/054056
QLD	2014 WO/2014/197936 2014 WO/2014/005178 2013 WO/2013/173865
NSW	2018 WO/2018/107245 2018 WO/2018/032056 2010 WO/2010/096874
VIC	2002 WO/2002/075615 2002 WO/2002/075616 2002 WO/2002/075618
WA	2007 WO/2007/121518 2004 WO/2004/093560 1987 WO/1987/000608

4.2 CSIRO

CSIRO is Australia's largest PRO. It employs 5,767 staff, of which 3,648 are researchers.⁵⁰ It claims in 2014 to have been the 25th largest PCT patent application filer amongst government and research institutions worldwide.⁵¹ Its website describes hundreds of innovations⁵² and scores of new start-up companies set up to commercialise many of those innovations.⁵³ The Case Study CSIRO's polymer banknotes (See Appendix 4) describes one of those innovations.

Being the country's largest generator of IP, unsurprisingly, it employs more staff with a TTO role than any other organisation. Anecdotally it exceeds 150 persons (although the TTO label is not employed by CSIRO). With such a large workforce in TTO roles it is also unsurprising that CSIRO's staff are well trained, and are experienced in assessing the commercialisation prospects of IP, formulating and implementing protection strategies, including filing for patents, formulating commercialisation strategies, and successfully implementing those strategies.

The following Table indicates the number of PCT applications filed by CSIRO in the last 3 completed calendar years:⁵⁴

	2015	2016	2017	Total
Commonwealth Scientific and Industrial Research Organisation	44	63	51	158

CSIRO's annual commercialisation revenue in recent years has been:⁵⁵

Year	Royalties and license fees \$M
2012 – 2013	37.5
2013 – 2014	29.1
2014 – 2015	60.8
2015 – 2016	59.7
2016 – 2017	51.1

⁴⁹ ibid

⁵⁰ [CSIRO Annual Report 2017-2018](#) page 14

⁵¹ <https://www.csiro.au/en/Do-business/Technology-licensing/Commercialising-our-work>

⁵² <https://csiropedia.csiro.au/a-products-processes-and-systems/>

⁵³ <https://csiropedia.csiro.au/companies-arising/>

⁵⁴ Patent searches undertaken 2 December 2018

⁵⁵ Extracted from Table 2.2 in [CSIRO Annual Report, 2016-2017](#), page 24

4.3 PROs

There are so many PROs in Australia. In the field of medical research there are 69 identified in Appendix 6.

It is not easy to obtain a similar list of PROs in other fields of research. Wikipedia lists 65 research institutes in Australia.⁵⁶ This is not a reliable list as just a few of the research institutes in Appendix 6 are listed by Wikipedia; and many of those that are listed in Wikipedia are administrative units of CSIRO or of a university and so are not PROs. As well, many have ceased to exist because their funding periods expired (all the CRCs that are mentioned) or because they merged with another organisation (for example, NICTA merged with CSIRO).

PROs in Australia are predominantly medical research institutes, as the list in Appendix 6 indicates. Apart from two specific PROs, namely CSIRO and the South Australian Research and Development Institute, I struggle to think of any other PROs undertaking research in fields other than medical research (which CSIRO also undertakes).

Research Australia is an organisation with which research organisations in Australia are affiliated. Its membership is listed on its website.⁵⁷ Disregarding universities, PROs already listed in Appendix 6, companies, and industry associations, there are no PROs mentioned working in fields other than medical research.

As in all countries in the world, research is largely driven by curiosity and the publication objective, both to enhance the reputation of the researcher, as well as to enhance the reputation of the research organisation where the researcher works. That is no less the case amongst PROs in Australia.

Most PROs having a research and publication focus, and most having a modest number of researchers, they do not have staff with TTO skills. Some may employ one person in that role. Often, through no fault of their own, a one-person TTO having to be a “jack-of-all-trades” is “a master of none.” As well, having no TTO co-workers and limited opportunities for TTO experience to be gained slows down their professional development. This results in the one-person TTO and the PRO struggling to manage, protect, and commercialise IP.⁵⁸

There are some quite large PROs, such as the Garvin Institute for Medical Research, and the Walter and Eliza Hall Institute for Medical Research. Some stunning successes have emerged from these. (See the Case Study of Venetoclax in Appendix 5).

Both are large enough to each employ 2 or 3 persons in a TTO. Nevertheless, even that is a modestly sized TTO.

The following Table indicates the number of PCT applications filed by selected PROs in the last 3 completed calendar years.⁵⁹

	2015	2016	2017	Total
Queensland Institute of Medical Research	3	5	9	17
Walter & Eliza Hall Institute of Medical Research	2	4	6	12
Murdoch Childrens Research Institute	3	3	4	10
Garvan Institute of Medical Research	2	2	4	8
Florey Institute of Neuroscience and Mental Health	2	4	0	6
Peter MacCallum Cancer Institute	1	1	2	4
Childrens Medical Research Institute	1	1	1	3
Burnet Institute for Medical Research	0	1	2	3
Baker IDI Heart and Diabetes Institute	1	0	1	2
George Institute for Global Health	0	0	1	1
Lions Eye Institute	1	0	0	1
Translational Research Institute	0	1	0	1
South Australian Research and Development Institute	1	0	0	1

⁵⁶ [https://en.wikip](https://en.wikipedia.org)

⁵⁷ See [https://rese](https://researchaustralia.org.au/)

⁵⁸ These commen

⁵⁹ Patent searches

As expected given the comments above, the number of PCT applications filed are modest.

By way of comparison, the Table below indicates the number of PCT applications filed by the 7 largest Australian universities in the last 3 completed calendar years:⁶⁰

	2015	2016	2017	Total
Monash University	22	21	25	68
University of Queensland	23	23	19	65
University of Sydney	16	21	23	60
University of Melbourne	12	12	5	29
Australian National University	6	7	12	25
University of Western Australia	3	10	2	15
University of Adelaide	0	1	8	9

These comparative statistics reflect that universities having critical mass, they have a TTO and TTO staff, who are able to manage, protect and commercialise IP, while so many modestly sized PROs without critical mass have no TTO, and no TTO staff, or may have a single person who amongst other duties may undertake some TTO – type tasks, but often with limited or no experience.

The result is that even if some protectable and commercialisable IP emerged from one of these many small curiosity-driven publications-focused PROs, it may well lack the skill and expertise to recognise that, and lack the skill and expertise to protect, manage and commercialise the IP.

It must also be said that the majority of researchers in Australia still have an antagonistic attitude, or at least an indifferent attitude to IP, its protection, management and commercialisation. Antagonism has been eroded most successfully in Australian universities, but indifference largely continues. The erosion of these attitudes has been least successful at PROs, or has not occurred in some PROs at all.

The IP outputs of the large universities, from the table above, are at the level to be expected. It might be speculated that if all the PROs were to be aggregated into one organisation, the IP output might be comparable to one of the large universities.

However:

1. each PROs prevailing antagonism or indifference to IP, its management, protection and commercialisation, and
2. its lack of a TTO or anyone with TTO skills,

means any IP that would have been prudently managed, protected, and commercialised is more likely to “fall between the cracks”, either by dissemination by being published, or by the lack of anyone whose task it is to see to its management, protection and commercialisation.

4.4 Cooperative Research Centers

A Cooperative Research Center (“CRC”) is a multi-party research collaboration with a finite funding period. The number of collaborators (called “participants”) can be as few as 5. The CRC with the largest number of collaborators was the Sustainable Tourism CRC which is believed to have had approximately 75 participants. Participants were drawn from universities, PROs, Agencies, SMEs, national companies, and international companies. The finite funding period at different times in the CRC Program has ranged from 5 to 10 years. However, a large number of CRCs

⁶⁰ Patent searches undertaken 2 December 2018

succeeded in their renewal applications and some achieved aggregate funding periods exceeding 20 years. Each CRC was focused upon research in a specific field. The Program commenced in 1990 and continues today.

The CWTH Government provides the funding under the CRC Program. That being so, and CRC collaborations lasting with such longevity, CRCs can be considered PROs.

Since 1990 there have been 211 CRCs. At least half of these had multiple funding periods. Currently there are 26 CRCs.

Initially, CRCs were set up as unincorporated joint ventures between the participant joint venturers. This was a cumbersome structure for many reasons:

1. the unincorporated joint venture was managed by a management committee, with each participant having one representative on the committee. The result was a decision making structure that was needlessly too large, causing inefficiencies, and which met for unnecessarily long and time consuming meetings
2. many participants feeling exposed under this joint and several liability structure insisted on having veto powers in relation to many issues, which led to other inefficiencies
3. as an unincorporated joint venture, every contract had to be signed each participant. As a result, even a simple legal document like a confidentiality agreement needed to be reviewed by the legal office of each participant, which often sought minor changes to the document which had to be reviewed by each other participant's legal office, including those which had already approved the document. This led to the time taken for all participants to sign a confidentiality agreement to have regularly exceeded 18 months
4. as an unincorporated CRC had no legal identity if its own, patent applications needed to show the names of up to 75 participants as the applicants.

The cumbersome unincorporated joint venture structure impeded the CRCs, but it was the structure that participants insisted on given their aversion to a corporate structure, meaning as it did that the ownership of intellectual property arising from their research would vest in the corporate structure, instead of the participants personally.

The CWTH's patience with the unincorporated joint venture structure ran out by the early 2000s, when funding criteria was changed to require a corporate structure for CRCs. This became the mandatory structure and almost all the previous inefficiencies immediately disappeared.

Like most PROs, CRCs have a research and publication focus, although over the years the dominance of this focus has lessened, with increasing focus on developing industrially relevant IP co-existing with the research and publication focus.

Like PROs, there being a modest number of researchers, most CRCs do not have staff with TTO skills. As with PROs, some CRCs may employ one person in that role, and often, through no fault of their own, a one-person TTO is a "jack-of-all-trades" and "a master of none." Again, having no TTO co-workers and limited opportunities for TTO experience to be gained slows down their professional development, and results in the one-person TTO and the CRC struggling to manage, protect, and commercialise IP.⁶¹ Notwithstanding these challenges, CRCs have created many innovations.⁶²

All CRCs today are incorporated joint ventures, with their IP assets held by a company trustee upon trust for the CRC's collaborators. This makes it virtually impossible to confidently undertake patent searches to ascertain the extent to which CRCs may be filing patent applications, without knowing the names of the 26 trustees of the 26 current CRCs. Given my experiences of having represented many CRCs before I retired, I would speculate that:

1. no patent applications would have ever been filed by the so called "public good" CRCs, that is CRCs undertaking research for social benefits, such as the protection of the Great Barrier Reef, aboriginal health, etc
2. no patent applications (or a negligible number) would have been filed by the CRCs undertaking research in agricultural sectors, where their research outcomes were mostly disseminated to those sectors for the immediate use of firms in those sectors
3. a few patent applications would have been filed by CRCs in medical research fields, but these would be a modest number

⁶¹ These comments are based on my experience, having had many PRO clients.

⁶² See the publications of the CRC Association at <https://crca.asn.au/publications/achievements/>

4. a few patent applications would have been filed by CRCs in manufacturing and other sectors, but again these would be a modest number.

4.5 IP policies

Given the recommendations made by the Auditors General (see section 3) all States and Territories have IP policies, and it is understood that Government Departments in all States and Territories have IP Policies.

There is no doubt that CSIRO has an IP policy, but it has never publicly disseminated its IP policy on its website, preferring to maintain its policy in confidence. To the best of my recollection, CSIRO had an IP policy in the mid 1990s, well preceding the reports and recommendations made by the Auditors General (see section 3). CSIRO regards itself not as “Government” per se, but as an independent research institute. As a research institute, CSIRO’s “DNA” is more closely aligned to the rest of the research community, that is, to universities, rather than “Government”. This may explain why CSIRO’s attention to an IP Policy can be dated to about the same time that universities paid attention to their own IP policies.

Other PROs, being mostly driven by curiosity driven research, and to publish, had little need for IP policies, and so were rather slow to the uptake. Even today, amongst the smallest PROs, it is speculated that while they have an IP policy, it is most likely one that has little impact on their curiosity-driven publication-focused research outcomes.

Like CSIRO, other PROs have historically preferred not to publicly disseminate their IP policies on their website. Some exceptions are Peter MacCallum Cancer Institute⁶³ and Murdoch Children’s Research Centre.⁶⁴

As a general rule, CRCs had little to no need for an IP Policy as such. The public good CRCs and the agricultural research CRCs had no need for one. The other CRCs had little IP to deal with or to protect. If they commercialised any IP, commercialisation revenue was distributed to the CRC’s collaborators, which in turn applied their own IP policies in relation to the distribution of commercialisation revenues to their own staff.

4.6 Obtaining title to IP

The law in Australia is clear, namely that an employer owns the IP created by an employee in the course of employment. Government, CSIRO and PROs therefore clearly own the IP created by their staff.

All the IP policies and guidelines of all Governments listed in Column A of the Table in Appendix 7 make reference to this legal principle, either expressly, or implicitly, as indicated in the Table.

The prevailing model of IP ownership for CRCs up to the early 2000s was that IP created by the staff of participants would be owed by all the CRC’s participants jointly, with each participant’s proportion being the same percentage as the percentage of the value of that participant’s cash and in kind contributions to the CRC, to the aggregate value of all the participants’ cash and in kind contributions to the CRC.

The prevailing model of IP ownership for CRCs from the early 2000s was that IP created by the staff of participants would be owed by a company, as trustee for all the CRC’s participants, with each participant’s beneficial interest in the trust being the same percentage as the percentage of the value of that participant’s cash and in kind contributions to the CRC, to the aggregate value of all the participants’ cash and in kind contributions to the CRC.

4.7 Sharing of commercialisation revenue with staff – Government other than PROs

Column C of the Table in Appendix 7 briefly describes each Government’s policy on sharing commercialisation revenue with Government employees.

The sharing of commercialisation revenue with staff whose innovations earned that commercialisation revenue is the universal practice around the world for universities and independent PROs. There are challenges however, in implementing similar policies in Government.

⁶³ https://www.petermac.org/sites/default/files/media-uploads/IP_policy_PeterMac.pdf

⁶⁴ https://www.mcrc.edu.au/sites/default/files/media/documents/intellectual_property_policy.pdf

Government is concerned that the community may be outraged by a public servant (as Government employees are called in Australia) receiving what could be significant financial benefits for “just doing their job.” This is not a hypothetical concern. In 2018 a high profile controversy occurred in Australia in relation to a payment to an employee of a PRO called the Brian Holden Vision Institute. The payment was reported to have been \$1 million. An anonymous letter, signed by “concerned staff” was sent to the Institute’s Chairman and its CEO, and as well to a number of newspapers. The letter asked “How can this be fair to the rest of us or correct for a charity organisation that has little money?” The payment was made in 2017 when the Institute had an operating loss of \$2.64 million on a turnover of \$17.8 million, which the previous year had been \$30.75 million. According to the Institute’s Chairman the payment was “nowhere near \$1 million” and was connected to royalties received by the Institute from the commercialisation of the recipient’s invention. The recipient staff member has not been identified.⁶⁵ The CEO resigned in July 2018. The Chairman resigned in October 2018.

The controversy certainly outraged many of the Institute’s staff. This may be hard to understand since it is unexceptional for a PRO to have commercialisation revenue sharing policies with its staff that are similar to such policies at universities. The Institute however is not just a PRO undertaking research in the field of vision, but additionally has a very large number of staff deployed delivering public health services in 17 least developed and developing countries. These latter staff are understood to regard the Institute as more of a charity, than a research organisation. This explains the outrage in an environment where this would not have been expected.

This is the sort of outrage that Government is concerned may be the backlash if a public servant was to receive a significant payment from the sharing of commercialisation revenue. This may explain:

1. Government IP policy guidelines being freely available on the internet, but specific IP policies of specific Agencies are not (see 3.8).
2. As reflected in Column B of the Table in Appendix 7:
 - (a) Only one Government Department (NSW Health Department) has a publicly available commercialisation sharing revenue policy which is comparable to the approach taken by universities and PROs, while the NSW State Government policy on silent on the matter.
 - (b) Two Governments (QLD and WA) while sharing commercialisation revenue with staff, limit the amount that can be received to a relatively modest \$50,000.
 - (c) Two Governments (SA and WA) rank the matter as having to be dealt with at a Ministerial level or Cabinet level, or both.
 - (d) One Government (VIC) is wholly silent on the issue.
 - (e) One Government (Cwth) refers to the matter in one sentence in a 235 page document as something that can be “given consideration.”

Seeking to avoid, or at least significantly lessen Government’s exposure to the risk of such outrage, QLD and WA have each placed monetary limits on the amount of commercialisation revenue that can be shared with an Agency employee, namely \$50,000 (see column B of the Table in Appendix 7). However, the observation has been made that such a limitation, and as a result removing the potential “blue-sky” share of commercialisation revenue, can be a disincentive to public sector innovation, compared to the university environment where no such limitations operate.⁶⁶

One further issue that creates a challenge for Government sharing the benefits of commercialisation with its innovative employees, and that is how to deal with commercialisation benefits that are realised “in-house.” When an innovation results in a product and the innovation is protected, patented and licensed, an Agency licensor will receive monetary compensation in the form of royalties and license fees. The monetary commercialisation benefit is quantifiable, and can easily be shared with innovators in accordance with the applicable Agency policy. But how is the sharing of commercialisation benefits to be handled when an innovation is a process or a methodology that is not licensed but is used “in-house” by the Agency that employs the innovator? The process or methodology is commercialised in no less a fashion than a patented product. The user of the innovation (the Agency) may realise substantial economic gains in the form of substantial cost savings. One innovation is no less important or valuable than the other.

A distinguishing difference between the two examples is that in the patented product the commercialisation benefit received by the Agency licensor is money paid by a licensee, while the process or methodology is used “in-house”.

⁶⁵ See Matthew Woodley “[Million-dollar bonus at Brian Holden sparks board governance concerns](#)” Insight News 7 September 2018.

⁶⁶ Comments by an officer of a State Agency in conversations with me.

A third example. Suppose an Agency staff member innovates, develops, and writes the program content for an outstanding public health training course. Governments in other States, and even countries are so impressed with the unique course that they seek licenses to use the materials. Licenses are granted. The innovative staff member can persuasively argue that the copyright materials are no less a “product” than a surgical instrument which is patented and licensed, and just as the innovator of the surgical instrument will receive a share of the commercialisation revenue, why should not the staff member who developed the unique materials? Going one step further, if the innovator receives a share of the commercialisation revenue that the employer Agency receives from licensing the materials to other Governments, what should the innovator receive from the employer Agency’s own use of the materials?

Examples such as these demonstrate that there still are unmet challenges in applying the university model of commercialisation revenue sharing into a public sector setting.

4.8 Sharing of commercialisation revenue with staff – PROs

Researchers at PROs and researchers at universities perceive themselves as the same, and that is the case. Throughout the world therefore PROs have IP policies that are comparable to IP policies of universities, in all aspects, including the manner of sharing commercialisation revenue. That is also the case in Australia.

4.9 Commercialisation and availability for public use

All Governments in their policy documents refer positively to the commercialisation of Government created IP, as indicated in Column D of the Table in Appendix 7. A number expressly refer to commercialisation taking place by either license or assignment, as indicated in Column D. A number also refer to Agencies being alert to the prospect of IP they create being suitable for use by other Agencies.

5. PUBLIC SECTOR INFORMATION: CONTENT & BIG DATA

Both:

1. content (government created content such as publications, guides, manuals, videos and other creative output, and
2. big data (information collected by government which can be input into products and services, including by the private sector)

are “lumped together” as public sector information (“PSI”).

The first attention that PSI received in Australia was when the Australian Government constituted the Government 2.0 Taskforce in 2009. This followed the [Recommendation of the OECD Council for enhanced access and more effective use of public sector information](#) in 2008.

The Taskforce produced its [Report of the Government 2.0 Taskforce - Engage Getting on with Government 2.0](#) (2009), which considered Government engagement tools, and paid specific attention to PSI. The Taskforce’s report contained many new ideas, and there was much uncertainty about the extent to which there would be receptiveness to them:

“PSI is a resource that should be managed like any other valuable resource—that is to optimise its economic and social value”⁶⁷

“establishment of ‘a pro-disclosure culture around non-sensitive public sector information’”⁶⁸

“In absence of good reasons to the contrary, whatever information or content has been funded by the public should, be discoverable, accessible and useable as a public asset”⁶⁹

“government revenue will often benefit more from taxes on the economic growth stimulated by open access to PSI than it will suffer where governments lose direct revenue from the sale of PSI.”⁷⁰

⁶⁷ [Report of the Government 2.0 Taskforce - Engage Getting on with Government 2.0](#) (2009) page 40

⁶⁸ Ibid page 49

⁶⁹ Ibid page 60

⁷⁰ Ibid page 60.

The Taskforce's Recommendation 6 was:

- “6.1 By default Public Sector Information (PSI) should be:
- free
 - based on open standards
 - easily discoverable
 - understandable
 - machine-readable
 - freely reusable and transformable.
- 6.2 PSI should be released as early as practicable and regularly updated to ensure its currency is maintained.
- 6.3 Consistent with the need for free and open reuse and adaptation, PSI released should be licensed under the Creative Commons BY standard as the default.
- 6.4 Use of more restrictive licensing arrangements should be reserved for special circumstances only.”⁷¹

Amongst the Commonwealth Government's response to the Report was the establishment of the Office of the Australian Information Commissioner, which in 2010 released two issues papers for public comment: [Towards an Australian Government Information Policy](#) (2010) and [Understanding the value of public sector information in Australia](#) (2010). This was followed in 2011 with the release of the [Principles on open public sector information](#) (2011). It set out the following 8 principles:

1. Open access to information – a default position
2. Engaging the community
3. Effective information governance
4. Robust information asset management
5. Discoverable and useable information
6. Clear reuse rights
7. Appropriate charging for access
8. Transparent enquiry and complaints processes.

Principle 1 is worthwhile reproducing in full:

“Information held by Australian Government agencies is a valuable national resource. If there is no legal need to protect the information it should be open to public access. Information publication enhances public access. Agencies should use information technology to disseminate public sector information, applying a presumption of openness and adopting a proactive publication stance.”⁷²

The Taskforce, Issues Papers for discussion, and Principles, were all Cwth Government initiatives. However, all Governments have taken these initiatives on board. All their IP policies and related documents reflect open access to PSI principles, as described in Column E of the Table in Appendix 7. A number also reflect an overriding principle and that is that access must be on terms that benefit for the State. This allows big data, such as spatial information, land registry information, company registration information, and birth, death and marriage registries to be licensed for royalties or other appropriate payments.

A searchable portal at <https://data.gov.au/> has been established to host PSI from Agencies. As at 2 December 2018 the database has 30,707 datasets. Most of these are of questionable value. The portal is supported by a toolkit at <https://toolkit.data.gov.au/index.php> that assists users. VIC has established a similar portal at <https://www.data.vic.gov.au/#>. To assist Agencies, the Cwth Government has also released the [Guidelines on licensing public sector information for Australian Government entities](#) (2018).

In 2017 the Australian Productivity Commission released its report [Data Availability and Use](#).

Amongst the report's findings:

⁷¹ Ibid page 58.

⁷² Office of the Australian Information Commissioner, [Principles on open public sector information](#) (2011), page 1.

1. In providing open access to public sector data Australia lags behind comparable countries such as United States, United Kingdom, and New Zealand,⁷³
2. There are in excess of 500 secrecy provisions in Commonwealth legislation, policies and guidelines, which impede the availability and use of data, with many of them being unnecessary,⁷⁴
3. Many parts of Government remain reluctant to share or release data,⁷⁵
4. Comprehensive reform of Australia's data sharing infrastructure is needed.⁷⁶

The report made 41 recommendations addressing these and other findings.

The report led to the Australian Government considering passing legislation on data sharing and release. It is presently seeking public consultation and has issued the [New Australian Government Data Sharing and Release Legislation - Issues Paper for Consultation](#) (2018).

Data sharing and PSI are therefore very much at an infant stage in Australia.

6. PROCUREMENT POLICIES

6.1 Ownership of IP created by contractors

Government procurement can be a catalyst for innovation driven economic growth. For that to happen, at the very least, contractors engaged by Government need to own the IP that they create under the engagement, or have a license to it on terms that enable them to commercialise it. However, until relatively recently, the inflexible rule amongst Departments in the CWTH and State Governments was that Government must own all intellectual property created by a contractor engaged by Government. Although policy documents reflected some flexibility on the matter, in practice the rule was cast in stone and vigorously and inflexibly implemented.

In the CWTH's [Intellectual Property Policies and Practices in CWTH Agencies, Performance Audit Report](#) (2004) the Auditor-General said:

“The Commonwealth IT IP Guidelines,⁷⁷ issued by the Minister for Communications, Information Technology and the Arts in 2000, implement this commitment. The Guidelines encourage Agencies to only acquire the intellectual property necessary for achieving their missions and to be alert to opportunities for financial savings.

Some of the key messages contained in the Guidelines include....in developing contracts, Agencies should not automatically assume that all IP rights must be vested in the CWTH, but should actively consider whether vesting the IP in the supplier might yield savings and in the long term more effectively meet agency objectives.”⁷⁸

To be noted is that the emphasis is not upon a contractor owning IP to facilitate its commercialisation and the resulting economic benefits, but instead the emphasis is upon cost savings to Government.

Notwithstanding the Commonwealth IT IP Guidelines encouraging Agencies to not assume that they must own the IP created by a contractor, in practice the rule that Government must own the IP created by the contractors it engages is inflexibly persisted.⁷⁹

The same is seen in the 2003 Version 1 edition of the QLD Public Sector [Intellectual Property Guidelines](#) (2003):

⁷³ Finding 1.1, Productivity Commission [Data Availability and Use](#), (2017) page 76

⁷⁴ Finding 3.2, Productivity Commission [Data Availability and Use](#), (2017) page 133

⁷⁵ Finding 3.5, Productivity Commission [Data Availability and Use](#), (2017) page 153

⁷⁶ Finding 4.1, Productivity Commission [Data Availability and Use](#), (2017) page 172

⁷⁷ An online copy could not be located.

⁷⁸ Auditor General [Intellectual Property Policies and Practices in Commonwealth Agencies, Performance Audit Report](#) (2004) Page 41

⁷⁹ This statement is made based on my experience as a legal practitioner.

“When engaging a contractor/consultant, Agencies should explore whether ownership of copyright material developed by a contractor/consultant on behalf of QLD Government (“the default position”) is the best option for maximising benefits to QLD. An agency may agree to a contractor/consultant engaged by the agency retaining the ownership of some or all of the IP rights created by the contractor/consultant during the course of the contract if other public interests, such as supporting QLD industry or enabling or facilitating the more efficient delivery of services to the QLD taxpayer, are considered to be of greater benefit to the public than the ownership of IP by the agency or the State.”⁸⁰

The same statement appeared in the 2007 Version 2 edition, and a modified 2013 Version 2 edition.⁸¹

A stronger statement appears in the QLD Department of Health’s - [Management of Intellectual Property purchased by QLD Health](#) (2010)

“The main points of the QLD Government’s policy in regards to the ownership of IP created by external organisations/consultants paid for by QLD Government departments is:

- It is not mandatory for departments to obtain ownership of all IP created by external organisations/consultants when funded by departments
- instead, there may be cost benefits to departments and broader economic benefits to QLD, if the external organisation/consultant owns the IP

Any previous policy position that the QLD Government must own all IP created by external organisations/consultants is no longer relevant.

The rationale for the revised policy is that:

- a basic objective of Government procurement processes is to ensure that Government obtains the best value for money
- a key characteristic of IP of course, is that you don’t need to own it in order to use it. Instead, all that departments may need is the right to use the IP, not to own the IP. Ideally, there should be an up-front cost saving to Government departments where the external organisation/consultant is to own the IP they create under funding provided by Government
- a basic objective of IP management and a specific objective in QH’s IP Policy, is to maximise the use of IP, not to let IP sit on a government shelf gathering dust. The value of IP generally increases the more it is used in contrast to physical assets which generally depreciate in value the more they are used. Ownership of IP by Government may not be the best way to maximise the use of IP
- ownership by Government may not suit the external organisation/consultant
- the private sector is generally better placed to commercialise the IP and this may also work more effectively to achieve the Governments bigger.”

This part of the document refers to:

1. ownership of IP by Government not being essential
2. the cost savings to Government if it does not insist on ownership
3. the need to facilitate the use and commercialisation of IP.

Yet, despite the strong 2010 statement that “Any previous policy position that the QLD Government must own all IP created by external organisations/consultants is no longer relevant” the insistence that QLD Health own intellectual property created by its contractors persisted.⁸²

In more recent times, greater flexibility on the part of Government on this issue can be seen.⁸³

This is particularly so in relation to the engagement of IT contractors by Government. The first Government Information Technology Conditions (“GITC”) framework was developed in 1991. It was a set of standard terms and conditions by which Government engaged an IT contractor. Over time it was adopted by all CWTH Agencies, and local government as well.

⁸⁰ QLD Public Sector [Intellectual Property Guidelines](#) (2003) page 6

⁸¹ QLD Public Sector - [Intellectual Property Principles](#) (2013) page 9

⁸² This statement is based on my own personal experience.

⁸³ Based on my experience.

This first framework provided for IP developed by the contractor to be owned by the Government customer. A second, third, and fourth framework were developed over time. By the time of the fourth framework the standard terms presented a more flexible package of provisions whereby the contractor and the Government customer could identify a category of IP that would be owned by the Government customer, a different category of IP that could be owned by the contractor, and a category of IP that could be jointly owned, with agreed licenses put in place.⁸⁴

Over time however, dissatisfaction with the GITC framework increased, and State Governments began to customise the GITC framework to reflect their own preferences. Some State Governments abandoned the GITC framework altogether and developed their own. QLD for example developed two standard sets of agreements by which IT contractors were engaged, a general terms and conditions for projects under \$1 million, and another for projects over \$1 million. Both sets of standard terms have provisions by which an agreed category of IP would be owned by Government, and another agreed category of IP would be owned by the contractor.⁸⁵

Most recently, CWTH's [Intellectual property principles for Commonwealth entities](#) (2018) contains the strongest statement that:

“In respect of information and communication technology (ICT) contracts for software, entities should adopt a default position in favour of the ICT supplier owning the IP in the software developed under the procurement contract.”⁸⁶

Provisions in the IP policy frameworks of Governments generally support Agencies taking a flexible approach on the question of IP ownership in procurement contracts, as shown in Column G of the Table in Appendix 7. Nevertheless, there remains a gap however between the contents of these policies that advocate a flexible position, and the day to day administration of procurement contracts where insistence on ownership persists.

6.2 Policy flexibility on ownership of IP is not enough

Government procurement policies providing for flexibility on the question of how the IP arising from a procurement contract will be owned, whether by the Government customer, or the contractor is not enough for procurement policies to catalyse innovation driven economic growth.

In addition, those policies actually have to be implemented. It is in the implementation of those policies that has been the challenge. However, the anecdotal evidence is that Government procurement contracts in all areas continue to provide for IP to be owned by the Government customer, without any consideration to whether such a provision is actually needed, nor whether greater economic benefits might accrue if the matter was dealt with more flexibly, as the procurement policies state should be considered.⁸⁷

As well, to maximise Government procurement policies catalysing innovation driven economic growth, greater participation by SMEs and start-up companies in Government projects needs to occur. However, CWTH Government procurement trends indicate that a declining level of participation by SMEs and small business in recent years, as the following table⁸⁸ shows:

⁸⁴ By way of example, see clause 56 of the [Tasmanian Government's GITC](#)

⁸⁵ See clause 15 of QLD Information Technology Contracting Framework's [General Contract Conditions - ICT Products and Services](#) and clause 12 of QLD Information Technology Contracting Framework's [Comprehensive Contract Conditions - ICT Products and Services](#)

⁸⁶ [Intellectual property principles for Commonwealth entities](#) (2018) para 8(a)

⁸⁷ This statement is based on my experience as a legal practitioner.

⁸⁸ Table is taken from <https://www.finance.gov.au/procurement/statistics-on-commonwealth-purchasing-contracts/>

SME and Small Business Participation Trends

Financial Year	SME		Small Business		Total	
	Value \$m	Number of Contracts	Value \$m	Number of Contracts	Value \$m	Number of Contracts
2016-17	12,309.0	38,649	5,808.5	21,311	47,354.7	64,092
2015-16	13,680.1	42,737	5,545.5	22,883	56,912.3	70,338
2014-15	16,715.8	41,151	5,805.8	23,540	59,447.0	69,236

Note: Small Business is a subset of SME.

Another source states that the level of SME participation in Government procurement has declined from 39% in 2011-2012 to 25% in 2015-2016.⁸⁹

There are efforts however, to increase the level of participation of SMEs in Government procurement.⁹⁰

6.3 Innovation and Science Australia Board – Strategic Plan 2016

In 2016 the Australian Government formed the Innovation and Science Australia Board, composed of entrepreneurs, investors, researchers and educators. The Board was asked to produce a strategic plan to advise policy makers how innovation could be accelerated and optimised. In 2017 the Board published its Strategic Plan [Australia 2030: prosperity through innovation](#), Innovation and Science Australia 2017.

The Plan deals with many aspects. One that received focused attention was the role of procurement policies as a catalyst for innovation. The plan noted:

“Australian governments could do more in this space. They are generally less intent on using their procurement power to foster innovation than other countries; the Australian Government ranks just 70th out of 140 countries on how well its procurement fosters innovation.”⁹¹

It referred to the experience in the United States and the United Kingdom, where a

“government department identifies a specific challenge or problem that is released to the public. Small businesses can then submit an application with their proposed solution, and over the course of multiple phases, the company has the opportunity to prototype and possibly scale their solution.”⁹²

Small Business Innovation Research programs like these catalysed infant companies like Symantec (which today employs some 11,000 staff in 35 countries⁹³ with \$4.019 billion in revenue in the 2017 financial year⁹⁴) and Qualcomm (which today employs 33,800 staff⁹⁵ and had \$22.3 billion in revenue in the 2017 financial year⁹⁶).⁹⁷

The Plan also noted that:

“United Kingdom firms that participate in the Small Business Research Initiative have nearly 10 per cent higher job creation than average, and more than 30 per cent average annual sales growth.”⁹⁸

⁸⁹ [Australia 2030: prosperity through innovation](#), Innovation and Science Australia 2017, page 65

⁹⁰ By way of example see the QLD Government’s [ICT SME Participation Scheme Standard](#) released in September 2018, and [New South Wales Government Procurement: Small and Medium Enterprises Policy Framework](#)

⁹¹ [Australia 2030: prosperity through innovation](#), Innovation and Science Australia 2017, page 65

⁹² Ibid page 64

⁹³ <https://www.symantec.com/about/corporate-profile>

⁹⁴ <https://www.symantec.com/about/corporate-profile/business-overview>

⁹⁵ <https://www.forbes.com/companies/qualcomm/#2142f9251ad5>

⁹⁶ <https://www.qualcomm.com/news/releases/2017/11/01/qualcomm-announces-fourth-quarter-and-fiscal-2017-results>

⁹⁷ [Australia 2030: prosperity through innovation](#), Innovation and Science Australia 2017, page 64

⁹⁸ Ibid page 64

The Plan noted that the participation of Australian SMEs in government tenders was steadily declining.⁹⁹ It also reported that start-up companies were disinclined to participate in Government tendering due to the requirement to produce financial statements for 3 years, which as start-ups they did not have, and more broadly the complexity and time burden involved.¹⁰⁰

The Plan identified a number of trial Small Business Innovation Research programs established since 2016 by some Australian and State Government Departments,¹⁰¹ but more needed to be done. Its Recommendation number 14 was:

“Establish a small and medium enterprise (SME) procurement target of 33 per cent of contracts (by dollar value) being awarded to Australian SMEs by 2022. The Australian Government Department of Industry, Innovation and Science should report on progress towards this target annually.”¹⁰²

6.4 Defence Procurement

An old survey reported that between 1994 and 1999, 50% of Defence outsourcing contracts provided for the ownership of intellectual property arising from the contract to be owned by the contractor.¹⁰³

A strong factor that influenced this is likely to be the bargaining position of defence contractors, of which there are few in Australia, which were able to negotiate intellectual property ownership provisions in their favour. But this does not wholly explain this, as anecdotally there are examples of SMEs, without the same bargaining power, whose Defence contracts provided for the SME’s ownership of the intellectual property arising under the contract.¹⁰⁴

For the time (1994 to 1999), the Department of Defence’s attitude to intellectual property ownership was forward thinking. It was recognised that it was often sufficient for the Department to have a license and that the Department did not always need to own the intellectual property created by a contractor. It was also recognised that the contractor owning the intellectual property that was created potentially provided an opportunity for the contractor to re-use that intellectual property, further develop it, customise it for other applications, etc, all of which could contribute to the growth of the contractor’s business. In turn, this could contribute to increasing employment, export earnings, spillover effects, an increase in the tax base, etc.

Defence continues to have this flexible policy, and continues to have flexibility about the ownership of new intellectual property resting with the contractor it engages. This is recorded in the Department of Defence’s [Intellectual Property Strategy](#) (2016).¹⁰⁵

7. SIGNAGE

The authorised use of the Commonwealth Coat of Arms is limited to Cwth Agencies, parliamentarians, defence forces, etc. Under the [Commonwealth Coat Of Arms Information and Guidelines](#), permission for use of the Coat of Arms (for example, by representative sporting teams) may be sought from the Prime Minister. The Cwth Coat of Arms is not protected by any specific legislation. However, unauthorised use may contravene the misleading and deceptive conduct provisions of the *Competition and Consumer Act 2010*, the *Trade Marks Act 1995* and the *Criminal Code Act 1995*.

[Australian flags – Part 2: The protocols for the appropriate use and the flying of the flag](#) sets out a protocol for the use of the Australian flag. It states that no formal permission is needed for the use of the flag for commercial or advertising purposes, but its guidelines are expected to be complied with.¹⁰⁶

⁹⁹ Ibid page 65.

¹⁰⁰ Ibid page 65.

¹⁰¹ Ibid page 65.

¹⁰² Ibid page 69.

¹⁰³ Barret, Patrick - Auditor-General for Australia, Speech 26 February 2002 “[Management of Intellectual Property in the Public Sector](#)” page 5

¹⁰⁴ This comment is based on my experiences representing Australian SMEs that contracted with the Department of Defence.

¹⁰⁵ Department of Defence’s [Intellectual Property Strategy](#), (2016), paragraphs 1.3 and 3.1f

¹⁰⁶ [Australian flags – Part 2: The protocols for the appropriate use and the flying of the flag](#) page 21.

Permission is not required to use Australia's national floral emblem, the golden wattle (*Acacia pycnantha* Benth.)¹⁰⁷ nor Australia's national colours (green and gold)¹⁰⁸

Permission is not required for non-commercial use of Australia's national anthem, but permission is required for commercial use.¹⁰⁹

In NSW the use of state arms, symbols and emblems is regulated by the [State Arms, Symbols and Emblems Act](#) 2004.

Other States and Territories take either one approach (guidelines without specific legislation, such as the CWTH), or the other (specific legislation, such as NSW).

8. RISK MANAGEMENT WHEN USING THE IP OF OTHERS

Chapter 8 of the [Australian Government intellectual property manual](#) (2018) deals extensively with the risk of using another party's IP. It describes:

- identifying IP that CWTH Agencies may seek to use
- assessing if permission to use that IP is needed
- ascertaining the IP's owner
- obtaining that permission
- whether to give, and if so the extent to give warranties, indemnities etc

Practical advice is included about avoiding infringement, as well as what to do when an assertion of infringement is made. It also describes the circumstances when Government is immune from infringement under patents, copyright and design legislation. The IP policies and guidelines of the Other States and Territories make brief reference only to the need to avoid infringement, as summarised in Column F of the Table in Appendix 7.

No other publicly available guidance or policy on managing the risk of infringement, from a Government perspective, appears to be available.

9. COMMERCIALISATION ASSISTANCE

The [Australian Government intellectual property manual](#) (2018) includes the following guidance:

1. Chapter 4: Identifying, Recording and Managing IP
2. Chapter 5: Making IP Protection Decisions
3. Chapter 6: Assessing and Valuing IP
4. Chapter 10: Commercialisation of Government IP.

No other publicly available guidance or policy specifically aimed at assisting public sector entrepreneurs and innovators appears to be available.

Section 6 of WA's [Industry and Technology Development Act](#) 1998 sets out the functions of the Minister for Commerce, one of which is:

- “(g) to encourage and facilitate the commercialization of the intellectual property and other resources of departments of the Public Service or of State agencies or instrumentalities;”

There does not appear to be any similar legislative provision operating in any other State or Territory.

10. GENERAL

What was the principal driver for efforts made towards better management of Government IP

¹⁰⁷ <https://www.pmc.gov.au/government/australian-national-symbols/australian-floral-emblem>

¹⁰⁸ <https://www.pmc.gov.au/government/australian-national-symbols/australian-national-colours>

¹⁰⁹ <https://www.pmc.gov.au/government/australian-national-anthem/use-australian-national-anthem>

In Australia there was no single dominant driver that operated to put the management of IP by Government on the agenda.

The management of IP by Government became topical, and was accorded a high profile and attention, given the maturing IP climate described in section 3.2, and the introspection and other factors described in section 3.4.

What is the objective adopted of IP management of government innovative and creative output

All the policies and guidelines considered return to the core principal of benefitting the people that Government serves. For example, the [Intellectual property principles for Commonwealth entities](#) (2018) states that

“The Government, through its entities, seeks to manage IP for the benefit of the Australian community as a whole.”¹¹⁰

The benefit that is expected to be realised from this management of IP by Government includes:

1. Identifying innovations which might otherwise go unrecognised and as a result not be used to benefit the community
2. Identifying innovations that are useful in one Agency (creating efficiencies, reducing costs etc) and which may be able to be used in other Agencies of the same Government
3. Commercialising IP which is useful for the community
4. Commercialising IP by granting licenses to other Governments
5. Commercialising IP by granting licenses to private sector licensees
6. Economic benefits to the community served by the Government arising from the above.

How does it differ from the objectives of the private sector

The difference between is the IP management objectives of Government and the private sector is that Government manages its IP for the benefit of the community, while the private sector manages IP to earn profits.

What is the model adopted of IP management of government innovative and creative output

Recognising the size, breadth and diversity of Government and their Agencies, it is also recognised that a “one size fits all” approach to an IP policy would simply not work. All Governments in Australia have therefore adopted a model of:

1. having a whole-of-government IP principles document (which some call a policy)
2. devolving to each Agency the responsibility to formulate its own customised IP policy that is responsive to its own needs and circumstances..
3. as a result, devolving to each Agency responsibility for the management and implementation of its own IP policy.

What should the Government do with the IP it owns

Government needs to take steps to ensure that the IP it creates is employed for useful purposes. Useful purposes are those that result in benefits, and these can be diverse:

1. sharing IP by way of industry adoption, for free (see section 4.1)
2. sharing IP by one Agency to another
3. providing copyright content under creative commons license, when that is appropriate, (see section 5)
4. licensing big data, either for free, or for license fees and royalties when that is appropriate
5. granting licenses to business sector licensees for commercialisation

What should not be done is:

1. Make all IP available for free, as this deters investment in its protection, further development, and commercialisation. Some IP certainly should be free, such as that which is for industry adoption, or that which

¹¹⁰ [Intellectual property principles for Commonwealth entities](#) (2018) page 5

is provided under a creative commons license. These excellent pursuits however do not mean that by extension all IP should be free.

2. Assign IP for commercialisation. This is referred to as an acceptable practice by a number of Government IP policies referred to in Column D of the Table in Appendix 7. Assignment results in the absence of diligence obligations upon the assignee. It also results in the loss of the ability to terminate. To ensure that a commercial partner remains diligent, and to take appropriate steps if a licensee is not, there needs to be a right of termination. This can only be achieved by a license.
3. Allow Government created IP to remain idle.

11. RECOMMENDATIONS

The following recommendations are based on observations and comments contained in this report.

1. Agencies may consider undertaking an IP audit of the Agency so as to identify the IP (which broadly includes know how, methodologies, business practices and procedures) that the Agency may have developed but not recognised as IP, and therefore not have identified.

The object is to identify IP which may be useful to employ in other Agencies of the same Government, or of another Government (with or without a license payment); to identify IP which may be beneficial to license under an appropriate creative commons license and to identify IP which may be appropriate for licensing to a commercial partner.

2. Consideration may be given to adopting a Model IP Principles Statement.

IP Principles documents developed by each Government in Australia are all different. Some capture some important points that are omitted in others. A Model IP Principles Statement can collect all the good ideas in all versions, and bring them together into one location. Governments can then draw from this model to the extent that they decide.

3. Consideration may be given to producing a model IP policy that Agencies can draw upon in formulating their own IP policy.

There is no “one size” fits all IP policy given the breath and diverse nature of Departments and Agencies.

Departments and Agencies have largely been left to “re-invent the wheel” in preparing their own IP policies, with important matters omitted, important matters perhaps treated incorrectly, or less than optimally. Only the passage of time and the emergence of challenges and errors will reveal where “re-invented” IP policies had been lacking.

Different types of Agencies have different needs. A Department of Agriculture needs an IP Policy with provision for industry adoption, but this will be irrelevant to an Agency that operates a museum or library.

A model IP policy can be prepared in a modular format. This would leave Agencies to identify which modules were applicable to them, and which modules were not. Accompanying guidelines would assist agencies to decide which modules were applicable to them and which were not. Each module would represent best practice in relation to its provisions.

After an Agency’s selection of the modules applicable to them, the result would be a customised best practice based IP policy that was specific to the Agency’s own needs.

4. Consideration may be given to requiring Agencies to amend their standard form procurement contracts to provide for the default position of the contractor retaining ownership of the IP that arises from the engagement, at the same time granting a perpetual license to the Agency, and other Agencies of the same Government upon appropriate terms.
5. Consideration may be given to requiring Agencies to prepare periodic reports, such as six monthly, reporting on how many procurement contracts were entered into in the preceding 6 months on the basis of the default position of the contractor owning the IP, how many otherwise, and the reasons that the default position was departed from.

6. Consideration may be given to a clear mandate to Agencies, to put it beyond any doubt, that they are empowered and sanctioned to manage, protect, use and where appropriate license Government created IP, including if necessary, introducing legislation or repealing parts of existing legislation which may be inconsistent with this, or perceived to be inconsistent with this (this recommendation is less applicable for Australia but more applicable for other countries).
7. Consideration may be given to IP Principles documents (see Appendix 7) omitting reference to the assignment of IP for the purpose of Commercialisation.

APPENDIX 1: DOCUMENTS REVIEWED

Note: Each document can be accessed electronically through the hyperlink embedded in its title.

Commonwealth Government

Auditor-General for Australia, [*Intellectual Property Policies and Practices in CWTH Agencies, Performance Audit Report*](#) No. 25 2003–04

[*Intellectual property principles for Commonwealth entities*](#) (2018)

[*Guidelines on licensing public sector information for Australian Government entities*](#) (2018)

[*Australian Government intellectual property manual*](#) (2018)

National Health and Medical Research Council, [*National Principles of IP Management for Publicly Funded Research*](#), 2001

Australian Research Council, [*National Principles of IP Management for Publicly Funded Research*](#), 2001

[*Backing Australia's Ability*](#) (Innovation Policy), 2001

[*Backing Australia's Ability Innovation Report 2003-2004*](#)

Department of Defence, [*Defence Procurement Policy Manual*](#) (2017)

CSIRO, [*CSIRO Annual Report, 2016-2017*](#)

Queensland Government,

[*QLD Public Sector Intellectual Property Principles*](#), 2013

QLD Health, [*Management of Intellectual Property Purchased by QLD Health*](#), 2013

QLD Government Chief Information Office [*ICT SME Participation Scheme Standard*](#) (2018)

QLD Government's [*ICT SME Participation Scheme Standard*](#) (2018)

NSW Government

Audit Office of NSW, [*Performance Audit Report: Management of Intellectual Property*](#), 13 September 2001

Audit Office of NSW, Auditor-General's Performance Audit Report [*Follow-up of Performance Audit: Management of Intellectual Property*](#), 2005

Audit Office of NSW [*Better Practice Guide – Management of Intellectual Property*](#), 2003

Premier's Department, [*Intellectual Property Management Framework for the NSW Public Sector*](#) 2005

[*NSW Government Procurement: Small and Medium Enterprises Policy Framework*](#)

Victoria Government

[*Managing intellectual property in government Agencies*](#) (2005)

[*Whole of Victoria Government Intellectual Property Policy - Intent and Principles*](#) (2012)

[Intellectual Property Guidelines for the Victoria Public-Sector](#) (2015)

Tasmania

Auditor-General TAS, [Managing Intellectual Property in Government Agencies](#), 2005

SA Government

[Intellectual Property Policy](#) (2006)

WA Government

Auditor General for WA, [Public Sector Performance Report](#) (1999)

Auditor General for WA, *Management of Intellectual Property by the Department of Agriculture: A Case Study of a New Apple Variety* [Second Public Sector Performance Report](#) 2002

[Government Intellectual Property Policy and Best Practice Guidelines](#) (2003)

[Review of the WA Government Intellectual Property Policy](#) (2012)

[Intellectual Property Policy](#) (2015)

[IP Management in WA Health - Procedures for the protection and commercialisation of WA Health IP](#)

Other

Barret, Patrick - Auditor-General for Australia, Speech 26 February 2002 “[Management of Intellectual Property in the Public Sector](#)”

Shane Comiski, Horticulture Australia Limited, [Final Report Horticulture Commercialisation Casebook](#), 2007

Matthew Woodley “[Million-dollar bonus at Brian Holden sparks board governance concerns](#)” Insight News 7 September 2018.

Productivity Commission, [Intellectual Property Arrangements](#) (2016)

Productivity Commission, [Data Availability and Use](#) (2017)

APPENDIX 2: CASE STUDY – PINK LADY APPLE

The Government Department called Agriculture Western Australia (AGWEST) successfully crossed bred two apple varieties which resulted in the Cripps Pink Apple variety. The new apple had a distinctive pink blush with a green background, a firm crisp texture, and an appealing sweet tartish flavour. Both its appearance and flavour were superior, which drew consumers to the new variety.

The challenge of policing the possession and use of propagation material, and the fruit industry's marketing structures assisted what at the time was a pioneering commercialisation strategy, and which is now standard industry practice around the world. The strategy is to register PBR in relation to the new variety, as well register a trademark in relation to the variety, and to license the trademark to fruit marketing authorities. A Cripps Pink Apple could not be sold as such without a trademark license, and without meeting stringent quality requirements. Royalties were payable by trademark licensees, who wanted to leverage the trademark branding in the sale of their produce. The main financial return to the breeder of a new fruit variety therefore became royalties for the use of the trademark, with royalties under a PBR license either being modest, or not even being sought.

Pink Lady was selected to be the trademark for the Cripps Pink Apple.

The desirable Cripps Pink Apple variety was released to apple growers in Australia. AGWEST did not apply for PBR in Australia, nor did it register the trademark in Australia.

AGWEST did however obtain PBR protection in other apple producing countries, as well as a plant patent in the US. It also sought registration of the Pink Lady trademark in key export markets.

In Argentina, France, UK and US, other applicants successfully registered the Pink Lady Trademark, having sought registration earlier than AGWEST.

AGWEST successfully negotiated the assignment to AGWEST of the Pink Lady trademark in Argentina, France, and the UK, but was unsuccessful with the US trademark.

In 1998 AGWEST assigned the trademarks to Apple and Pear Australia Limited (APAL), a company which was the peak industry body for the apple and pear industries, apparently for no consideration.

APAL went on to license the trademark throughout the world, and earned significant commercialisation revenue.

AGWEST received some royalties on the sale of apple trees by overseas licensees to which a PBR license was granted.

It received no income from the international use of the Pink Lady trademark and the employment of its pioneering commercialisation strategy, all of which is realised by AMPAL.

It also received no royalties from the propagation of Pink Lady apples in Australia, nor from the sale of Pink Lady apples in Australia, since it had not applied for PBR nor a trademark in Australia.

* The Case Study draws upon Auditor General for Western Australia, [Public Sector Performance Report](#) 1999, page 32, and Shane Comiski, Horticulture Australia Limited, [Final Report Horticulture Commercialisation Casebook](#), 2007, page 47f

APPENDIX 3: CASE STUDY – UNIVERSAL CATHETER HOLDING DEVICE

Western Australia's Metropolitan Health Service Board (MHSB) operated 5 hospitals in Perth.

One of its staff invented a catheter holding device which helped reduce the incidence of the accidental removal of catheters.

Before filing a patent application, MHSB disclosed the invention in discussions with a potential European manufacturer, without having first put in place a confidentiality agreement.

Having been advised by a patent attorney that this non-confidential disclosure destroyed novelty, no patent application was pursued.

* The Case Study draws upon Auditor General for Western Australia, [Public Sector Performance Report](#) (1999) p 31

APPENDIX 4: CASE STUDY – CSIRO’S POLYMER BANKNOTES

One of CSIRO’s successes has been the polymer banknote with unique security features.

Australia introduced a new decimal currency in 1966. Banknotes for the new currency had a number of security features, including a watermark, metal threads, and raised printing, but within one year good forgeries of the \$10.00 began to circulate.

The Reserve Bank of Australia set the challenge to science to develop a better banknote that was harder to forge.

CSIRO’s approach was to incorporate into the note a security device that could not be photographed, and could not be reproduced by printing plates. What was developed was called an optical variable device, which is a device that changes its appearance influenced by an external factors, such as the viewing angle, temperature etc. This became a hologram on a see through panel, on a banknote manufactured with a purpose developed polymer.

It took 10 years to fully develop the technology, but the Reserve Bank was not convinced that the public would take to the innovative “plastic note”. It took another 10 years for the Reserve Bank to agree to put a polymer note into circulation. This occurred in 1988 with a new polymer \$10.00 note. The note was easily accepted by the public.

Public acceptance of the “plastic note” having been demonstrated, Securrency International Pty Ltd was formed in 1996 to commercialise the technology throughout the world. By 2009, it was manufacturing and exporting banknotes to 25 countries that had engaged it to manufacture their currency.

* Case study drawn from <https://csiropedia.csiro.au/polymer-banknotes/>

APPENDIX 5: CASE STUDY – CSIRO’S POLYMER BANKNOTES

Case Study: WEHI’s development and commercialisation of Venetoclax

Venetoclax is a drug that was approved by the US Food and Drug Administration in 2016 to treat leukaemia.

The technology was developed by the Walter and Eliza Hall Institute for Medical Research (“WEHI”) which licensed it to Genentech Inc (wholly owned by F. Hoffmann-La Roche AG) in 2007.

In 2017 WEHI made a partial sale of the royalty stream under the license, for an up-front payment of US\$250 million and anticipated milestone payments of US\$75 million.

The development of the drug started in 1988 when WEHI’s researchers recognised that a human protein enabled cancer cells to live indefinitely.

In 1991 WEHI’s researchers recognised that high levels of this protein resulted in a patient having resistance to anti-cancer drugs.

In 2005 WEHI researchers successfully designed a protein that could block the protein causing resistance to anti-cancer drugs and which could therefore trigger cancer cell death. This was the basis of Venetoclax’s development.

Over the years more than 100 WEHI researchers were involved in its discovery and development.

* Case study sources: <https://www.wehi.edu.au/news/anti-cancer-treatment-yields-us325m-landmark-australian-deal> and https://social.shorthand.com/WEHI_research/nge4mUouhGc/venetoclax

APPENDIX 6: MEDICAL RESEARCH INSTITUTES

List of independent Medical Research Institutes

- Anti Cancer Council of Victoria
- ANZAC Research Institute
- Asbestos Diseases Research Institute
- Austin Medical Research Foundation
- Australian Regenerative Medicine Institute
- Baker IDI Heart and Diabetes Institute
- Black Dog Institute
- Brien Holden Vision Institute
- Cancer Council NSW
- Cancer Council Queensland
- Centenary Institute of Cancer Medicine and Cell Biology
- Centre for Eye Research Australia
- Children's Cancer Institute Australia for Medical Research
- Children's Medical Research Institute
- Council of the Queensland Institute of Medical Research
- Ear Science Institute Australia
- Florey Institute of Neuroscience and Mental Health
- Garvan Institute of Medical Research
- George Institute for Global Health
- Hanson Institute
- Harry Perkins Institute of Medical Research
- Heart Research Centre
- Heart Research Institute
- Howard Florey Institute
- Hunter Medical Research Institute
- Illawarra Health and Medical Research Institute
- Ingham Institute of Applied Medical Research
- Institute for Breathing and Sleep
- Kolling Institute of Medical Research
- Lions Eye Institute
- Ludwig Institute for Cancer Research
- Lung Institute of Western Australia
- Mater Medical Research Institute
- Menzies Research Institute
- Menzies Research Institute Tasmania
- Menzies School of Health Research
- MIMR-PHI Institute of Medical Research
- Murdoch Childrens Research Institute
- National Ageing Research Institute
- Neuroscience Research Australia
- O'Brien Institute
- Orygen Youth Health Research Centre
- Parenting Research Centre
- Peter MacCallum Cancer Institute
- Prince Henry's Institute of Medical Research
- QIMR Berghofer Medical Research Institute
- Queensland Children's Medical Research Institute
- Queensland Eye Institute
- Queensland Institute of Medical Research
- Royal Brisbane and Women's Hospital Research Foundation
- Schizophrenia Research Institute
- South Australian Health and Medical Research Institute
- St Vincent's Institute of Medical Research
- Telethon Institute for Child Health Research
- The Bionics Institute of Australia
- The Burnet Institute
- The Sax Institute
- The Trustee for the Brain Research Institute Foundation
- The Walter and Eliza Hall Institute
- Trans Tasman Radiation Oncology Group
- Translational Research Institute
- Victor Chang Cardiac Research Institute
- Wesley Research Institute
- Western Australian Neuromuscular Research Institute
- Westmead Millennium Institute for Medical Research
- Women's and Children's Health Research Institute
- Woolcock Institute of Medical Research

APPENDIX 7: COMPARATIVE TABLE OF GOVERNMENT IP PRINCIPLES

Column A Government and its policy documents	Column B Title to IP	Column C Sharing Commercialisation Revenue	Column D Fostering Commercialisation and Use	Column E Access to Content	Column F Use of Others' IP	Column G Ownership of IP in procurement
<p>CWTH Intellectual property principles for Commonwealth entities (2018) Guidelines on licensing public sector information for Australian Government entities (2018) Australian Government intellectual property manual (2018)</p>	<p>Under Australian common law IP created by Agency staff in the course of their employment is owned by the employer Agency. Reflected in statements made in Australian Government intellectual property manual (2018) at p 66.</p>	<p>The Australian Government intellectual property manual (2018) at p 17 refers to Agencies giving consideration to incentives and rewards to staff in their own IP policy, but does not offer any suggestions about the form that these incentives or rewards might take.</p>	<p>Under the Intellectual property principles for Commonwealth entities (2018):</p> <ul style="list-style-type: none"> commercialisation, including by license or assignment to the private sector is encouraged (section 13) IP should be shared with other CWTH Agencies (section 12) <p>Chapter 10 of the Australian Government intellectual property manual (2018) provides extensive Commercialisation guidance to Agencies</p>	<p>Under the Intellectual property principles for Commonwealth entities (2018), free access to published content under a Creative Commons license is encouraged (section 11). This is reinforced by the Guidelines on licensing public sector information for Australian Government entities (2018)</p>	<p>Chapter 8 of Australian Government intellectual property manual (2018) deals extensively with</p> <ul style="list-style-type: none"> Identifying IP to be used Assessing if permission to use that IP is needed Ascertaining the IP's owner Obtaining that permission Whether to give, and if so the extent to give warranties, indemnities etc Circumstances when Government is immune from infringement under patents, copyright and design legislation 	<p>The Intellectual property principles for Commonwealth entities (2018) contains the following very strong statement: "In respect of information and communication technology (ICT) contracts for software, entities should adopt a default position in favour of the ICT supplier owning the IP in the software developed under the procurement contract." (Para 8(a)).</p>
<p>QLD QLD Public Sector - Intellectual Property Principles (2013) Rewards for Creating Commercially Valuable Intellectual Property Directive (2007) QLD Department of Health - Management of</p>	<p>Under Australian common law IP created by Agency staff in the course of their employment is owned by the employer Agency. While there is no express statement to this effect in these documents, it is implicit by the Rewards for Creating Commercially Valuable</p>	<p>Section 3 of Rewards for Creating Commercially Valuable Intellectual Property Directive (2007) states that creators of IP can be paid an amount determined by the Chief Executive of the Agency, up to 1/3rd of net income, with a maximum of \$20,000 per employee per year, and</p>	<p>Under section 1.5 of the QLD Public Sector - Intellectual Property Principles (2013) Agencies are expected to consider the opportunity to share IP with other Agencies.</p> <p>Section 3 deals with commercialisation by Agencies which is</p>	<p>Under the QLD Public Sector - Intellectual Property Principles (2013) Agencies are expected to license copyright works under the least restrictive Creative Commons license. A restrictive license however may be appropriate where the public interest requires,</p>	<p>Section 2.6 section 1.5 of the QLD Public Sector - Intellectual Property Principles (2013) contains the short statement that "Agencies should avoid infringing the IP rights of other people or organisations. Where relevant and necessary, agencies should obtain copyright</p>	<p>Section 2.7.1 of the QLD Public Sector - Intellectual Property Principles (2013) states that "when engaging a consultant, agencies should explore whether ownership by the agency of IP developed by the contractor/consultant on behalf of the QLD Government ('the default</p>

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Intellectual Property purchased by QLD Health (2010)	Intellectual Property Directive (2007).	an overall maximum for all years of \$100,000	strongly advocated, if it benefits the State. It also records the expectation that a commercial partner such as a license should preferably be from QLD, or Australia.	such as where there is the prospect of commercial returns (section 1.3)	authorisation and conduct trademark and business name searches, patent and design searches”	position’) is the best option for maximising benefits to QLD” and encourages Agencies to evaluate their needs on this question. This principle is also reflected in the QLD Department of Health’s - Management of Intellectual Property purchased by QLD Health (2010)
NSW Intellectual Property Management Framework for the NSW Public Sector (2005) Department of Health - Intellectual Property Arising from Health Research (2004)	Under Australian common law IP created by Agency staff in the course of their employment is owned by the employer Agency. Reflected in IP Principles 3 and 4 in Intellectual Property Management Framework for the NSW Public Sector (2005)	The Intellectual Property Management Framework for the NSW Public Sector (2005) is silent on the matter. The Department of Health - Intellectual Property Arising from Health Research (2004) provides in para 5.5.2 that 1/3 rd of net commercialisation income will be paid to the creators of the IP.	The Intellectual Property Management Framework for the NSW Public Sector (2005) supports commercialisation of Agency created IP, if the people of NSW obtain the maximum benefit from that commercialisation, and recognises that this may involve the license or assignment of IP to the private sector (pages 19-20)	The Intellectual Property Management Framework for the NSW Public Sector (2005) is silent on the matter. However, see section * of the Report.	The Intellectual Property Management Framework for the NSW Public Sector (2005) alerts Agencies to the need to take active steps to avoid infringement of a third party’s IP, the need to carry out searches, the need to seek consents or licenses, and the need to obtain advice (page 15)	The Intellectual Property Management Framework for the NSW Public Sector (2005) states cryptically that Agencies “should take a considered approach towards managing risk and opportunity in determining what IP rights to acquire during procurement, contracting, and engaging consultants, for example [a license or ownership].” (page 15)
VIC Whole of Victoria Government Intellectual Property Policy (2012) Intellectual Property Guidelines for the Victoria Public Sector (2015)	Under Australian common law IP created by Agency staff in the course of their employment is owned by the employer Agency. Reflected in IP Policy Principle 4 in Whole of Victoria Government Intellectual Property Policy (2012)	No provision in either document.	The Whole of Victoria Government Intellectual Property Policy (2012) records IP Policy Principle number 7 as follows: “The State is not in the business of commercialising intellectual property, and does not create intellectual property in	The Whole of Victoria Government Intellectual Property Policy (2012) records IP Policy Principle number 2 in terms that rights to IP should be granted with the least possible restrictions. The Intellectual Property Guidelines for the Victoria Public Sector (2015) clarifies this	IP Policy Principle No 11 of the Whole of Victoria Government Intellectual Property Policy (2012) records the need to avoid infringing another person’s IP and that equitable remuneration must be paid to IP owners for the use of their IP.	IP Policy Principle No 9 of the Whole of Victoria Government Intellectual Property Policy (2012) records that in procurement contracts only a license to IP will be sought, and ownership of IP will only be sought when a license is not adequate.

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			<p>order to generate a financial return.”</p> <p>IP Policy Principle number 8 proceeds to state that An Agency may commercialise IP if it has an explicit statutory function to do so, or has the Treasurer’s approval.</p>	<p>principle as being one that applies to the content of publications, which should be subject to an appropriate creative commons license, unless for good reasons (such as privacy) this is inappropriate.</p>		
<p>SA</p> <p>Intellectual Property Policy (2017)</p>	<p>Under Australian common law IP created by Agency staff in the course of their employment is owned by the employer Agency. While there is no express statement to this effect in these documents, it is implicit by the Intellectual Property Policy's (2017) provisions about monetary rewards to staff.</p>	<p>The Intellectual Property Policy (2017) at p 3 allows a Minister to put in place a monetary rewards framework that would operate in that Minister’s portfolio, subject to the proviso that it may not exceed one third of net financial returns. No provision is made for thresholds, or maximum payments.</p>	<p>Guiding Principles 16 to 18 of SA’s Intellectual Property Policy (2017) encourages Agencies to share IP with each other.</p> <p>Guiding Principles 19 to 24 encourage the commercialisation of IP by way of license, or if appropriate assignment, “if the benefit of commercialisation outweighs the benefit to the public of open access to the government-owned IP.”</p>	<p>Guiding Principles 12 to 15 of SA’s Intellectual Property Policy (2017) promotes open access to Agency publications under a Creative Commons license.</p>	<p>No provision in this document.</p>	<p>No provision in this document.</p>
<p>WA</p> <p>Intellectual Property Policy (2015)</p> <p>Encouraging Innovation by Government Employees Procedures for the payment of monetary rewards to innovative Government employees (2003)</p>	<p>Under Australian common law IP created by Agency staff in the course of their employment is owned by the employer Agency. While there is no express statement to this effect in these documents it is implicit in Encouraging Innovation by Government Employees</p>	<p>Section 6 of the Encouraging Innovation by Government Employees Procedures for the payment of monetary rewards to innovative Government employees (2003) provides that with the approval of the relevant Minister, as well as the approval of the State</p>	<p>Under WA’s Intellectual Property Policy (2015) Agencies are expected to “Respond to opportunities to ‘unlock’ IP for commercial use and further exploitation by the private and non-for-profit sectors where this involves acceptable risk,” including when appropriate, by license</p>	<p>Under WA’s Intellectual Property Policy (2015) Agencies are expected to provide open access to publications under a Creative Commons license “where considered appropriate”.</p>	<p>No provision in these documents.</p>	<p>No provision in these documents.</p>

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	<i>Procedures for the payment of monetary rewards to innovative Government employees</i> (2003).	cabinet, a financial reward may be paid to innovative Government employees. The aggregate maximum payment is \$50,000, although.	and assignment of IP (Section 4)			

* Excluded from this list are TAS, ACT and NT. Internet searches failed to identify IP management policies or guidance for these. Enquiries have been made of each to ascertain if these Governments have any such policies, but at the time of this report there has not been a response.

