

# **Management of IP by Government in Australia**

**SMEs and Their Use and Access to Government Innovation**



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# Government created IP

- Relatively recent (1997) awareness by Government in Australia that
  - It's involvement with IP
    - Goes beyond that of
      - being a policy maker and regulator
      - Intervening in the economy to achieve some desirable economic impact
    - extends to being a creator and innovator of IP

“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.”

SA Auditor-General's Report 1996–97, Managing Intellectual Property Assets and Government Information When Outsourcing, Adelaide, 1997



# Government created IP

- Government in Australia has been slow to deal with its IP assets

“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.”<sup>10</sup>

Barret, Patrick - Auditor-General for Australia, Speech 26 February 2002 “*Management of Intellectual Property in the Public Sector*” page 8,

- In the early 2000s a series of performance audits by the Auditors-General of a number of Australian Governments
- Performance audit enquires into and reports to Parliament on the performance of a Government department or agency



# Government created IP

- Performance Audits in Australia:
  - 1997 – South Australian Government
  - 2001 – New South Wales Government
  - 2004 – Commonwealth Government
  - 2005 – Victorian Government
  - 2005 – New South Government (follow up report)

“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.<sup>21</sup>

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



# Government created IP

- Why did Government deal so poorly with Government created IP?
- According to Performance audit reports:
  - Lack of Government IP Policy
    - Lack of awareness or understanding of what IP was
    - Lack of systems, expertise or resources to deal with IP
  - Rigid risk-averse culture
  - Concerns about transparency
  - Uncertainty of what the Government's mandate was about its IP
  - Concerns about Government's role in
    - “profiting”
    - “being in business”



# Government created IP

- Amongst the recommendations from the Performance audit reports:
  - A whole of Government framework for Government created IP identification, management, protection and exploitation
  - Each Department and Agency responsible for formulating its own IP Policy so that it is customised to its own needs and requirements
  - Clarify mandate on Government's role in relation to Government created IP
  - Prepare Guidelines on Public Sector IP Management
  - Encourage public sector innovation
  - Raise IP awareness
  - Resource Departments and Agencies to recognise, protect, and exploit IP
- As at 2019: Implemented in Commonwealth Government, as well as Qld, NSW, VIC, SA, WA (unsure about Tas, NT and ACT)



# What has been the result

- What has been the result of Government focus on Government created IP?
- First:
  - What is the “Government” in Government created IP?
- Universities are excluded
  - They are independent bodies that manage and exploit their own IP
- “Government” means
  - Government departments and agencies
  - Public Research Organisations (PROs)
    - over 60 in Australia
- We need to consider these two separately



# What is the public sector?

- PROs in Australia think and act more like a university, than Government

Let's compare	Government Dept	PRO	University
Self-perception	We are Government	We are independent research institute	We are an independent teaching and research institute
Decision making	Government	Independent governing body	Independent governing body
Answerable to Govt for decisions	Yes	No - independent	No - independent
Accountable to Govt or Minister	Yes	Generally No - independent	No - independent
Financial accountability	Yes – audited by Govt audit office	Yes – audited by Govt audit office	Yes – audited by Govt audit office





# PROs

- Very difficult to attribute to PROs the same characteristics as “Government”
- PROs
  - Think, act and behave like a research center of a university
  - Don’t think, act or behave like Government
- Some PROs are very sophisticated
  - Awareness of IP
  - Identification of IP
  - Assessing its commercialisation prospects
  - Protecting it
  - Successfully exploiting it, including via SMEs



# CSIRO engagement with SMEs

- Commonwealth Scientific and Industrial Research Organisation
  - largest PRO – by far
  - 5767 staff, of which 3648 are researchers
  - ~150 TTO staff
- has a long history of
  - SME engagement - 13 SME Connect staff members
  - Working with SMEs to create innovations
  - licensing CSIRO innovations to SMEs

## SME Connect

Our national SME Connect team have specialised industry knowledge that can assist your business to get the most value out of your research and development activities. We work with you to find the very best capabilities suited to your business, both within your local region and across Australia.







# CSIRO engagement with SMEs

SME CONNECT  
www.csiro.au



## SME Connect funding programs

 <b>MATCHED FUNDING</b>	2 × UP TO <b>\$50K</b>	2 × UP TO <b>\$50K</b> (+ \$30K GRADUATE)	UP TO <b>\$135K</b> PER ANNUM
 <b>PROGRAM</b>	<b>CSIRO KICK-START</b>	<b>INNOVATION CONNECTIONS</b>	<b>CSIRO INDUSTRY+</b>
 <b>SME ELIGIBILITY</b>	<\$1.5 MILLION <u>OR</u> <3 YEARS TRADING	\$1.5M–\$100M <u>AND</u> >3 YEARS TRADING	COMPLETED KICK-START <u>OR</u> INNOVATION CONNECTIONS PROJECT
 <b>PROJECT LENGTH</b>	UP TO 1 YEAR	2–12 MONTHS	1–2 YEARS
 <b>RESEARCH ORGANISATIONS</b>	CSIRO ONLY	ALL PUBLIC RESEARCH ORGANISATIONS	CSIRO ONLY



# CSIRO engagement with SMEs

- CSIRO undertakes research for SMEs
  - CSIRO itself co-funds with SME (CSIRO Kickstart; CSIRO Industry), or
  - SME obtains Innovation Connections co-funding from Federal Govt
- CSIRO licenses research outcomes to SME

## AW Bell: Casting a brighter future >

CSIRO  
move  
comp

### Botanical Resources Australia: Ingredients of a blooming business >

CSIR  
mar

### Intec: Extracting new metals from waste >

CSIRO  
explo

### Ziltek: cutting through the competition in waste remediation >

South Australian SME Ziltek teamed up with CSIRO to develop a handheld soil contamination detector, to underpin their expansion into a new environmental remediation service.



# Other PROs

- Other PROs
- Over 60
- Almost all MRIs

- 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

# 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
- 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
- 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



# Other PROs

- After CSIRO - largest
  - Walter & Eliza Hall Institute for Medical Research (~6 TTO staff)
  - Garvin Institute of Medical Research (~5 TTO staff)
  - Murdoch Childrens Research Institute (~4 TTO staff)
- ~ 10 PROs
  - TTO is limited to 1 or 2 persons
  - “Jack of all trades” – little experience - struggle
- The bulk of PROs
  - Insufficient critical mass – therefore no person with TTO functions
- Most PROs
  - Curiosity driven medical research
  - Some engagement with start up companies (as vehicle for VC investment)
  - Engagement with SMEs is almost unheard of



# Patent Filings by PROs

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

	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



# CSIRO and PROs

- Why is CSIRO so active with SMEs and other PROs so inactive?
  - That's CSIRO's mission

## SCIENCE AND INDUSTRY RESEARCH ACT 1949 - SECT 9 Functions of the Organisation

### SCIENCE AND INDUSTRY RESEARCH ACT 1949 - SECT 9

#### Functions of the Organisation

(1) The functions of the [Organisation](#) are:

(a) to carry out scientific research for any of the following purposes:

(i) assisting Australian industry;

This year, we worked with 1750 private industry customers, including 400 major Australian companies, more than 1060 Australian small to medium enterprises (SMEs), and 280 overseas corporations.

- Other PROs – established by States – have no similar mission
  - Focus on curiosity driven medical research





# Government

- Must distinguish between Government Departments and Agencies where creation of IP
  - is amongst core functions
  - is not a core function
- Some of those where it is a core function:





# Government – IP is a core function

- Where the creation of IP is a core function
  - Very sophisticated
    - Awareness of IP
    - Identification of IP
    - Assessing its commercialisation prospects
    - Protecting it
    - Successfully exploiting it
- Departments of Agriculture – mostly to farmers and other primary producers
- ANSTO – mostly curiosity driven research
- Department of Defence
  - long track record of SME engagement and knowledge transfer



**Australian Government**

**Department of Defence**

**DEFENCE INNOVATION HUB**

**INTELLECTUAL PROPERTY STRATEGY**

*December 2016*

The objectives of this IP Strategy (Objectives) are to:

- (a) encourage and facilitate the development by Australian Defence industry (including small to medium enterprises (SMEs)) of innovative, effective, leading-edge technologies aligned to Defence strategic priorities;

### 3. INTELLECTUAL PROPERTY PRINCIPLES

The IP arrangements for the development of innovative technologies for the Defence Innovation Hub will be set out in the Innovation Contracts. The following principles will underpin these IP arrangements:

#### 3.1 Principle 1 – Ownership of Innovation IP

Defence will not seek to own Innovation IP (including Innovation IP created jointly by Defence and Participants), unless there are compelling reasons to support Defence ownership.

- This principle recognises that IP is generally better managed and exploited where owned by industry through vesting ownership of Innovation IP in the Participant (or a subcontractor). (It also recognises that IP ownership arrangements as between the Participant and its subcontractors are generally a matter best determined by the Participant and its subcontractors.)

# IP is a core function Department of Defence

- Department of Defence
  - Has its own research capability (DST)
  - Collaborates with industry, including SMEs
  - Has procurement policies by which it contracts industry to undertake research, including SMEs
  - Provides research grants, including to SMEs
  - Employs advisers to help SMEs export:
    - Navigate defence market
    - Gain skills and accreditations
    - Connect with supply chains
    - Connect with defence multi-nationals
  - Provides business grants to companies to help them export





# Defence

- On its website
- Numerous case studies
- Defence / SME
  - Innovation
  - Research Collaboration
  - Procurement
  - Export assistance

Business	Case study
ACT Australia	<a href="#">Theatre brings safety training to life</a>
Australian Aerospace Engineering	<a href="#">First For Local Albury Company</a>
Barrett Communications	<a href="#">Enhancing Barrett on the global stage</a>
BEAK Engineering	<a href="#">Long-term commitment to defence supply chains</a>
Berkeley Solutions	<a href="#">Sharing information without sharing risk</a>
Blacktree Technology	<a href="#">Connecting the Globe From Perth</a>
Camco Engineering	<a href="#">Leveraging a reputation for reliability</a>
Daronmont Technologies	<a href="#">Tapping opportunities to innovate</a>
EPE-Trusted to Protect	<a href="#">Radar-equipped unmanned vehicles to protect ground forces</a>
HTA Aerospace and Defense	<a href="#">HTA Aerospace and Defense integral to F35 supply chain</a>
Jenkins Defence Systems (JEDS)	<a href="#">Up-skilling to world standards</a>
Kleinod Pacific Enterprises	<a href="#">Innovation fusion for Aussie soldiers and law enforcement</a>
Kord Defence	<a href="#">Ministerial visit to Kord Defence in Canberra</a>
L3 Micreo	<a href="#">L3 Micreo advances international defence market presence</a>
Norseld	<a href="#">Seeking advice early to grow</a>
Prism Defence	<a href="#">Growing Aussie business brings flight testing to the world</a>
Remote Imaging Solutions	<a href="#">Saving costs remotely</a>
Ronson Gears	<a href="#">Exporting to the world - securely</a>
Sayfa	<a href="#">Height safety for ADF</a>
Silentium Defence	<a href="#">Innovation contracts to develop situational awareness capability</a>
SYPAQ Systems	<a href="#">Two projects awarded under the Defence Innovation Hub</a>
Textron Systems Australia	<a href="#">Innovators working on next era of unmanned aerial systems</a>
UAV Vision	<a href="#">Innovators working on next era of unmanned aerial systems</a>
Wisely Group	<a href="#">Getting ready to defend</a>



# Departments where IP is not a core function

- For a Department or Agency where IP is not a core function, it is more challenging for
  - IP to be seen as relevant
  - IP awareness to be raised
  - Resources to be allocated or staff to be tasked in relation to
    - IP identification
    - IP protection
    - IP management
    - IP exploitation
- This is the case for most Departments and Agencies
- They still have a role to play in innovation
  - Procurement
  - Big Data



# Government Procurement

- Government procurement is well understood as having a catalytic role to play in innovation

“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 ...

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 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. ...
- a basic objective of IP management and a specific objective in OH’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... Ownership of IP by Government may not be the best way to maximise the use of IP
- the private sector is generally better placed to commercialise the IP and this may also work more effectively to achieve the Governments bigger.”

QLD Department of Health’s - [Management of Intellectual Property purchased by QLD Health](#) (2010)



# Government Procurement

- Department of Defence realised earlier than most that there were advantages to contractors owning the IP they created in the course of performing Government contracts
- GISC terms – where software contractors are engaged
  - 1<sup>st</sup> edition 1991 – Government customer will own IP
  - Most recent editions – greater flexibility
- Other Governments have policy statements like Qld's
- Anecdotally, many (most?) Departments and Agencies persist in requiring ownership of IP arising from procurement contracts

“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.”<sup>85</sup>

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





# Public Sector Information

- In Australia, both
  - content (government created content such as publications, guides, manuals, videos and other creative output, and
  - 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”).
- A 2009 report described how PSI should be dealt with:

“PSI is a resource that should be managed like any other valuable resource—that is to optimise its economic and social value”<sup>66</sup>

“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.”<sup>69</sup>



# Public Sector Information

Australian Government Portal - <https://data.gov.au/>

The screenshot shows the homepage of the Australian Government's data.gov.au portal. At the top left is the Australian Government crest and the text "Australian Government". To its right is the "data.gov.au" logo with a "beta" badge. On the right side of the header are navigation links: "Datasets", "Organisations", "Community", and "About". The main content area features a large white search bar with the placeholder text "Search for open data" and a magnifying glass icon. Below the search bar is a banner image of a road winding through a green, hilly landscape. At the bottom of the banner, the text reads: "An easy way to find, explore and reuse Australia's public data".



# Public Sector Information

Victorian Government Portal - <https://www.data.vic.gov.au/#>

The screenshot shows the top navigation bar of the Victorian Government Data VIC website. The bar is dark blue with white text. On the left, it says 'VIC.GOV.AU | DATA VIC'. On the right, there are two links: 'Data' and 'About us'. Below the navigation bar, the main content area is white. It features a large, bold, blue heading: 'Discover and access Victorian Government open data'. Underneath the heading, there are two links: 'Find out more' and 'What is open data? →'. At the bottom of the main content area, there is another link: 'Find spatial data' with a small blue square icon containing a white checkmark.

VIC.GOV.AU | DATA VIC

Data About us

## Discover and access Victorian Government open data

Find out more

[What is open data? →](#)

[Find spatial data](#) 



# Public Sector Information

- As at 2 December 2018 the Commonwealth database has 30,707 datasets.
- Most of these are of questionable value
- 2017 the Australian Productivity Commission released its report *Data Availability and Use*
  - Report led to the Australian Government considering passing legislation on data sharing and release.
  - 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.



# Government Departments

- Why are
  - some Government Departments so active in transferring innovation
  - some are not
  
- Those that are:
  - Directed by Government
    - Department of Defence directed by Government to innovate with and for SMEs
    - Why: Australian defence industry too small to meet Dept's needs
    - For future needs to be met, the industry needs to be supported and grow
    - Growth comes developing new innovations that can be exported
  - its their mission:
    - State Departments of Agriculture



# Commercialisation Revenue Sharing in Government

- One of the challenges for Government is
  - whether, and
  - howto reward government employees for their innovations
- IP policies of
  - Universities
  - PROstypically provide for a share of commercialisation revenue to be paid, as a salary bonus, to the inventors or creators of the IP that earned the revenue
- 30%, 1/3<sup>rd</sup>, or more
- Can Government implement policies to benefit their employees in the same way?



# Commercialisation Revenue Sharing in Government

- Commonwealth Government
  - *Australian Government intellectual property manual* (2018) recommends consideration to incentives and rewards to staff in the customised IP policies of Departments and Agencies
  - Does not offer any suggested models
- Qld Government
  - *Rewards for Creating Commercially Valuable Intellectual Property Directive* (2007)
  - creators of IP can be paid an amount determined by the Chief Executive of the Agency, up to 1/3<sup>rd</sup> of net income, with a maximum of \$20,000 per employee per year, and an overall maximum for all years of \$100,000
- NSW Govt
  - Department of Health - *Intellectual Property Arising from Health Research*  
1/3<sup>rd</sup> of net commercialisation income will be paid to the creators of the IP.



# Commercialisation Revenue Sharing in Government

- Western Australian Government
  - *Encouraging Innovation by Government Employees Procedures for the payment of monetary rewards to innovative Government employees* (2003) with the approval of the relevant Minister, and
    - approval of the State cabinet,
    - a financial reward may be paid to innovative Government employees.
    - aggregate maximum payment is \$50,000
    - (in telephone conversation, no amount has ever been paid under the policy)
- South Australia
  - Minister may formulate a framework
  - No framework has been formulated
- Victoria
  - No provision





# Commercialisation Revenue Sharing in Government

- Uncertainty about community accepting high salary bonuses to Government employees, in the form of a share of commercialisation revenue
- 2018 Controversy at Brian Holden Vision Institute
  - PRO
    - charity - staff deployed delivering public health 17 LDC
- 2017
  - \$1 million paid to a staff member as share of commercialisation revenue
  - operating loss of \$2.64 million
- Anonymous letter, signed by “concerned staff” sent to the Institute’s Chairman and its CEO, and newspapers.
  - “How can this be fair to the rest of us or correct for a charity organisation that has little money?”
- Highlights if there would be public acceptance of generous payments to Government innovators



# Department of Defence

- You Tube Video
- Focus on references to SMEs
- <https://www.youtube.com/watch?v=sqiDjZ6j4f0>

A word cloud featuring the word "thank you" in various languages and scripts. The central word "thank you" is the largest and most prominent. Other large words include "gracias", "merci", "danke", "arigatō", "sukriya", "dank je", "teşekkür ederim", "obrigado", "dziękuję", "hvala", "mauruuru", "mochchakkeram", "go raibh maith agat", "sagolun", "kop khun krap", "terima kasih", "takk", "dank", "barka", "ngiyabonga", "tapadh leat", "chokrane murakoze", "tenki", "manana", "asante", "obrigada", "hвала", "mamiun", "trugarez", "merce", "merci", "xiexie", "감사합니다", "তোমাকে ধন্যবাদ", "merci", "arigatō", "takk", "dank je", "teşekkür ederim", "ngiyabonga", "tapadh leat", "chokrane murakoze", "tenki", "manana", "asante", "obrigada", "hвала", "mamiun", "trugarez", "merce", "merci", "xiexie", "감사합니다", "তোমাকে ধন্যবাদ", "merci", "arigatō", "takk", "dank je", "teşekkür ederim", "ngiyabonga", "tapadh leat", "chokrane murakoze", "tenki", "manana", "asante", "obrigada", "hвала", "mamiun", "trugarez", "merce", "merci", "xiexie", "감사합니다", "তোমাকে ধন্যবাদ".