

Performance Audit Report

Management of Intellectual Property

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LEGEND

Throughout the report the following conventions are used to highlight:



Minimum standards



Better practices

Executive Summary

The Audit

NSW Government policy states that the management of information and the use of new and emerging technologies are cornerstones of the Government's plans for reforming public sector services, administration and obligations.

Intellectual Property refers to legal rights that protect both creative effort and economic investment in creative effort.

In the public sector, Intellectual Property exists in most works containing information and in many innovations and technologies.

Against this background, fourteen public sector agencies were audited to see how well they manage Intellectual Property (IP).

Audit Opinion

The Audit Office is of the opinion that the good management of IP by the public sector depends on an adequate and coordinated framework to guide agencies in developing their own policies.

The current framework for IP is incomplete because it does not help agencies to:

- develop policy
- identify the IP assets that need to be managed
- integrate management of IP with agency objectives
- access expert help when they need it
- encourage staff to be innovative and so create and promote the uptake of IP
- monitor and defend IP against unauthorised use.

It is also important to improve coordination between agencies responsible for developing whole-of-government policy in regard to IP.

The lack of an integrated framework and co-ordinated support for agencies means that the management of IP has varied across the public sector and in general is not adequate.

Findings

The audit found that:

- some agencies do not understand what IP is and are not aware of IP assets under their control
- most agencies do not maintain a register of their IP assets
- many agencies do not have adequate policies and systems to manage IP
- because of lack of expertise in the area, agencies tend to be overly cautious towards IP
- few agencies recognise or reward innovation leading to IP
- most agencies have not allocated adequate resources for the management of IP.

While agencies usually allocate IP rights when making contracts, they need to do more to ensure the ongoing management of their assets. As is:

- few agencies use risk management techniques in regard to IP. Such an approach would assist agencies to decide whether to own, or obtain a licence for, IP
- many agencies do not require a staff member, a contractor, or consultant to tell the agency when the work he or she is doing may lead to the creation of IP. As a result an agency may not know about its IP assets
- many agencies do have not adequate systems to know whether their IP is being used without permission
- many agencies do not have adequate systems to enforce IP rights against infringement.

The audit also found that most agencies do not manage the uptake of IP adequately, in particular:

- some agencies are not sure who owns IP developed through collaboration with the private sector and the Commonwealth
- a number of agencies are uncertain as to whether they are allowed to commercialise or deal in IP
- there is confusion among agencies about who should approve the disposal or transfer of IP to parties external to the agency.

The way to improve

The Government has introduced several initiatives to improve the management of information and innovation, for example:

- the Department of Information Technology and Management (DITM) has been established to encourage the best use of information and technology for the benefit of the people of NSW
- the Premier's Department has published material to assist agencies manage IP in a variety of contexts including infrastructure projects, consultancies and corporatisation
- the Department of Public Works and Services (DPWS) has developed standard contract conditions to establish IP rights in procurement and consultancy arrangements.

The Audit Office welcomes these initiatives and recommends that they be built on.

The Audit Office considers that in particular there is a need for:

- Government to improve the framework for IP management across the public sector
- agencies to develop and implement local policies and procedures.

These issues are developed in the audit recommendations.

To help agencies manage IP better, the Audit Office developed a **Better Practice Guide**, which is published as a separate document.

Recommendations

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
- find out why certain agencies have limited awareness of existing government policy
- make each CEO accountable for the management of all IP assets.

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.

Response from the Premier's Department

Thank you for the opportunity to respond to the final draft performance audit report Management of Intellectual Property.

I was pleased to note that the Report acknowledges a number of significant whole of government policies and guidelines that have been developed to assist agencies to address different aspects of Intellectual Property.

I support, in principle, the audit opinion that improved policies, guidelines and models would benefit the New South Wales public sector, providing consistency and clarity. Some of these documents referred to in the Report are currently under review and other related policies such as the Department of Information Technology Management Pricing and Access Policy and copyright guidelines are in development.

I have noted the recommendation proposing the development of a coordinated whole of government framework and I will give consideration to establishing an inter-agency working group to undertake this work in the future.

(Signed)

*C Gellatly
Director-General*

Dated: 13 September 2001

1 Background

1.1 What is Intellectual Property?

Intellectual Property (IP) is part of the larger concepts of knowledge, innovation and intellectual capital.

IP is the legally recognised outcome of creative effort and economic investment in creative effort. The law governing IP is extensive and complex.

The law protects creative effort by providing an exclusive right of use.

In general, the law gives the creator of a work an exclusive right to own IP in the work for a fixed period of time. The rationale for this legal protection is to encourage and promote creative effort.

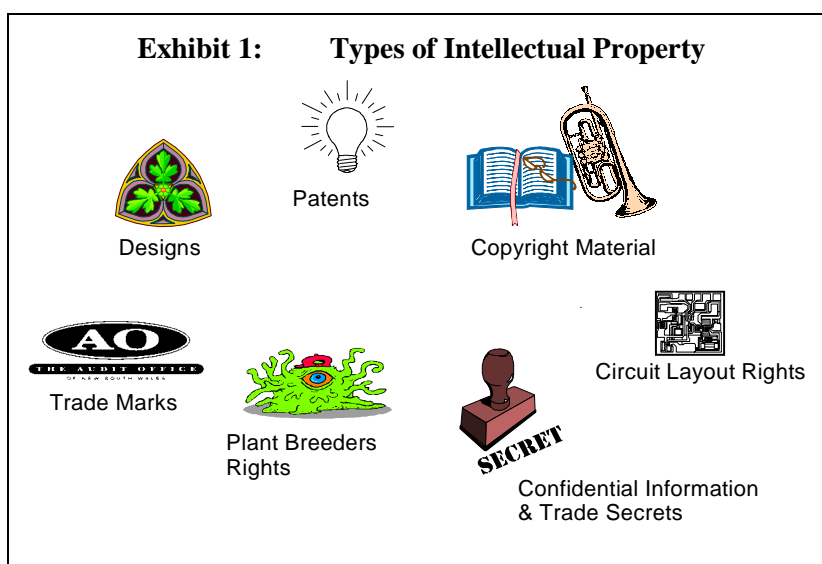
IP rights are rights to:

- recognition and acknowledgment
- the protection of intellectual activity or the protection of ideas and information that have been created
- control distribution of such activity, ideas or information
- receive benefits from such activities, ideas or information by way of exploitation and commercialisation.

Like other property, IP can be bought, sold, rented (licensed), lost or stolen.

The more important types of intellectual property are shown in Exhibit 1 below.¹

There are several types of IP that differ in significant ways.



¹ Confidential information is not strictly 'property', as it only comprises contractual rights in respect of disclosure and non-disclosure. However, these rights approximate how the law deals with property. Confidentiality is an essential strategy for protecting emergent IP before the registration of patents, etc.

1.2 Characteristics of IP

IP has a number of characteristics that make it difficult and complex to manage.

IP rights can be divided ...

Firstly, IP rights are more divisible than many other forms of property. Licensing, for example, may be arranged to allow many parties to use a particular IP asset in different ways at the same time.

A licence may restrict use to a particular location, period of time, industry, application, non-commercial purpose or number of copies.

... and are governed by a number of complex laws.

Secondly, different laws apply to different forms of IP. Consequently, the types of IP depicted in Exhibit 1 differ in a number of ways including:

- the way in which IP is established. Some rights are automatic (like copyright). Others arise only after a rigorous and expensive process of registration (like patents)
- the rights the law provides and how long those rights last
- what remedies the rights-holder has if someone infringes IP.

More than one form of IP may exist in a single innovation.

Thirdly, one innovation may give rise to a number of IP rights. The creator of computer software has several rights in that innovation, for example:

- copyright will protect the software and manuals
- confidentiality about how the software works will protect the commercial value of the asset, particularly during the development stage
- patents may be registered to protect the software
- trademarks may protect the name used to market the product.

The pace of technological change is being accompanied by a rapid development of IP rights.

Fourthly, the pace of innovation in computers, electronics, telecommunications and service is very fast.

Technological change and the tension between the need to protect innovation and the need to encourage competition is driving the rapid development of IP law. This process of change makes the management of IP a more complex task.

For example, there were 8 significant changes in legislation and administration of IP law between 1 March and 24 May 2001 (this excludes changes in case law, design rights and confidential information).

International developments indicate that bigger, faster changes lie ahead.

The growing influence of international IP law on Australia is quickening the pace of change. The last few years have seen the North American expansion of copyright then patent to cover software;² the patenting of life-forms, human genes and 'ways of doing business'; and the extension of copyright terms limits.

In addition, electronic publishers of IP are relying more upon direct contractual arrangements (and less upon copyright) to extend their power relative to the would-be reader.³ Concern is mounting that the volume and quality of information and innovation in the public domain is under threat.⁴

1.3 Management of IP in the Public Sector

Traditionally, agencies have managed IP in the context of Research and Development ...

The public sector is a major contributor to R&D in Australia.

In 1996-97 governments in Australia spent \$2090 million on R&D (or nearly a quarter of all expenditure on R&D). This figure does not include the Higher Education sector.

The state and territory agricultural departments (of which NSW Agriculture is the largest) undertake the bulk of R&D in agricultural science in Australia. State agencies also undertake and fund significant R&D in the medical, health and natural sciences.⁵ These R&D activities lead to the creation of IP including plant varieties, patents, circuit layouts, trade marks, confidential information and copyright.

² Australian law has already replicated the extension of IP to cover elements of software.

³ Soon, J., *The Evolution of Private IP Regimes in Cyberspace*. in Policy Summer 1999/2000 p.35-39.

⁴ Clarke, R., *Freedom of Information? The Internet as Harbinger of the New Dark Ages*. <http://firstmonday.org>; Boyle, J., *A Politics of Intellectual Property: Environmentalism for the Net?* <http://www.law.duke.edu/boylesite>.

⁵ Australian Bureau of Statistics *Catalogue Number 8112.0*.

**... and Crown
Copyright ...**

The business of government involves the extensive collection, storage, analysis, retrieval and publication of information. These activities involve the creation of documents, drawings, computer programs, spreadsheets, reports and brochures. The Copyright Act says that the Crown owns copyright in any works made "*under the direction and control*" of a government agency.

**... and have given little
emphasis to ...**

In the past:

**...a coordinated
approach towards IP
management ...**

- 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
- IP created through public R&D and the educational and health sectors has generally been made freely available for the public benefit
- government's role in creating and expanding IP and knowledge in the public domain and an emphasis on the prompt publication of research has worked against making a profit from IP
- the management of crown copyright has emphasised issues of control, access and accuracy of information.

**... and protecting or
exploiting IP.**

**In today's world
knowledge-based assets
are increasingly
important ...**

Advances in communications and technology are significantly increasing the importance of IP.

More and more value resides in intellectual capital and IP assets. Over half of the wealth generated in developed economies is now knowledge-based.⁶ These changes are having far reaching implications for the way organisations operate and deliver services.

⁶ OECD. 1999. *Science, Technology and Industry Scorecard*.

... to organisational performance ...

Public sector agencies have to manage IP in ways that are different from the more familiar crown copyright and R&D. The new contexts include:

... in new contexts.

- IP required for agency activities (for example, software). The majority of this IP is obtained from external parties through purchase or licence agreements
- IP developed by the agency during routine operations. Such innovation is often gradual and unplanned
- data collections and registers made valuable by tools that can retrieve and manipulate volumes of information. The new uses of such assets raise issues of privacy, confidentiality, access and pricing.

Public sector reform is also affecting how resources are used to deliver services.

The significant reforms of the public sector in NSW in the past two decades have changed the way agencies work. For example:

- initiatives like outsourcing, corporatisation, privatisation and user-pays have changed how agencies deliver services and acquire and use assets (including IP)
- agencies are under pressure to give greater access to "public information". This may conflict with other requirements including the need to respect privacy or to protect commercially valuable information
- *The National Competition Policy* affects the delivery and price of publicly provided goods and services, including information and other IP.

1.4 Factors Affecting the Management of IP

Government reform and developments in technology and the law combine to make the management of IP a complex task.

Agencies have to manage different, sometimes competing, IP issues.

Agencies have to manage many, sometimes competing objectives, at once:

- run efficiently and improve services
- add to and develop existing IP assets
- add to the knowledge and IP in the public domain
- protect and defend IP
- ensure that government-held information is accurate
- stimulate economic growth within the state
- increase revenue to offset reductions in public spending
- promote the wider use of publicly developed IP.

Agencies need to develop localised policies and procedures to address the particular issues which they face.

No one set of IP management practices will serve all agencies. Appendix 4 illustrates the diversity of IP management across the public sector.

Different agencies, and units within agencies, have to manage different IP issues and need localised policies.

The factors that influence how IP is managed include:

- the nature of the IP activity and the type of IP managed
- the extent to which an agency relies on revenues generated by the sale of IP
- whether the agency owns IP in its own right, acts as a custodian of the IP on behalf of the Crown⁷, or licences the use of IP from another party
- the mandate of the agency to undertake IP activities
- whether IP is developed or procured as part of a planned activity or emerges incidentally as part of routine operations.

⁷ Most agencies do not own property in their own right. They have a duty to actively control and manage assets for the good of all. A minority of agencies are empowered by legislation to own assets.

2 Whole-of-government Perspective

2.1 Introduction

This section of the report examines the arrangements in place across the government to guide agencies in managing IP.

Recent studies, culminating in the reports of the National Innovation Summit (NIS) have identified that innovation and IP are not well managed in Australia.

Innovation is not well managed in Australia ...

In comparison with other OECD countries, Australia is a poor performer in developing and adopting innovation. The problem is one for the private sector and for national, state and local governments.⁸

This failing is caused by many factors but low private sector R&D funding is the most significant.

... in part, because of systemic problems in the way that governments handle IP.

Nevertheless there is growing recognition that there are systemic problems in the way that governments in Australia manage IP.⁹ For example, the public sector tends to:

- lack the skills and resources to create and defend IP
- have reporting and management processes that act as a disincentive to innovation
- be overly cautious about new ideas
- neglect the uptake of IP
- lack incentives to encourage innovation
- find it difficult to work easily with the private sector.

2.2 Existing Policy Framework



A government-wide framework should support IP management ...

An effective government-wide framework provides direction and supports the establishment of agency arrangements, policies and procedures for managing IP.

The Public Finance and Audit Act 1983 and the Public Sector Management Act 1988 impose obligations on agencies to control and manage public property and resources.

⁸ National Innovation Summit. 1999. *Working Group on Institutional Structures and Interfaces Paper*.

⁹ National Innovation Summit. 1999. *Working Group on Managing IP Framework Paper*.

... but there are no specific provisions for agencies to manage IP or develop IP policies.

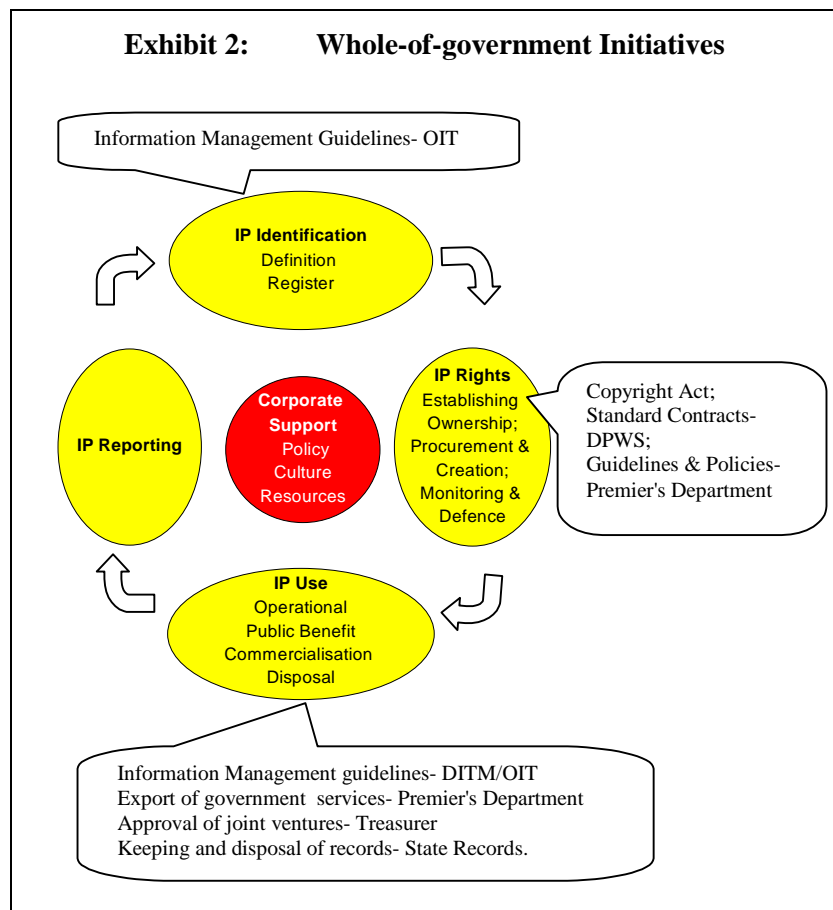
These Acts make no specific provision for IP assets and there are no requirements for agencies to develop corporate policies for the management of IP.¹⁰

A number of agencies have undertaken whole-of-government initiatives for specific aspects of IP management.

However, some initiatives have been taken in respect of ...

As depicted in Exhibit 2, the most significant of these initiatives relate to IP rights, IP use and information management.

A more comprehensive list of whole-of-government initiatives can be found in Appendix 3 at page 72.



¹⁰ Treasury Direction 460.4 does require authorities to keep a special record of specified assets, including scientific apparatus, books and works of art. Some of these items will constitute IP.

... establishing the ownership of IP assets,

The following frameworks exist to establish ownership of IP rights:

- the Premier's Department has issued guidelines and memorandum in regard to aspects of IP rights including the use of consultants, SES conduct, corporatisation and infrastructure projects
- the Department of Public Works and Services (DPWS) has issued standard conditions for the allocation of IP rights in many contracts.

... the use, disposal and uptake of IP ...

The most significant government wide initiatives that effect the use, uptake and disposal of IP are:

- the Government's policy for Export of the Skills and Expertise of NSW Public Sector Agencies (in *Premier's Memorandum No. 93-31*)
- the Government Services Export Unit (GSEU) that assists NSW agencies to export consultancy services
- policies and procedures developed by the State Records Authority for the creation, management, and use of state records
- procedures for agencies to obtain the Treasurer's approval before entering joint ventures with external parties.

... and the management of government-held information.

In 1997 the Government released the *Information Management & Technology Blueprint* for NSW.

The Blueprint provided an integrated approach for the planning, management and use of information management and technology. The management of information overlaps significantly with IP management.

Components of the Blueprint include:

- strategies for "making the vision work"
- executive support and coordination in the form of the *Government Information Management Board* (GIMB) with senior representation from lead agencies¹¹
- frameworks for implementing the strategies.

¹¹ The GIMB operated until September 1999 when it was replaced by *CEOs' Standing Committee on Information and Communications Technology and Management*. That Committee in turn was replaced in July 2001 by the *CEO's e-Government Committee*.

DITM was established to deliver whole-of-government strategies for information management.

In 1999 the Department of Information Technology and Management (DITM) was established to deliver whole-of-government strategies, policies and projects for information management, information technology, telecommunications, land titling and valuing in NSW.

One of DITM's key objectives is to ensure the public sector makes the most of information and technology for the benefit of the people of NSW.

The Office of Information Technology (OIT), a unit of DITM, is responsible for implementing a coordinated and consistent approach to systems development and the use of information technology and telecommunication across government.

The adequacy of whole-of-government frameworks is a key factor in the management of IP by agencies.

The existing initiatives are limited in their coverage.

Existing frameworks are largely confined to policies and guidelines about:

- establishing IP rights
- limited aspects of information management
- the export of government expertise
- the disposal of state records.

The shortcomings in existing arrangements are discussed below.

The current whole-of-government arrangements do not adequately help agencies to develop and implement good policies for the management of IP. In particular there is not adequate assistance across government to:

- help agencies manage IP
- encourage innovation and the uptake of IP
- identify and report on IP assets
- monitor and defend IP against unauthorised use.

There is limited commercial, legal and administrative expertise to assist agencies manage IP.

DITM and the cross-agency committees have had a technological focus ...

DITM and the succession of executive bodies¹² established to coordinate the implementation of the Government's information policy have:

- tended to focus on the technological aspect of information management and technology (IM&T) and information and communications technology (ICT)
- been less concerned with broader issues relating to the use and management of information and innovation.

Approved information management (IM) policy is limited to guidelines on:

- IM framework
- IM audit
- IM classification
- IM inventory.

... and there are gaps in the existing framework ...

Additional information management guidelines were planned for in the 1997 framework but have yet to be issued. These include guidelines for:

- custodianship
- licensing
- quality
- copyright
- privacy
- liability

... but DITM is taking action to address these problems.

DITM (including OIT) is broadening its focus beyond technological issues. For example:

- DITM is currently consulting with agencies to finalise Guidelines on the Access and Pricing of Government-Held Information
- OIT is working with agencies to extend the role and expertise of the Chief Information Officer to address broader issues of information management¹³
- OIT has some programs to assist agencies to develop inventories and registers of information resources including the Service NSW portal
- OIT advises that it is developing guidelines to address gaps in the existing framework.

¹² Government Information Management Board (from June 1997); CEOs' Standing Committee on Information and Communications Technology and Management (from September 1999); CEO's e-Government Committee (from July 2001).

¹³ OIT. 2000. *Unpublished presentation to the Chief Information Forum 16 June 2000*

Better coordination of government initiatives would provide clearer guidance to agencies seeking to manage IP.

The existing whole-of-government initiatives are not adequately integrated. The absence of clear arrangements makes the effective management of IP more difficult and contributes to the limited uptake of public sector innovation.

The majority of managers interviewed during the audit indicated a belief that the whole-of-government systems are fragmented and provide limited direction or guidance.

Exhibit 3: Dealing in IP - An Example of a Gap In the Framework

The management of stand-alone IP transactions is important because many agencies have arranged for contractors to create software. The contracts typically make sure that the IP belongs to the government.

Some time later, the IP is often found to have a wider commercial potential and the developer proposes to commercialise the software. Agencies face a number of options: selling the IP rights; trading the rights for another benefit; or entering a licensing agreement.

The current guidelines do not adequately cover the above situation:

- the Premier's *Memorandum for the Export of Skills and Expertise of NSW Public Sector Agencies* is not directly applicable to domestic commercialisation
- the *Government Information Technology Conditions* promulgated by DPWS do not apply to stand-alone IP transactions
- there is disagreement amongst agencies as to whether the approval of the Crown Solicitor, the Attorney General or the Treasurer is required before agreements to exploit the IP can be entered into.

The implementation of whole-of-government initiatives has been limited ...

Some whole-of-government initiatives, particularly those undertaken by smaller agencies, have been limited by the lack of sponsorship and clear support from key agencies.

... with some agencies being unaware of requirements.

Many agencies are unaware of the policies, guidelines and even statutory provisions that relate to the uptake of IP. For example:

- nine of the fourteen agencies were not aware that legislation requires the approval of the State Records Authority before records may be disposed of
- agencies were generally unaware of the implications of changes to the Public Authorities (Financial Arrangements) Act on arrangements to license agency IP to other parties (see Chapter 6)
- some agencies are unaware of the GSEU
- a Chief Information Officer has been appointed in only 43% of agencies and in many cases the position has been subsumed in the role of the Chief Technology Officer.¹⁴

2.3 Models of Better Practice are Available



The management of publicly owned IP is managed in a variety of ways in other places and organisations. An outline of some better practices is provided in Appendix 6.

¹⁴ OIT. 2000. *Unpublished presentation to the Chief Information Officers Forum 16 June 2000*

2.4 Conclusion

Agencies would benefit from an improved government framework for managing IP.

IP is not adequately managed by the NSW public sector. An integrated whole-of-government framework is likely to help agencies improve the management of IP.

It is important that the framework:

- establish a cross-agency task force to champion the implementation of the IP policy framework
- integrate IP management with other management and whole-of-government policies including risk, information, procurement and human resources management
- improve coordination among key agencies responsible for developing an integrated approach to IP
- establish accountability for the development of whole-of-government guidelines to assist agencies manage IP
- provide the public sector with a "model IP policy" or IP guidelines to support the management of IP by agencies
- clarify the mandate of agencies to commercialise IP
- require each CEO to establish appropriate accountability arrangements for the management of IP
- require each agency to develop policies to manage IP in accordance with the agency's major functions
- require agencies to maintain a register of IP assets, and where appropriate, to account for those assets
- ensure that legal and commercial IP expertise is readily available to help agencies to manage IP
- establish systems to foster and encourage innovation across the public sector.

The rest of the report explores IP management at the agency level

The remainder of this report (Chapters 3 – 7) examines the following aspects of IP management of fourteen agencies in light of the existing whole-of-government framework:

- corporate support
- IP identification
- IP rights
- IP use and uptake
- IP reporting.

3 Corporate Support for IP Management

3.1 Introduction

The executive is responsible for the management of IP.

The executive of an agency needs to ensure that IP is managed so that:

- IP is integrated with the objectives and functions of the agency
- the corporate environment and structure support IP.

The executive can help IP to flourish by:

- having adequate IP policies which are both communicated to staff and implemented
- providing sufficient resources to manage IP
- encouraging innovation
- informing staff about significant aspects IP.

3.2 Corporate Policy



Each agency should have appropriate IP policies ...

Each agency has appropriate policies and procedures to manage its IP. The policies should:

- *be documented*
- *identify who is accountable for implementation*
- *contain a process of periodic review*
- *be communicated to staff*
- *be integrated with other corporate policies and objectives.*

... but many agencies do not.

As depicted in Exhibit 4, eight of fourteen agencies surveyed do not have an IP policy.

Of six agencies that say they have a policy, three advised that their 'policy' is neither formal nor comprehensive.

There is no government-wide requirement for agencies to establish policy for the management of IP and this is likely to be a factor in the above result.

| Exhibit 4: Corporate Policy | | | | | | | | | | | | | | |
|---|----------|---|---|----|----|---|---|---|---|---|----|----|----|---|
| Question | Agencies | | | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| Does your agency have a policy governing Intellectual Property? | X | X | X | X | √ | X | X | √ | X | X | √ | √ | √ | √ |
| ▪ does it apply to all agency activity and functions? | | | | | √ | | | √ | | | √ | √ | √ | X |
| ▪ is it documented? | | | | | X | | | ? | | | √ | √ | √ | X |
| ▪ does it identify who is accountable for implementation? | | | | | √ | | | √ | | | √ | √ | √ | √ |
| ▪ does it contain review timeframes and review mechanisms? | | | | | X | | | √ | | | X | X | √ | X |
| ▪ when was it last reviewed and updated? | | | | | 96 | | | ? | | | 00 | 96 | 99 | ? |
| Are the roles and responsibilities for managing IP identified and communicated within your agency? | X | X | X | √ | √ | X | X | √ | X | √ | √ | X | √ | √ |
| Is the management of IP integrated within your agency's overall management and risk management systems? | X | X | X | na | √ | √ | X | √ | √ | √ | X | X | √ | X |



Leading agencies develop IP policies appropriate to their needs and environment.

Better practice organisations have a specific IP policy. An adequate policy facilitates the management of IP.

Potential benefits include increased efficiency, minimised risk and perhaps additional revenue.

In developing an IP policy an agency needs to:

- have regard to its core functions
- identify all IP that it is likely to develop, use or manage
- allocate enough resources to allow the policy to be effective
- consider the adequacy of existing systems, policies and procedures.

3.3 Resources Allocated for IP Management



Agencies need to allocate appropriate resources to the management of IP.

The management of IP needs to be resourced ...

The management of IP is a complex and expensive task that requires the timely application of specialised resources and skills. The cost, for example, of establishing and managing an Australian patent is between \$150,000 and \$300,000 over the life of an asset.¹⁵

Studies in Canada recommend that at least 5% of the budget for the development of IP should be set aside for the management of the IP.¹⁶ These funds should be applied to specialist resources to protect, monitor, defend and commercialise IP.

... but in many agencies resources have not been allocated ...

The majority of agencies surveyed absorb IP management within other management functions.

Only three agencies indicated that specific resources are used to manage IP. Only one of these agencies was able to account separately for resources devoted to IP management.

... and access to expertise ...

The majority of survey responses indicated that agencies have access to legal and commercial expertise for the management of IP. However, many agencies do not seek specialist advice when dealing with potentially complex IP issues.

A number of managers also indicated during interviews that the legal and commercial expertise currently available is limited.

... and training is limited.

Most agencies do not have arrangements in place to routinely inform staff about significant IP issues.

¹⁵ Prime Minister's Science, Engineering and Innovation Council. (1999). *Innovation in Medical Biotechnology*. p10.

¹⁶ Department of Science and Technology. 1997 *Federal Partners in Technology Transfer Report*.

| Exhibit 5: Training and Communication | | | | | | | | | | | | | | |
|---|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Question | Agencies | | | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| Does your agency provide training to staff in relation to Intellectual Property? | X | X | X | X | X | X | X | √ | X | √ | X | √ | √ | X |
| Does your agency have mechanisms to ensure that staff are informed of legal and policy developments relating to IP? | X | X | X | X | √ | X | X | √ | X | √ | X | X | √ | √ |



However, some agencies have implemented better practices.

Better practice organisations provide professional development and guidance to equip their staff to manage IP.

Exhibit 6: Guidelines, Training and Expertise

The Department of Public Works and Services (DPWS) has issued guidelines to assist its officers:

- identify IP which has been created by DPWS as well as IP created by consultants and contractors engaged by DPWS
- understand the procedures to be followed to ensure that DPWS owns and protects all of its IP
- identify and maximise commercial applications of IP owned by DPWS.

The guidelines require staff to refer IP matters as they arise to in-house managers with IP expertise.

DPWS maintains a panel of legal experts to provide timely advice on legal developments. The advice, updates and briefings provided by these experts are communicated to DPWS staff.

3.4 Accountability

There are appropriate accountability arrangements in place to manage IP.



There should be clear accountability for the management of IP ...

Corporate policy needs to determine who is responsible for the management of IP, where and how IP is to be managed.

Management of IP from a central, corporate group can promote the growth of competencies and expertise. However, agencies also need to consider issues such as the need to ensure that:

- rights to IP are situated in appropriate business centres before undertaking corporatisation or restructuring
- management of IP is not divorced from the users and creators of IP in large heterogenous agencies.

The accountable officer needs to ensure that:

- IP policy is implemented and reviewed as required
- IP is identified, monitored, maintained and defended
- licence fees are paid and collected and transactions involving IP are managed to further the agency's objectives
- the costs and revenues associated with IP activities are appropriately managed.

... but half of the agencies haven't identified who is responsible.

Half of the agencies surveyed indicated that the roles and responsibilities for managing IP have not been identified and communicated within the agencies.

The absence of appropriate costing and other information can impede the way in which IP is managed. For example, poor information systems may limit the ability of an agency to develop:

- cost-effective systems for identifying and registering IP
- resource allocation and procurement systems
- pricing policy when considering the sale or licensing of IP to external parties.

3.5 Supporting Innovation



Agencies should support innovation ...

Agencies need to recognise, reward and encourage innovation.

Governments need to encourage innovation if societies are to be competitive in a globalised world.

The development of a corporate culture, which is receptive to innovation and learning, requires supportive human resource management.

... but most agencies do not encourage or reward innovation.

There are limited initiatives in the NSW public sector to encourage innovation. The majority of agencies surveyed do not reward innovation and the successful management of IP.

As illustrated by the following case studies:

- certain agencies demonstrate quite rigid and risk-averse cultures that discourage the development of IP
- other agencies have not addressed issues of transparency and probity
- however, some agencies have instituted better practices to promote innovation transparently and with probity.

Certain agencies are risk averse and discourage innovation ...

Exhibit 7: Being Overly Cautious

Joan, an employee of agency X approached her manager with a novel idea. The manager determined that X was not interested in the innovation and directed Joan not to expend agency resources on the idea.

Joan worked in her own time, raised funds, established a family company and within two years had developed a working prototype of the idea.

When agency X evaluated the prototype, it found that that there were strong economic, environmental and safety reasons to adopt the innovative idea.

However, these considerations were outweighed by X's concerns about probity. Agency X believed that there would be a perceived conflict of interest if it purchased the technology from Joan or from a company with which Joan was associated.

Ensuring a perception of integrity and transparency was assessed to be more important than the opportunity lost by not taking up the innovation.

In this case the employee was particularly aggrieved because she had complied with established procedures by notifying her manager of the development of the IP.

Such outcomes discourage innovation.

... while other agencies allow staff to take control of agency assets.

Exhibit 8: Not Being Careful Enough

Agency Q developed a software package at a cost of \$160,000.

The IT Manager of Q was a key developer of the software.

Agency Q assigned the IP in the software to company R for no charge. Agency Q had neither valued the IP nor offered it to the public or other third parties.

The IT Manager of Q was, and continues to be, a director of R.

Agency Q justified the arrangement on the grounds that the agency benefits from:

- ongoing development of the IP that the agency was not able to undertake because of resource constraints
- upgrades of the system at no cost
- a share of any revenue generated if the company licenses or sells the system to other users.

Doubts as to the probity of the arrangement caused friction within the agency. A subsequent investigation led to the introduction of mechanisms to ensure greater transparency and accountability.



But some agencies do support innovation with open and accountable rewards.

Exhibit 9: Getting it Right: A Reward Culture

A unit of an agency created IP that was successfully licensed.

The agency reinvested the royalties in the originating unit, allowing it to upgrade its equipment and develop further innovations. This empowered the unit and enabled staff to achieve professional recognition and aided promotion.

The reward was provided within:

- a framework of accountability as the unit was required to justify its expanded programs and projects
- the mandate of the agency to develop and exploit new technologies for the sustainable development of NSW.

Other practices that have been implemented to ensure accountable rewards include:

- clear and well communicated codes of conduct and reward policies
- transparent reporting of information about rewards and the transfer of IP rights to staff and consultants¹⁷
- policies to manage IP (developed by staff, consultants, etc) which the agency does not wish to develop or exploit¹⁸
- inclusion of innovation as a key consideration for promotion and performance recognition (Canada).¹⁹

3.6 Conclusion

The executive of agencies need to do more in setting the environment and providing corporate support, including resources, for the management of IP in order to better achieve agency objectives.

In particular corporate support has not been adequate in areas of:

Leadership is needed to provide direction and corporate support for the management of IP.

- the development and implementation of policy governing IP
- the allocation of resources to manage IP
- accounting for resources
- keeping staff informed of IP issues
- recognising and rewarding innovation
- reporting on IP activity.

¹⁷ The Western Australian Treasurer's Directions require agencies to maintain a public register of rewards provided to staff.

¹⁸ Leading universities provide for informed and timely decisions to allocate IP which the university declines to use or exploit; see The Audit Office of NSW. 2000. *Academic's Paid Outside Work*.

¹⁹ Department of Science and Technology. Canada. 1997 *Federal Partners in Technology Transfer Report*.

4 Identification and Recording of IP

4.1 Developing an Awareness of IP



Agencies need to ensure that managers and staff are aware of IP.

Agencies need to be aware of IP ...

All fourteen agencies were asked to identify the type of IP assets owned or subject to their control.

A number of managers said that they were “*coming up to speed*” in determining what is a significant IP asset.

... and most are ...

The majority of agencies were, however, aware of at least some IP assets under their control. All of these agencies said that they managed copyright in some form. Agencies also owned, controlled or used other IP including confidential information, trade marks, patents, designs, circuit layout designs and plant breeders' rights.

... but a few don't know that they are responsible for significant IP assets.

Two agencies indicated they did not own or control any assets with a significant IP component. One agency even reported that it did not use IP belonging to other parties.

The annual reports of these two agencies show that they use substantial computer systems and produce publications. Such activities and products would normally indicate the existence of copyright and perhaps other forms of IP.

4.2 IP Needs to be Identified and Recorded



Each agency should routinely identify and record IP assets that it owns, controls or uses.

IP should be identified and recorded ...

The *Public Finance and Audit Act 1983* requires authorities to ensure that they have effective systems to provide accounting control of assets. The Act makes no specific provision for IP assets.²⁰

The Australian Accounting Standards Board has issued guidance on what assets should be recognised. Many intangible assets (including IP) fail to meet the requirements of having a probable future economic benefit and a value that can be reliably measured.²¹

²⁰ *Treasury Direction 460.4* does require authorities to keep a special record of specified assets, including scientific apparatus, books and works of art. Some of these items will constitute IP.

²¹ *Statement of Accounting Concepts 4*, 1995.

OIT's framework includes guidelines for the classification, audit and inventory of government-held information.

A recent Queensland study into public-sector IP found that the identification of IP can be relatively straightforward where IP is intentionally generated as part of a planned program such as R&D.²²

Much of the IP generated by the public sector is likely to be an incidental by-product of an agency's efforts to become more efficient and effective. This form of IP is more difficult to identify and may not always have a significant commercial, operational or strategic value to an agency.

The need to identify and record IP is different from the obligation to account for assets in the financial statements of the agency. IP regarded as 'valueless' can present significant risks and opportunities. The valuation of IP is discussed at page 64 in the context of IP management reporting.

... even in the absence of a general requirement to do so.

There is no general requirement on agencies to identify and record IP assets.

There is a concern that agencies do not have systems to identify IP. For example:

- most agencies do not record IP assets in financial statements. The agencies believe that the assets are either not significant or too difficult to value
- few agencies have policies, procedures or registers to support the identification and recording of IP (see Exhibit 10).

IP registers need to be kept up to date as the complexity of IP and short lifecycle of innovation are likely to erode the integrity of an IP register over time. Agencies would benefit from a risk management approach to provide assurance that their systems identify and record significant IP.

²² Steffens, P., et al *Capitalising on Intellect: Public-Sector Intellectual Property Management in Queensland*. IPAA (Qld) 2000.

| Exhibit 10: Identification of IP | | | | | | | | | | | | | | |
|--|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Question | Agencies | | | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| Does your agency have policies and procedures for identifying the IP that it owns or controls? If yes, | X | X | X | X | √ | X | X | √ | X | √ | X | √ | √ | X |
| ▪ does the policy define what constitutes IP? | | | | | √ | | | ? | | √ | | √ | √ | |
| ▪ does the policy specify who is responsible for identifying IP? | | | | | √ | | | ? | | √ | | √ | √ | |
| Has your agency conducted an audit or structured review to identify its IP assets? | X | X | X | X | X | X | X | ? | X | √ | X | X | √ | X |
| Does your agency have an IP register? | X | X | X | X | X | X | X | ? | X | √ | X | X | X | X |



Leading agencies assess their environment and develop policies for identifying and recording IP assets.

Better practice organisations develop policies to assist in identifying IP. These policies will take into account:

- what constitutes IP and how do we identify IP?
- who is responsible for identifying IP?
- what IP do we own?
- what IP have we leased?
- do we need to do a stock take of IP (owned and leased)?
- how do we decide what assets and licences to record in our IP Register?
- when should new IP be identified and recorded?
- what other information should be recorded in our IP Register?
- when and how will we review our policies and procedures for identifying and recording IP?

The considerations above need to consider issues of materiality, risk and strategic value. Agencies may find it useful to consider the contents of **Appendix 5** when establishing an IP Register.

4.3 Conclusion

Agencies need to know what IP assets they control.

In order to manage IP effectively the staff of an agency need to be aware of what exactly IP is. They should also know what IP assets are owned or controlled by the agency.

There is currently no requirement for public sector agencies to identify, and maintain a register of their IP assets. Generally IP is not recorded within the financial statements or accompanying notes.

5 Managing IP Rights

5.1 Introduction

This section examines the arrangements to establish, protect and defend the rights of the creator, the user and the funder of IP.

If these arrangements are not adequate an agency may be exposed to a number of risks including:

- the loss of valuable IP
- loss of strategic control over IP necessary for important agency work
- the loss of revenue
- liability for infringing IP owned by others.

5.2 IP and Business Planning

Agencies should address IP issues when business planning.

Usually an agency will need to use many IP assets to do its work. Therefore, the plans the agency has and the way it uses its money and staff should take account of IP issues.

Government policy²³ requires an agency making investments on behalf of the community to:

- make investments which are beneficial and are open to scrutiny
- examine carefully all the options, costs and risks involved
- refer to the DITM's guidelines on business case development and risk management.

The above guidelines do not explicitly refer to IP, although the OIT guideline *Acquisition of IM&T* requires agencies to have a "*clear understanding of IP issues*".

Agencies, when generating or acquiring IP, tend not to allocate resources for the management of IP.

The policies and procedures that exist at an agency level are largely based on existing and standard procurement, consultancy and employment conditions.



²³ Premier's Business Case Guidelines 2000.



Better practice organisations develop policies and practices to govern the creation or acquisition of IP in the course of business.

In creating or acquiring IP agencies need to consider the following:

- will it duplicate what is already there?
- will it distract the agency from its the real purpose (core objectives)?
- will it be worth the investment of time and staff?²⁴
- does the agency need to retain control of the IP?
- are there risks to existing assets?
- can the agency benefit commercially from the IP?
- will there be a flow on effect of more innovation, jobs and wealth for NSW from widespread adoption of the IP?

All this needs to be thought about before tenders or bids are invited or consultants engaged.

5.3 Establishing Ownership of IP

Agencies need to establish ownership of their IP.



Agencies establish ownership of IP using ...

The business of government involves extensive gathering, storing, analysing, retrieving and publishing of information.

All of these activities may give rise to copyright because original material is created in a variety of forms including documents, drawings, figures, computer programs, spreadsheets and reports.

... Crown Copyright ...

The *Copyright Act (Commonwealth) 1968* provides that the creator (or the employer of the creator) owns the copyright in the work.

This Act gives preferential treatment to government. Section 176 provides that the Crown owns the copyright in any works made "*under the direction and control of*" government.²⁵

²⁴ *Australian Bureau of Statistics Catalogue 8112.0* indicates that poor returns are made on that portion of IP investment that agencies report as Research and Development. In 1998-99 NSW agencies spent \$250m on R&D for an estimated return of less than \$5m.

²⁵ It should be noted that Federal Government is considering the recommendation of the Intellectual Property and Competitive Review Committee to remove the favourable treatment given to Crown copyright.

In addition, government policies advise that agencies explicitly address the issue of ownership of IP when engaging consultants, contractors and executives.

... and standard contract conditions issued by ...

The following central agencies have issued general conditions to be taken into account when developing or acquiring IP.

... DPWS

The Department of Public Works and Services (DPWS) coordinates the buying and leasing of capital works, goods and services across the public sector.

In carrying out this function, DPWS prepares standard contracts that contain a variety of conditions that provide for the allocation of IP rights.

The *Government Information Technology Conditions (GITC)*, for example, govern term agreements for IT contracts including hardware, software, consultancy and systems integration.

GITC provide for the ownership of both pre-existing IP and IP created during the contract. Generally IP rights in the contract material vest in the agency, while rights in tools, objects and methodologies vest in the contractor.

... and the Premier's Department.

The Premier's Department has released *Circular No. 2000-47* that deals with the Engagement and Use of Consultants. The associated guidelines and standard conditions define IP broadly and provide that new IP vests in the principal.

A list of other guidelines issued by the Premier's Department concerning IP are in Appendix 3.

However, agencies need to improve arrangements to ...

Whole-of-government frameworks exist to establish IP rights. The arrangements could, however, be improved.

Potential improvements fall under three areas:

- is the existing framework adequate and appropriate?
- has the framework been implemented in an adequate way?
- has the framework been driven by a risk management approach?

These are discussed below.

... integrate IP with other management activities,

The whole-of-government frameworks need to be better coordinated. For example:

- agencies receive little guidance on how to integrate policies relating to recordkeeping, copyright, access and pricing of information and patents
- there are gaps in existing arrangements. The standard short-term contract issued by DPWS for the supply of goods and services does not allocate IP rights. There are also no contract guidelines or standard procedures for stand-alone transactions in IP

... increase awareness of ...

- some agencies are not aware, or vaguely aware, of the policies and guidelines issued by the Government.

and implement policy ...

The systems and procedures to help put government policy into action are limited. For example:

- many agencies do not have procedures requiring personnel to notify a senior officer of work that may lead to the creation of IP. As a result an agency may not become aware of its IP rights
- only a minority of agencies have procedures to establish ownership of those forms of IP that require registration in order for a right to be created (eg patents).

... and address non-compliance.

Existing arrangements were sometimes not complied with. For example:

- certain private suppliers have entered into contracts with agencies that reserve IP rights to the suppliers. This is occurring even though the suppliers had made prior agreements with the State Contracts Control Board (SCCB) to transfer IP to the Crown. DPWS advises that it is working to prevent such breaches of SCCB contracts in the future
- many standard contracts provide that the IP rights of the Crown are not to be diminished by sub-contracting. However, many agencies do not have adequate systems to enforce IP rights over an extended chain of sub-contractors working for a contractor.

Agencies need arrangements to ensure that they are acquiring ...

An agency, when acquiring an IP asset, should obtain ownership or licensing rights consistent with the agency's objectives.

Existing contracts generally seek to secure ownership of IP rights by the agency wherever possible. This reasons for doing so are illustrated by the experience of the Victorian Police as described below.

Exhibit 11: The Dangers of Not Managing IP Rights²⁶

In 1992 Victoria Police entered into a software licence and development agreement which out-sourced a critical operational system. The cost of the licence to Victoria Police was \$2.2m.

In 1996 the Victorian Audit Office found that the arrangement had created significant risks for Victoria Police which:

- did not have ownership of the software which drove critical systems and which required ongoing investment for development and modification (\$50m by 1996)
- was prevented from commercially exploiting enhancements made by Victoria Police
- was prevented from reverse engineering and functionally cloning the software for other applications
- was locked into one external contractor for software support.

Victoria Police found that an attempt to terminate the contract posed serious consequences.

In responding to the audit, Victoria Police advised that they were not successful in an attempt to buy the software or alternatively to renegotiate the agreement.

There is, however, growing recognition that an over-emphasis on acquiring ownership instead of a licence to use IP also has risks.

Firstly, if an agency owns the IP, but lacks the will or means to actively manage it, the value of IP is likely to erode over time. This is particularly so where the pace of change is shortening the life cycle of new technology.

Any erosion of value represents an opportunity cost to the agency and a lost opportunity for private sector development in NSW.

Secondly, agency insistence on acquiring ownership of IP, as opposed to a licensing arrangement to use IP, may result in a premium being charged on the acquisition price.

²⁶ Victorian Auditor-General's Office. 1996. *Special Report 46 Law Enforcement Assistance Program*.



... the appropriate rights to IP.

Exhibit 12: License or Own?

Better practice organisations adopt a considered approach towards managing risk and opportunity when determining what IP rights to acquire during procurement, contracting and engaging consultants.

| License | Own |
|---|---|
| <ul style="list-style-type: none"> ▪ one-off, isolated or non-critical uses ▪ alternative solutions available ▪ low exit costs | <ul style="list-style-type: none"> ▪ on-going or critical uses ▪ is likely to be further developed and those enhancements will be required by the agency ▪ high exit costs |

5.4 Monitoring and Defending IP



Agencies need to protect their IP rights against unauthorised use ...

... but few agencies have systems in place to monitor and defend their IP assets.

Agencies need to monitor the infringement of IP rights and to act against those who infringe those rights.

Failure to act promptly in the case of an infringement of IP can increase the loss and limit the remedies available.

There is no coordinated framework across government to guide agencies in the monitoring and defence of IP.

Responses to the survey provide limited assurance that agencies have developed and implemented systems to manage the infringement of IP. This is indicated by the following:

- although the majority of agencies saw a need to monitor the unauthorised use of IP, only three agencies had monitoring systems in place
- three agencies had dedicated resources to manage IP. The other eleven agencies subsume IP management (including defence and monitoring of IP) into their general management functions.

Better practice organisations manage the risks and opportunities to develop cost effective procedures to:

- maintain a register of IP assets
- monitor IP. This can be done in-house or outsourced to organisations such as copyright collection agencies which monitor the unauthorised use of IP
- require that a specified, senior officer be informed of a possible infringement of IP
- specify how quickly a decision to act against an infringement must be made
- require any legal action to be funded properly.



5.5 Using IP Owned by Others



Agencies need to have arrangements in place to avoid infringing the IP rights of other parties.

The Crown does not own the majority of IP used by agencies. It is important, therefore, that agencies avoid infringing the ownership rights of others.

Under Commonwealth legislation, public authorities receive preferential treatment: when acting for the State, an agency can act in ways that would be an infringement if done by others.²⁷ Nevertheless the law will require an agency acting in such ways to compensate the owner of the IP.

Generally agencies respect the rights of other parties, but

The majority of agencies advised that they monitor their offices and staff for the unauthorised use of IP owned by other parties. This typically takes the form of checking computer systems for unlicensed software.

The Government also provides direction for the management of IP by agencies during tendering and expressions of interest for works and the provision of goods and services. Thirteen of the fourteen agencies surveyed had policies in place to manage the disclosure of IP to tenderers and the receipt of IP from tenderers (during the tender process).

There is no requirement for agencies to maintain a register of IP belonging to other parties.

The transfer of IP through commercialisation, corporatisation or privatisation is an emerging issue. In such circumstances an agency needs to be careful to respect the rights of other parties in underlying or pre-existing IP.

²⁷ Copyright Act part VII, Patents Act s 163-169 and Designs Act s40A



... there is room for improvement.

Better practice organisations minimise the risk of infringing the rights of other parties.²⁸ They:

- have codes of conduct and compliance agreements to ensure that staff are aware of their obligations to respect the IP owned by others
- maintain a register of IP that the agency is licensed to use
- monitor that the agency's compliance with licensing agreement
- conduct a trade name search when selecting a new name for a service or product to be provided by the agency
- conduct a patent search when implementing what is considered to be a new process or new product
- obtain copyright clearances from the owner of IP when that IP is to be developed or incorporated into new IP developed by or for the agency.

5.6 Collaborative Arrangements



Agencies manage IP and allocate IP rights when working with the Commonwealth and private organisations.

Collaborative arrangements are becoming more common

Agencies, in the pursuit of IP, are receiving increased funding from the Commonwealth and the private sector.

Six agencies reported access to such funding, although only three agencies actually received non-government funds since 1999.

but agencies need to do more to manage the IP issues that arise.

Certain agencies do use commercial and legal expertise in developing contracts with non-government parties when working collaboratively on IP.

Other agencies are uncertain of who owns the IP; that is the agency or the funding organisation or is it owned jointly.

²⁸ These recommendations have been developed from the Western Australian Government. 2000. *Intellectual Property Guidelines 3rd Edition*. page 33.



Many agencies fund other bodies to develop IP, but

An agency that funds others to develop IP needs to :

- *ensure the funded organisation can manage IP properly*
- *consider the opportunities to exploit IP for the benefit of NSW when determining the funding allocations.*

almost half do not adequately address IP management issues that arise.

Nine of the fourteen agencies surveyed fund the development of IP by universities and non-government research institutes and organisations.

Five of these agencies have arrangements that satisfy the minimum standard, while a further two agencies meet one aspect of the standard.



Agencies that administer the public funding of research should consider the national *Draft Guidelines for IP Management and Commercialisation for Health and Medical Research*.²⁹

5.7 Conclusion

The effective management of IP is essential if an organisation is to achieve its objectives.

Initiatives are being introduced to improve the management of IP rights ...

The Government has developed many documents that together create a framework for the management of IP. This can guide agencies to determine who owns IP assets as they are bought or created.

... and more can be done.

The framework needs, however, to be improved by:

- better coordination of what already exists
- integrating it with other management tools, especially risk management
- introducing systems to monitor and protect IP assets
- having centres of expertise to help agencies solve their IP problems
- streamlined arrangements to enable timely and transparent collaboration with other parties.

²⁹ National Health and Medical Research Council. 2000. Draft Guidelines for IP Management and Commercialisation for Health and Medical Research.

6 IP Uptake

6.1 Introduction

IP uptake refers to the:

The value of IP lies in its application ...

- commercialisation of IP through sale or licensing
- transfer of technology to the private, public and international sectors
- the use of publicly owned information by people and organisations external to the agency.

The effective management of the uptake of IP is important because:

- the more IP is used, the more valuable it becomes (this is in contrast to tangible assets that tend to be consumed with use and deteriorate over time)
- IP may lose value when it becomes outdated and fails to keep up with demands of users. If an agency is unable or unwilling to further develop an IP asset, it may be best to transfer ownership of the IP to the private sector
- an agency may be liable to parties that have suffered loss because they took up or relied on IP owned by an agency
- the State may benefit economically from IP assets in many ways.

... but Australian governments have a poor track record in encouraging the use of IP.

The National Innovation Summit 2000 noted that although Australian governments have made significant investments in IP and innovation, they have often been unable to capitalise on that investment.³⁰ This is attributed to:

- rigid and risk averse organisational structures and cultures that inhibit the adoption of innovation
- an under-investment in managing the uptake of IP
- a lack of incentives and recognition do not encourage innovation
- poor management of the interface between agencies and the private sector
- a lack of appropriate skills and resources for high technology business, product and service development, marketing and delivery
- a lack of streamlined and timely systems to make IP management decisions.

³⁰ National Innovation Summit. 1999. *Working Group on Managing IP Framework Paper*.

6.2 Whole-of-Government Arrangements

The NSW government has addressed aspects of IP uptake through ...

The whole-of-government initiatives for the uptake of IP are largely framed in the context of:

- the overseas export of government skills and expertise,
- the management of public sector information and
- state record keeping.

Competition policy is also applicable to business activity undertaken by agencies.

The Government's policy for the export of skills and expertise of NSW public sector agencies is contained in *Premier's Memorandum No. 93-31*.

... the policy for the export of skills and expertise,

The 1993 guideline states that:

the Government supports and encourages the efforts of NSW public sector agencies to pursue international market opportunities for their skills and expertise provided that these activities:

- do not result in the agency giving priority to an export project at the expense of an agency's domestic obligations;
- have demonstrable links with the agency's core function(s);
- are generally undertaken on the basis of supplying knowledge and expertise rather than undertaking construction activities or providing equity;
- operate on a fully commercial basis, with separate financial reporting; and
- are subject to appropriate levels of review, risk analysis and risk coverage with a view to minimising liability for the Government.

... the Government Services Export Unit

In 1998 the Government Services Export Unit (GSEU) was set up as part of the Department of State and Regional Development.

Most exports assisted by GSEU are linked to aid programs. They are done for reasons of national policy as well as for profit. The exports are consultancy services related to planning and capacity building of social and physical infrastructures.

Over the past three years the number of agencies exporting such services has grown from fourteen to thirty and the revenue earned has increased from \$14 million to over \$40 million.

With one staff member and a budget of \$200,000 the GSEU serves as an initial contact point between agencies and the world. The GSEU does not provide legal, commercial or management resources to agencies.

... and information management initiatives

Management of information is the other major area of IP uptake subject to whole-of-government initiatives.

The amount of information collected by public sector agencies is enormous but it has quite different purposes. The copyright in this material needs to be managed differently for each purpose.

Some information may have commercial value such as genealogical records and flood plain data. This is made available at a subsidised price for reasons of public policy.

Other information has no commercial value but the community relies on it. For example, the Department of Agriculture is responsible for the accuracy of bulletins dealing with herbicide use.

... coordinated by DITM.

The Department of Information Technology and Management (DITM) has a responsibility to ensure that the public sector makes the best of its use of information and technology for the benefit of the people of NSW. DITM:

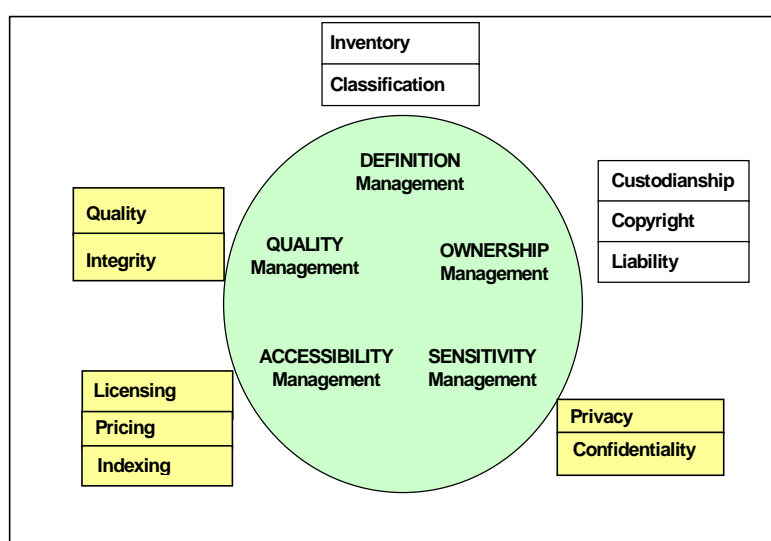
- ensures that all information is treated as a valuable resource
- supervises the information access and pricing policy for government information
- balances the desire of agencies to make the most of the commercial value of information, with the public's right to use the information.

The 1997 *Information Management Framework Guideline* planned that guidelines would be developed for each of the aspects of illustrated below.

Issues relating to definition and ownership management have been discussed above in Chapters Four and Five.

Exhibit 13: Aspects of Information Management

The Information Management Framework planned for guidelines including ...



... accessibility management

There has been a dramatic increase in the value of the large stocks of information held by the public sector.

Information banks such as Land and Property Information and Births, Deaths and Marriages registers have become revenue generators with significant commercial potential.

Agencies are required to balance the often competing objectives of making profit from such assets with:

- the public's right to use public information. The community has already paid to maintain the agency collecting the information
- the need to protect and preserve state records. The law and the public nature of records both limit the amount of profit. Agencies cannot sell the information in a way that would result in the government losing control of that information
- protecting privacy
- protecting the commercial value of information.

An agency, for example, could provide a commercial Internet provider with exclusive access and rights to distribute information electronically.

Such a strategy would promote the broader distribution of public information at low cost to consumers and create a revenue stream for the agency. It may not, however, be compatible with keeping control and integrity of information nor with privacy issues.

... and quality management.

Government and the people need to have confidence in the ability of agencies to manage the information under their control.

It is important therefore that agencies manage the quality, integrity and currency of the information. This is so even where the information is made freely available by agencies for reasons of the public good.

IP uptake is also governed by competition ...

The Competition Principles Agreement endorsed by the NSW Government in 1995 requires that agencies do not restrict competition unless it can be demonstrated that the benefits to the community as whole outweigh the costs. Section 3(1) states:

...Government businesses should not enjoy any net competitive advantage simply as a result of their public sector ownership...

In the context of IP management, agencies should ensure that competition is not adversely affected through the:

- abuse of any commercial advantage arising out of the agency's public ownership
- the transfer of IP to private firms in a way that restricts competition or allows private firms to form a monopoly.

and record-keeping policies.

The State Records Authority provides a further policy overlay. The *State Records Act 1998* established the authority as the Government's records and archives institution. The purpose of the State Records Authority is to:

ensure that the needs of people and government for records - as evidence of the business of the NSW public sector - are met now and in the future.

The Act defines state records broadly as records created by a designated agency as part of its functions. Generally a state record will also constitute government information, IP and copyright material.

Section 66 of the Act provides that the Authority's functions include the development and promotion of efficient systems for the creation, management, disposal and use of state records.

The Act also provides that agencies may not transfer or dispose of state records without the approval of the Authority. The Authority has released an extensive, multi-volume *Government Recordkeeping Manual*.

6.3 Arrangements for the Uptake of IP



Some agencies have sound arrangements to manage the uptake of IP

Agencies have policies and procedures to encourage and manage the uptake of new IP by appropriate end-users.

Certain agencies have sound arrangements in place to manage aspects of the uptake of IP. Some of these arrangements have been developed in the absence of an over-arching government policy.

A number of agencies have successfully commercialised IP, most frequently through licensing technologies to other public sectors. Two notable successes have been:

Exhibit 14: Successful Uptake I - Keyword AAA

The State Records Authority of NSW developed Keyword AAA as part of its core activities. Keyword AAA is a business function thesaurus that can be integrated with records management software packages to provide effective organisation, storage, access and retrieval of information.

Keyword AAA has attracted international attention. Since 1998, 64 licences have been sold for total revenue of \$290,000. The sales include whole-of-government licences purchased by the Commonwealth, the Northern Territory and Alberta.

Under the terms of the agreement, licensees must provide State Records with any modifications they make to Keyword AAA.

Exhibit 15: Successful Uptake II - SCATS

In the early 1990's the Roads and Traffic Authority (RTA) developed the Sydney Coordinated Adaptive Traffic Systems (SCATS), an internationally recognised urban traffic control system.

RTA continues to enhance and develop SCATS and has distributed it internationally through a licensing agreement with selected distributors. 45 authorities in 13 countries including China, Singapore, Ireland and Mexico use SCATS.

Other agencies have instituted good practices for ensuring the provision of quality information to the community. Such systems may not always be designated as an IP policy.



Exhibit 16: Publication Policy

NSW Agriculture has implemented a publication policy that provides a sensible and open risk management framework. This provides timely and accurate information while exercising a duty of care. It requires that:

- each publication is given a category based upon the level of risk. It is then managed in a suitable way for that risk category. For example, publications with significant information and wide distribution and or longer shelf life have more stringent requirements for approval and are subject to a predefined review or withdrawal date
- a copyright statement is in all publications
- authors must ensure that the publication does not breach confidentiality or ownership of IP

This publication policy applies to web as well as traditional publishing.

But many agencies do not manage IP uptake adequately due to ...

Despite these successes, the majority of agencies do not have policies or procedures in place to manage the uptake of IP and there is confusion about who should approve the disposal or transfer of IP to outsiders.

Exhibit 17: IP Uptake

| Question | Agencies | | | | | | | | | | | | | |
|--|----------|---|---|----|---|---|----|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| Does the agency have policies and procedures (including approvals etc) to sell, deal in, or dispose of IP? | √ | √ | X | X | X | X | X | √ | X | √ | X | X | √ | √ |
| Has the agency disposed, or transferred the ownership, of any of IP since July 1 1999? | X | X | X | na | X | X | X | ? | √ | X | X | X | √ | √ |
| Has the agency commercialised any IP since July 1 1999? | √ | √ | X | X | X | √ | X | √ | X | √ | √ | X | √ | X |
| ▪ if yes, has the Board/ CEO received and reviewed reports of the success or otherwise of the commercialisation? | ? | ? | | | | √ | | ? | | √ | X | | √ | |
| ▪ if yes, is an identified officer/position accountable for approving the commercialisation or transfer of IP? | | ? | | | | | | √ | | √ | | √ | | ? |
| Does the agency need the approval of other Government agencies to sell, "deal in" or dispose of IP? | √ | √ | √ | ? | √ | X | na | ? | X | X | X | X | X | √ |

... uncertainty about the mandate of agencies to undertake IP activities,

In 2000 the Auditor-General reported that:

... there are a number of agencies that are clearly acting outside their mandate and others are operating in unclear areas.³¹

Mandate is an issue for agencies as they manage IP, and in particular the uptake of IP.

An agency's mandate refers to the:

activities or operations which the agency is permitted to perform in order to be able to deliver the services for which it is established.³²

An agency has no legal authority to act outside of its mandate. For example, in the absence of specific provision, a statutory authority has no power to lawfully operate outside of the State.³³

Non-mandated activity presents risks to an agency including:

- interference with an agency's core operational activities
- allocation of scarce resources other than as intended by Parliament
- a lack of authority that may render contracts entered into by the agency void.

On the other hand, an agency with a vague or uncertain mandate may be unwilling to adopt innovation and maximise the benefits of IP.

... uncertainty about the need for external approvals

In the Auditor-General's Report to Parliament Volume 2 1999, the Auditor-General concluded that the Public Authorities Financial Arrangements Act (PAFA Act) was an ineffective control over joint ventures entered into by NSW government agencies.

In August 2000, the PAFA Act was amended to better manage the exposure of the State to liabilities arising from joint ventures. The Act now provides that an authority may neither enter into nor carry on a joint venture without the Treasurer's approval.

The Treasurer may approve of an authority entering into a joint venture subject to the terms and conditions under section 22L of the PAFA Act.

³¹ Auditor-General's Report to Parliament 2000 Volume Four p 17.

³² Auditor-General's Report to Parliament 2000 Volume Four p.11.

³³ Crown Solicitor's letter of 9 August 2000 contained in Auditor-General's Report to Parliament 2000 Volume Four p.69.

The terms of approval, for example, may be given for:

- a specified arrangement or class of arrangements
- one or more specified authorities
- or in respect of a specified class of authorities.

The Audit Office is of the opinion that, in respect of the uptake of IP, there is scope to improve the manner in which the amendments were communicated and implemented. This opinion is based upon the following factors.

Firstly, agencies have not appreciated that an arrangement to licence IP to the private sector is a "joint venture" under the PAFA Act and as such requires the Treasurer's approval.

This has arisen because the PAFA Act defines "joint venture" broadly. Although Treasury advised agencies of the changes to the Act, Treasury did not elaborate on the meaning of the term "joint venture".³⁴

Secondly, the current arrangements to implement the Act may not support the efficient decision-making required when operating in a commercial environment.

For example, the Treasurer wrote to the Minister for Agriculture on 7 June advising:

... it is a requirement that separate advice be sought from the Crown Solicitor's Office on the legal basis of each proposed joint venture prior to the matter being referred to Treasury for assessment and formal approval under the PAFA Act.

Each year NSW Agriculture enters into approximately 500 agreements that are captured by the amended Act. The Department uses these agreements to commercialise IP and to ensure that rural communities enjoy the benefits of improved technology.

NSW Agriculture has advised the Audit Office that:

- the commercialisation of IP will be disrupted ... with obvious consequences of inefficiency and lost income for rural communities.
- current NSW Treasury guidelines also impose substantial additional administrative costs
- the amendments to the PAFA Act are having a major detrimental impact on the effective management of IP, but NSW Agriculture is working with NSW Treasury and The Cabinet Office to reduce that impact.

³⁴ Treasury Circular 00/23 of 18 October 2000.

A number of other agencies have expressed similar concerns about the current procedural requirements to the Audit Office.

In response to these concerns Treasury is reviewing its procedures. It has advised the Audit Office, for example, that:

- agencies are only required to seek the advice of the Crown Solicitor in cases of uncertainty
- Treasury is investigating ways to simplify approvals for joint ventures, such as agencies being given approval for classes of arrangements.

...and gaps in the whole-of-government framework.

Gaps in the whole-of-government framework contribute to the absence of policy at the agency level. For example:

- domestic commercialisation of public IP is not covered by government guidelines or standard contracts
- approved guidelines have not yet been issued for copyright, custodianship, liability, pricing, privacy, confidentiality, licensing, indexing and quality of publicly held information. This is even though the 1997 Information Management Framework Guideline implied they would be (see Chapter Three).

Most agencies don't have a pricing and access policy ...

Less than half of the agencies surveyed have policies and procedures for the pricing and access of information.

... but DITM is taking action.

However, DITM has developed Draft Guidelines on the Access and Pricing of Government-Held Information. The draft has been issued to agencies for consultation.

The policies of many agencies don't address information quality or ...

According to the last OIT Information Management & Technology Census, 63% of agencies did not have strategies in place to address the quality and integrity of information.

... competition policy.

There does not appear to be any government wide guidance or direction to agencies on the application of competition policy to IP management.

Six of the agencies surveyed did not consider competition policy a significant factor in the management of IP. It is noteworthy that five of these agencies had transferred or commercialised IP assets since 30 June 1999.

Only two of the surveyed agencies have addressed competition policy in their IP policies and procedures.

The uptake of IP is also constrained by

... limited corporate support,

... lack of awareness,

... limited integration

... and an emphasis on managing ownership rather than the value of IP.

Other factors which limit the ability of agencies to manage the uptake of IP include:

- limited corporate support for IP management in terms of policy, resources and innovative culture (Chapter Three)
- limited awareness of IP issues and a lack of systems to identify and record IP (Chapter Four)
- lack of integration between the various frameworks that apply to aspects of IP management. These include record keeping information management, procurement, probity and competition requirements (Chapter Two and Three)
- an emphasis on establishing ownership of IP without considering how the value and ongoing development of the asset might be augmented (Chapter Five)
- limited systems to cost-effectively assess and manage the liability, risk and opportunity associated with the uptake of IP.

6.4 Other Jurisdictions

Other jurisdictions manage the uptake of IP in different ways.

Some states have established export corporations ...

Victoria and South Australia each established an export corporation with a statutory mandate to commercialise and market all public sector IP, leaving other public sector agencies free to concentrate on their core, domestic activities.

The NSW Public Accounts Committee (PAC) endorsed this approach in 1994. The recommendations were not implemented.

... while Western Australia has established a policy framework to support a decentralised approach.

In contrast, Western Australia has adopted a decentralised approach.³⁵ Agencies are responsible for the management of IP (including commercialisation) **and** are supported by:

- a cross-agency IP council to sponsor the necessary legislative and administrative change to provide agencies with the mandate and resources to commercialise IP
- an IP policy and resources to assist agencies develop and implement local policies and procedures. Extracts from the policy are contained in Exhibit 18.

³⁵ *Western Australian Government Intellectual Property Policy 2000*

Exhibit 18: Western Australia IP Commercialisation Policy

Western Australian agencies commercialising IP are to:

- commercialise for the benefit of WA but not to the detriment of core agency activities
- commercialise only as an ancillary activity
- assess value and risks before commercialising an IP asset
- employ third party with appropriate commercial expertise
- ensure that commercialisation does not detrimentally affect the operational value (to the agency) of the IP
- give preference to a WA or Australian commercial ‘partner’
- comply with the National Competition Policy
- ensure that revenues from commercialisation benefit the originating agency
- ensure that the commercialisation of IP achieves the best deal for WA and that it is done in an open, accountable and competitive manner.

North America governments seek to transfer IP to the private sector ...

The trend in North America is to rapidly deploy IP into the private sector so as to maximise the commercial exploitation of IP and to stimulate further innovation.

National Aeronautical and Space Administration, for example, licenses all inventions made under its control to private companies able to exploit the technology. Limitations on the licence protect the public interest.

... while reserving rights to protect the public interest.

The Canadian government promotes flexible collaboration with the private sector, while maintaining a degree of control over publicly held IP.³⁶ The Canadian guidelines provide that:

- an agency awarding an exclusive licence should reserve the right to use the IP for its own internal non-commercial purposes
- the continuance of the licence should be conditional upon the licensee achieving performance milestones. If the licensee fails to properly develop and exploit the IP, the agency can recover the IP
- licensees cannot assign rights third parties without the consent of the agency, which is obliged to use the IP to maximise the socio-economic well being of Canadians.

³⁶ Federal Partners in Technology Transfer Report. 1997. *Guiding Principles for the Management of Intellectual Property Issues*.

6.5 Conclusion

Arrangements to manage IP uptake are fragmented ...

and although work is being done by DITM and OIT ...

more is required.

The arrangements in place to manage the uptake of IP are fragmented and incomplete.

DITM and OIT are taking steps to address some of the issues identified in the uptake of IP. Further guidelines are being developed, in consultation with agencies, to assist agencies in developing and implementing IP management policy.

However, more needs to be done to improve the coordination and integration of the government frameworks for the uptake of IP. In particular:

- the whole-of-government framework should provide greater leadership and support for agencies
- information management frameworks needs to extend beyond technological solutions
- the mandate of agencies to commercialise IP needs to be clarified
- greater integration needs to occur between IP management and other management initiatives including risk management and information management
- systems for managing and approving the uptake of IP need to be streamlined to allow timely and informed decisions.

7 Reporting Systems

7.1 Reporting Systems



Most agencies do not have systems to report on IP assets.

Each agency reports on the management of IP assets that it owns or controls.

As illustrated in the following Figure most agencies do not report on and review the management of IP assets.

| Exhibit 19: Reporting Systems | | | | | | | | | | | | | | |
|--|----------|---|---|---|---|---|----|---|---|---|---|---|---|---|
| Question | Agencies | | | | | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N |
| Does the agency have arrangements to periodically report on IP? | X | X | X | X | √ | X | na | ? | X | X | X | X | √ | X |
| Does the agency report on the costs, outputs and revenues associated with particular IP assets and projects? | X | X | X | X | √ | √ | X | √ | X | √ | X | √ | √ | √ |
| Does the Board/CEO receive reports of the success or otherwise of the agency's IP activities? | X | X | X | X | √ | √ | X | ? | X | √ | X | √ | √ | √ |

7.2 Valuation Issues

Most agencies want to value IP ...

but their ability to do so is limited by the lack of guidance and expertise available.

The majority of agencies expressed a desire to value IP. This is especially so when the asset is to be commercialised, transferred, privatised or where the asset is generating significant income.

Agencies were concerned over the lack of guidance across the public sector in valuing assets and resolving related disputes.

Exhibit 20: Restructuring and IP

When agency P was reorganised into two separate entities, the ownership and value of its main operating software was left unresolved. For over three years significant management time was spent in trying to resolve the impasse. Substantial opportunity costs were incurred.

Exhibit 21: IP and Financial Statements

For over 3 years agency S has significantly understated its assets in its financial statements. It has not provided a realistic value for its main database, the operation of which is its core business and main source of revenue.

The cases of agencies P and S highlight the need for clear guidance on IP issues, particularly those of valuation and inter-agency disputes.

In 2000 the Premier's Department issued a *Corporatisation Manual*, the Checklist of which provides that "intellectual property needs to be identified and transferred". Compliance with this should prevent a recurrence of the problems experienced by agency P.

Limited policies and procedures also present agencies with problems of transparency and probity.

Exhibit 22: Dangers of Not Valuing IP to be Commercialised

On at least three occasions agency T has sold or transferred IP through private arrangements. The assets were not valued prior to disposal.

Agency T justified these dealings on the basis that it lacked the resources to develop the IP and that the transferees agreed to licence the IP back to agency T.

Nevertheless, the morale of some staff has been adversely affected and the agency has been criticised for its lack of transparency and accountability.



Some agencies are developing flexible and open procedures that 'fit' their objectives.

Exhibit 23: Alternative Approaches to Valuation

One of NSW Agriculture's main activities is the development and dissemination of IP in the form of new plant varieties.

Plant varieties can be very difficult to value. For example, the department anticipated that a recently developed wheat variety would be very valuable. Much of this potential value was destroyed by the appearance of a new strain of rust that will limit the variety's effectiveness to two or three seasons.

To assess both the market value of the IP and potential vehicles for commercialisation, NSW Agriculture calls for expressions of interest for all IP approved for commercial release.

The EoI process provides an open and competitive means of determining how to encourage the adoption of the IP. The department can then assess the merits of applications according to its own needs including:

- the cash flow (royalties, investments, other financial flows)
- the suitability of the proposal (capacity to exploit, market and further develop the IP)
- sustainable agriculture.

7.3 Conclusion

IP is an under-reported but increasingly important organisational asset.

The management of IP needs to be integrated with other management systems and regularly reviewed. Appropriate reporting systems should be implemented.

The financial statements of agencies do not include IP assets of any significance. This is despite the growing significance of IP and intellectual capital in developed economies.

Although valuation of IP is not always feasible, managers need to be conscious of the value and the risk that IP presents to their agency.

Agencies need to ensure that management and transfers of, and dealings in, IP are open to scrutiny.

Appendices

Appendix 1: Glossary of Terms

| | |
|--|--|
| Agency | In this report agency refers to a NSW Government agency. It includes government departments, state owned corporations, statutory authorities as well as business units belonging to those entities. |
| Circuit Layout Designs | <p>The Circuit Layouts Act 1984 (Commonwealth) provides copyright style protection for the layout design used to build an integrated circuit or computer chip.</p> <p>Like copyright protection, circuit layout protection is automatic.</p> |
| Confidential Information/ Trade Secrets | <p>Information or secrets are not capable of being owned and are not protected by statute. An agency possessing such information can obtain protection by controlling access to that information through procedures for maintaining confidentiality and the use of contracts.</p> <p>If that information is disclosed to another party in circumstances suggesting an obligation to keep the information confidential and that other party misuses the information to the detriment of the agency, then the agency may be able to sue for damages. Alternatively the agency may be able to sue for breach of contract.</p> |
| Copyright | <p>Copyright protection is provided by the <i>Copyright Act 1968 (Commonwealth)</i>. It may exist in many works produced in the course of the normal operations of agencies, for example, software, reports, publications, blueprints, and components of training programs (manuals, videos, notes). However, not all works protected by copyright will be commercially significant.</p> <p>Copyright protection is automatic. Nothing needs to be done to obtain copyright protection and protection commences as soon as copyright material is created.</p> |
| Copyright collection agency | Copyright collecting societies are non-profit organisations which license uses of copyright material and monitor copyright compliance for owners of copyright works. |
| Crown copyright | The <i>Copyright Act</i> makes special provision for government Departments (referred in the Act as the "Crown". The Act provides that the Crown is the owner of copyright in original work made, or first published, "by or under the direction or control of" the Crown. |
| Designs | <p>The <i>Designs Act 1906 (Commonwealth)</i> provides protection for the visual appearance of a manufactured article. Design rights are not automatic but require registration.</p> <p>The design registration system is not widely used at present and is unlikely to be relevant to most agencies.</p> |
| DITM | Department of Information Technology and Management. |

| | |
|-------------------------------|---|
| DPWS | Department of Public Works and Services. |
| IM&T | Information Management and Technology. |
| IP Australia | IP Australia is the federal government agency that grants rights in patents, trademarks and designs. |
| OIT | Office of Information Technology. |
| Patents | <p>The <i>Patents Act 1990</i> (Commonwealth) protects the rights in inventions that are useful, novel and not obvious to people skilled in the relevant field. The invention can be a new product or process or improvements to existing products or processes. Business systems and computer programs can now also be patented.</p> <p>Patent protection is obtained by applying for a patent at IP Australia. Inventions must be kept secret until an application for a patent is lodged to be properly protected.</p> |
| Plant Breeder's Rights | <p>Plant Breeder's Rights (PBR) are provided by the <i>Plant Breeder's Rights Act 1994</i> (Commonwealth). PBR protect new varieties of plants, fungal, algal species and transgenic plants, provided that the new variety is distinct, uniform and stable.</p> <p>PBR are not automatic but require registration with the Plant Breeders Rights Office in the Federal Department of Forestry, Fishing and Agriculture.</p> |
| Protection | <p>The various forms of Intellectual Property (copyright, patents, etc) provide a complex system of legal protection.</p> <p>A single asset may be the subject of protection under more than law This may present difficult choices as to the form of protection on which to rely. For example a computer program may be protected by copyright (which would cover a particular source code), by withholding confidential information and/or by seeking patent protection.</p> |
| Trademarks | <p>A trademark is a sign used to distinguish goods or services of one trader from those of another. Trademark protection is provided by the <i>Trade Marks Act 1995</i> (Commonwealth).</p> <p>Trademark rights are not automatic but require registration with IP Australia.</p> |
| Uptake of IP | <p>The uptake of IP refers to the:</p> <ul style="list-style-type: none"> ▪ commercialisation of IP through sale or licensing ▪ transfer of technology to the private, public and international sectors ▪ the use of publicly owned information by people and organisations inside and outside of NSW. |

Appendix 2: About the Audit

| | |
|---|---|
| Audit Objective | <p>The objective of the audit was to form an opinion on the efficiency and effectiveness of the arrangements for managing IP (including copyright, patents, etc) across the NSW public sector.</p> <p>The audit also reviewed compliance with existing policies and guidelines for the management of IP.</p> |
| Criteria | <p>The Audit Office examined whether systems exist to ensure the efficient and effective management of IP for the benefit of the people of NSW. Such systems should:</p> <ul style="list-style-type: none">▪ account for (identify and report on) significant IP assets controlled by agencies▪ support sound management decisions to create, acquire or access new IP necessary to perform agency functions▪ provide assurance that IP assets are appropriately protected, monitored and defended▪ provide assurance that management of IP assets maximises the benefit of IP and minimises risk consistent with agency objectives and functions. |
| Audit Scope | <p>The audit surveyed fourteen agencies about their IP management policy and practices. The agencies were chosen to reflect the diversity of government instrumentalities in terms of their size, activity, function and organisation.</p> <p>The audit does not attempt to provide an overview of the various legal rights applicable to IP. Nor does the audit specifically examine the topics of intellectual capital and knowledge management that are related to the issue of IP.</p> |
| Audit Approach & Methodology | <p>The audit approach and methodology involved:</p> <ul style="list-style-type: none">▪ research, review and analysis of relevant literature, prior studies and policies and systems operating in other jurisdictions▪ a review of whole-of-government systems that influence agencies' management of IP▪ discussions with representative from agencies that coordinate aspects of IP policy across government: Premier's Department, DITM, OIT, State Records, DPWS and DSRD▪ analysis of surveys completed by 14 agencies▪ follow-up interviews with the surveyed agencies and the review of selected documents to substantiate survey responses▪ interviews with other key stakeholders in the public sector. <p>The surveys were completed by, and interviews held with, senior officers conversant with policy and practice in the area and appointed by the Chief Executive to act as spokesperson for the organisation.</p> |

Cost of the Audit The cost of the audit and the Better Practice Guide was \$160,000. This figure includes the estimated printing costs of \$12,000.

Audit Team

The team comprised Michael Johnston and Denis Streater.

Acknowledgments

The Audit Office gratefully acknowledges the cooperation and support provided by representatives of Premier's Department, State Records, DITM, OIT, DPWS and DSRD.

The Audit Office also wishes to thank those agencies which assisted in the survey and contributed their insights to the audit.

The Audit Office also recognises the valuable models and frameworks developed by:

- Dr Paul Steffens of the University of Queensland
- Western Australian Department of Commerce and Trade
- Canadian Department of Science and Technology.

Appendix 3: Whole-of-Government Framework

| Management Aspect | Existing Policies, Practices and Initiatives |
|--|--|
| <p>Corporate Support for the Management of IP</p> | <p>Treasury sets the framework for agencies to report on the management of assets</p> <p>Government issued <i>Information Management & Technology Blueprint for NSW - A Well-connected Future</i> in 1997.</p> <p>DITM was established in 1999 to deliver whole-of-government strategies, policies and projects for information management, information technology, telecommunications, land titling and valuing</p> <p>OIT, a unit of DITM, is responsible for implementing a coordinated and consistent approach to systems development. OIT publishes a number of guidelines related to information management including</p> <ul style="list-style-type: none"> ▪ <i>Chief Information Officer</i>. 1997 ▪ <i>Information Management Framework</i> 1997 <p>State Records Authority has issued the <i>Government Recordkeeping Manual</i></p> <p>ICAC provides advice to agencies on corruption prevention issues may address IP management issues</p> |
| <p>Promotion of innovation - rewards, recognition, resources</p> | <p>Since 1997 the Premier has recognised technological contributions and innovative systems through the annual Public Sector Awards.</p> |
| <p>Management of the Generation and Procurement of IP</p> | <p>Procurement and generation</p> <p>DPWS and the State Contracts Control Board coordinates public sector procurement.</p> <p>Premier's Department has issued <i>Business Case Guidelines 2000</i>, which in turn refer agencies to OIT's <i>Business Case Development and Risk Management Guidelines</i>. (None of the guidelines expressly refer to IP)</p> <p>Treasury approves major procurements.</p> <p>Identification, reporting and valuation of IP</p> <p>Treasury sets the framework for agencies to report on the management of assets.</p> <p>OIT publishes guidelines including:</p> <ul style="list-style-type: none"> ▪ <i>Information Management Audit</i> ▪ <i>Information Management Classification</i> ▪ <i>Information Management Inventory</i> |

| Management Aspect | Existing Policies, Practices and Initiatives |
|---|---|
| <p>Management of the IP Rights</p> <p>Overall IP policies and procedures</p> | <p>Premier's Department has developed and published guidelines that relate to aspects of IP rights including:</p> <ul style="list-style-type: none"> ▪ the <i>Code of Conduct and Ethics for Public Sector Executives 1998</i> provides that any IP created by the executive is the property of the government and that the executive is to treat confidential information appropriately ▪ <i>Corporatisation Manual 2000</i> contains a checklist item for IP to be identified and transferred as part of the corporatisation process • Premier's Department <i>Circular No. 2000-47 Engagement and Use of Consultants</i> defines IP broadly and provides that new IP vests in the Principal. Standard contract conditions provide for the protection of IP during the tender process, the management of sub-contractors, the ownership and or licensing of IP and dispute resolution mechanisms • Premier's <i>Memorandum No. 2000-11 Disclosure of Information on Government Contracts with the Private Sector</i> requires agencies to disclose the benefits of R&D and to not disclose IP and confidential information ▪ <i>Working with Government Green Paper 2000</i> that provides guidelines for the management of IP during the review of infrastructure proposals. The paper calls upon agencies to consider purchasing IP for project design. <p>DPWS coordinates procurement across government. As part of this role DPWS prepares a variety of standard contracts including those for capital works, design development, consultancy management, minor works, IT, and goods and services. These contracts generally contain standard conditions that provide for the protection of IP and its assignment to the Crown.</p> |

| Management Aspect | Existing Policies, Practices and Initiatives |
|--|---|
| Management of the Uptake of IP Commercialisation of IP | Premier's <i>Memorandum 1993-31: Guidelines for the Export of the Skills and Expertise of NSW Public Sector Agencies</i> encourages the export of agency skills provided that (amongst other things) the activity: <ul style="list-style-type: none"> ▪ does not adversely affect the agency's core business ▪ operates on a fully commercial basis with separate financial reporting ▪ is subject to appropriate review, and risks are minimised. |
| Cross Agency Resources | Department of State and Regional Development's Government Services Export Unit facilitates the export of NSW goods and services (which often consist mainly of IP) mainly as part of Australia's foreign aid program. |
| Approvals | <ul style="list-style-type: none"> ▪ State Records Act requires the approval of the State Records Authority for the disposal or transfer of state records. ▪ DITM is currently developing access and pricing policies for government-held information. ▪ Some agencies seek Attorney General's Department approval to deal in IP and/or waive Crown copyright on a case-by-case basis. ▪ The <i>Public Authorities (Financial Arrangement) Act</i> requires the Treasurer to approve joint ventures. Treasury has advised some agencies that they need to seek advice from the Crown Solicitor's Office and obtain formal approval from the Treasurer before entering into each agreement to licence IP. (IP licences fall within the definition of a joint venture). |

Appendix 4: Diversity of IP Management Across the Public Sector³⁷

| Organisational Function (<i>Example</i>) | Nature of Core Activity | Distinguishing IP Management Activities | Reliance on IP Revenue | Prevalent Forms of IP |
|---|--|---|------------------------|--|
| Central Agency (<i>Treasury</i>) | Coordination of W-o-G activities; Stimulation of economic growth | <ul style="list-style-type: none"> ▪ Develops and oversees WoG reporting requirements ▪ Approval of major IP procurements | No | Copyright Confidential information |
| Executive of Department (<i>DITM</i>) | Governance and support for activities | <ul style="list-style-type: none"> ▪ Implement and interpret WoG IP management policy and objectives ▪ Provide corporate support for operational IP management ▪ Approval of major IP procurements | No | Copyright Confidential information |
| Data Management (<i>Land and Property Information-DITM</i>) | Collect, store, retrieve and provide information | <ul style="list-style-type: none"> ▪ IP is core asset managed by agency | Yes | Copyright Confidential information Patents |
| IP Delivery (<i>TAFE</i>) | Develop and deliver IP to customers; | <ul style="list-style-type: none"> ▪ IP is created and disseminated as a direct consequence of core activity ▪ Mandate to commercialise outside of NSW has been questioned | Yes | Copyright Confidential information Circuit layout designs Designs Patents |
| R&D (<i>NSW Agriculture</i>) | Innovation for sustainable development | <ul style="list-style-type: none"> ▪ Planned generation of IP ▪ Education, extension and delivery of IP to farmers ▪ Partnerships with other Government and private bodies ▪ Clear mandate to commercialise | Yes | Copyright Confidential information Plant breeder's rights Patents Trademarks |
| Production (<i>State Owned Utility</i>) | Continuous service or product delivery | <ul style="list-style-type: none"> ▪ Unplanned IP creation as part of normal operations ▪ Recognition and valuation of potential; IP ▪ Statutory mandate to commercialise | Marginal | Copyright Confidential information Circuit layout designs Patents |
| Regulatory & Procurement Group (<i>DPWS</i>) | Coordination of Govt procurement Promulgation of contract conditions and procedures | <ul style="list-style-type: none"> ▪ Develops WoG procurement policy ▪ Provides advice and support to other agencies | Yes | Copyright Confidential information |

³⁷ adapted from Steffens, P. et al. 2000. *Capitalising on Intellect*. page 4.

Appendix 5: IP Asset Register

Exhibit 24: What IP Assets Should Be Recorded in a Register?³⁸

Agencies need to consider recording the following assets in an IP register.

- computer programs developed for the agency where the development cost (replacement cost) exceeds \$10,000
- print publications/promotional materials sold or provided free of charge
- databases maintained by the agency
- television and radio advertising material developed by or for the agency
- artwork, photographs commissioned and used in promotional material by the agency
- computer programs licensed by the agency
- training materials developed by the agency where the development cost (replacement cost) exceeds \$10,000
- trademarks or logos used by the agency whether or not they are registered as trademarks or business names
- patented inventions
- registered designs
- registered plant varieties
- integrated circuit boards designed by or for the agency
- patented inventions, registered designs, plant varieties and integrated circuit boards that are purchased or licensed in by the agency.

Exhibit 25: What Information Should Be Recorded in an IP Register?

The minimum information in such a register should include:

- description of IP and its location
- ownership details
- if contractors or consultants are involved in the development of the IP asset, details of the IP clauses contained in their contracts and details as to where those contracts can be found
- whether the IP is protected
- status of IP protection
- where IP is licensed out: details of licence, licensee and payment details
- where IP is licensed in: details of licence, licensor and payment details.

³⁸ adapted from Western Australian *Intellectual Property Guidelines Third Edition*.

Appendix 6: IP Management in Other Jurisdictions

Other jurisdictions address the management of publicly owned IP in a variety of ways.

Western Australia

In 1997 the Western Australian Government introduced an integrated policy for the management of IP. Its main features include:

- a Government Intellectual Property Council (GIPC) which champions implementation of Government IP policy. The membership of the GIPC comprises representatives from five core agencies and representatives from three IP-rich agencies on a rotational basis³⁹
- guidelines to assist agencies develop and implement policies and procedures appropriate to their specific needs
- arrangements to facilitate the legislative and administrative reform needed to implement the IP policy. The lack of a specific mandate of most statutory corporations to commercialise IP was recognised as a significant obstacle to the implementation of IP policy. GIPC sponsored statutory amendments that enable Treasury to approve an agency's request to commercialise specific IP assets
- an Intellectual Property Support Program that assists agencies (at no cost to the agencies) to implement the IP policy
- arrangements for the ongoing and comprehensive review of the whole-of-government policy
- a requirement that the most senior executive (or his or her delegate) is responsible for the management of IP. The accountable officer is to be notified when significant IP incidents (such as a suspected infringement of IP) occur
- Treasurer's Instructions that require public sector agencies to establish and maintain a register of IP assets and to account for IP assets (where appropriate) in financial statements.

The Western Australian policy is regularly reviewed.

The Western Australian initiative does not, however, directly address issues of pricing and access of information and the requirements of state record keeping.

³⁹ The five permanent members of the GIPC are the Western Australian Treasury, Crown Solicitor's Office, Ministry of Premier and Cabinet, Contract and Management Services and the Department of Commerce and Trade.

South Australia & Victoria

The South Australian policy emphasises out-sourcing of public sector IP. The policy is not as detailed or comprehensive as that of Western Australia because South Australian agencies are viewed as users of IP rather than as owners or custodians.

Victoria appears to be adopting a similar approach to South Australia. The major biomedical technology initiative, Bio21, emphasises the transfer of public sector IP to the private sector. Bio21 promotes the development of both the economy and innovative industries rather than the protection of publicly owned IP.

Both Victoria and South Australia have sought to address the limited mandate of agencies to commercialise IP by establishing a corporatised body to market and export public sector services.

The South Australian entity has been privatised.

The Commonwealth

Like NSW, the Commonwealth has a number of agencies developing aspects of IP policy.

The Department of Finance and Administration provides a number of IP policies for agencies of the Commonwealth. These include guidelines relating to copyright and procurement.

The Attorney General's Department provides advice and briefings on copyright and IP law.

IP Australia, the federal government agency that grants rights in patents, trade marks and designs, provides guidelines and advice to organisations and individuals in relation to these forms of IP.

Useful guidelines, produced by a number of agencies, include the:

- *Draft Guidelines for IP Management and Commercialisation for Health and Medical Research* issued by the National Health and Medical Research Council
- *Commercialisation of Commonwealth IP in the Field of Information Technology* released by the Department of Communications, Information Technology and the Arts.

**Information and
Copyright**

Other jurisdictions, including the UK and Queensland are developing frameworks for the management of publicly owned information.

It is important that governments address key issues of access, pricing and copyright as public sector agencies seek to balance objectives including:

- maximising the information made available to the public for no or minimal cost
- maximising the revenues generated to support agency operations maintaining control over publicly owned information/copyright and ensuring that the accuracy and integrity of the information is maintained
- preventing non-competitive practices.

At this stage limited progress appears to have been made, in any of these jurisdictions, in relation to the integration of information management policy and IP management policy.

Appendix 7: Further Reading

Australian Bureau of Statistics *Catalogue 8112.0*.

Boyle, J., *A Politics of Intellectual Property: Environmentalism for the Net?*
<http://www.law.duke.edu/boylesite>

Clarke, R., *Freedom of Information? The Internet as Harbinger of the New Dark Ages*.
<http://firstmonday.org>;

Department of Communications, Information Technology and the Arts (Commonwealth). 2000. *Commercialisation of Commonwealth IP in the Field of Information Technology*.

Department of Science and Technology (Canada). 1997 *Federal Partners in Technology Transfer Report*

Department of Science and Technology. (Canada). 1997. *Guiding Principles for the Management of Intellectual Property Issues*.

HMSO (UK), 1999. *Future Management of Copyright*. <http://www.hmso.gov.uk>

Intellectual Property and Competitive Review Committee (Commonwealth). 2000. *Review of intellectual property legislation under the Competition Principles Agreement*.

National Health and Medical Research Council. 2000. *Draft Guidelines for IP Management and Commercialisation for Health and Medical Research*.

National Innovation Summit. 1999. *Working Group on Institutional Structures and Interfaces Paper*.

National Innovation Summit. 1999. *Working Group on Managing Intellectual Property Framework Paper*.

New South Wales Auditor-General's *Report to Parliament 2000 Volume Four* p.11.

NSW Public Accounts Committee. 1994. *Offshore and Off-target - Why NSW lags the field in overseas projects?*

OECD. 1999. *Science, Technology and Industry Scorecard*.

OIT. 1998 *Information Management & Technology Census*

Soon, J., *The Evolution of Private IP Regimes in Cyberspace*. in *Policy Summer 1999/2000* p.35-39.

Steffens, P., et al (2000) *Capitalising on Intellect: Public-Sector Intellectual Property Management in Queensland*. IPAA (Qld).

Tasmanian Audit Office. 2000. *Auditor-General Special Report No. 35 Software Licensing*.

Western Australian Department of Commerce and Trade. 2000. *Government Intellectual Property Policy 2000*. Perth.

Useful Links

www.commerce.wa.gov.au Western Australian Department of Commerce and Trade

www.ipaustralia.gov.au IP Australia

www.premiers.nsw.gov.au NSW Premier's Department

Performance Audits by the Audit Office of New South Wales

Performance Auditing

What are performance audits?

Performance audits are reviews designed to determine how efficiently and effectively an agency is carrying out its functions.

Performance audits may review a government program, all or part of a government agency or consider particular issues which affect the whole public sector.

Where appropriate, performance audits make recommendations for improvements relating to those functions.

Why do we conduct performance audits?

Performance audits provide independent assurance to Parliament and the public that government funds are being spent efficiently and effectively, and in accordance with the law.

They seek to improve the efficiency and effectiveness of government agencies and ensure that the community receives value for money from government services.

Performance audits also assist the accountability process by holding agencies accountable for their performance.

What is the legislative basis for Performance Audits?

The legislative basis for performance audits is contained within the *Public Finance and Audit Act 1983, Division 2A*, (the Act) which differentiates such work from the Office's financial statements audit function.

Performance audits are not entitled to question the merits of policy objectives of the Government.

Who conducts performance audits?

Performance audits are conducted by specialist performance auditors who are drawn from a wide range of professional disciplines.

How do we choose our topics?

Topics for a performance audits are chosen from a variety of sources including:

- ❑ our own research on emerging issues
- ❑ suggestions from Parliamentarians, agency Chief Executive Officers (CEO) and members of the public
- ❑ complaints about waste of public money
- ❑ referrals from Parliament.

Each potential audit topic is considered and evaluated in terms of possible benefits including cost savings, impact and improvements in public administration.

If you wish to find out what performance audits are currently in progress just visit our website at www.audit@nsw.gov.au.

The Audit Office has no jurisdiction over local government and cannot review issues relating to council activities.

How do we conduct performance audits?

Performance audits are conducted in compliance with relevant Australian standards for performance auditing and our procedures are certified under international quality standard ISO 9001.

Our policy is to conduct these audits on a "no surprise" basis.

Operational managers, and where necessary executive officers, are informed of the progress with the audit on a continuous basis.

What are the phases in performance auditing?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team will develop audit criteria and define the audit field work.

At the completion of field work an exit interview is held with agency management to discuss all significant matters arising out of the audit. The basis for the exit interview is generally a draft performance audit report.

The exit interview serves to ensure that facts presented in the report are accurate and that recommendations are appropriate. Following the exit interview, a formal draft report is provided to the CEO for comment. The relevant Minister is also provided with a copy of the draft report. The final report, which is tabled in Parliament, includes any comment made by the CEO on the conclusion and the recommendations of the audit.

Depending on the scope of an audit, performance audits can take from several months to a year to complete.

Copies of our performance audit reports can be obtained from our website or by contacting our publications unit.

How do we measure an agency's performance?

During the planning stage of an audit the team develops the audit criteria. These are standards of performance against which an agency is assessed. Criteria may be based on government targets or benchmarks, comparative data, published guidelines, agencies corporate objectives or examples of best practice.

Performance audits look at:

- processes
- results
- costs
- due process and accountability.

Do we check to see if recommendations have been implemented?

Every few years we conduct a follow-up audit of past performance audit reports. These follow-up audits look at the extent to which recommendations have been implemented and whether problems have been addressed.

The Public Accounts Committee (PAC) may also conduct reviews or hold inquiries into matters raised in performance audit reports.

Agencies are also required to report actions taken against each recommendation in their annual report.

To assist agencies to monitor and report on the implementation of recommendations, the Audit Office has prepared a Guide for that purpose. The Guide is on the Internet and located at <http://www.audit.nsw.gov.au/guides-bp/bpplist.htm>

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards.

The PAC is also responsible for overseeing the activities of the Audit Office and conducts reviews of our operations every three years.

Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament and from internal sources.

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Tom Jambrich
Assistant Auditor-General
Performance Audit Branch
(02) 9285 0051

Performance Audit Reports

| No. | Agency or Issue Examined | Title of Performance Audit Report or Publication | Date Tabled in Parliament or Published |
|-----|--|---|--|
| 1 | Department of Housing | <i>Public Housing Construction: Selected Management Matters</i> | 5 December 1991 |
| 2 | Police Service, Department of Corrective Services, Ambulance Service, Fire Brigades and Others | <i>Training and Development for the State's Disciplined Services: Stream 1 - Training Facilities</i> | 24 September 1992 |
| 3 | Public Servant Housing | <i>Rental and Management Aspects of Public Servant Housing</i> | 28 September 1992 |
| 4 | Police Service | <i>Air Travel Arrangements</i> | 8 December 1992 |
| 5 | Fraud Control | <i>Fraud Control Strategies</i> | 15 June 1993 |
| 6 | HomeFund Program | <i>The Special Audit of the HomeFund Program</i> | 17 September 1993 |
| 7 | State Rail Authority | <i>Countrylink: A Review of Costs, Fare Levels, Concession Fares and CSO Arrangements</i> | 10 December 1993 |
| 8 | Ambulance Service, Fire Brigades | <i>Training and Development for the State's Disciplined Services: Stream 2 - Skills Maintenance Training</i> | 13 December 1993 |
| 9* | Fraud Control | <i>Fraud Control: Developing an Effective Strategy (Better Practice Guide jointly published with the Office of Public Management, Premier's Department)</i> | 30 March 1994 |
| 10 | Aboriginal Land Council | <i>Statutory Investments and Business Enterprises</i> | 31 August 1994 |
| 11 | Aboriginal Land Claims | <i>Aboriginal Land Claims</i> | 31 August 1994 |
| 12 | Children's Services | <i>Preschool and Long Day Care</i> | 10 October 1994 |
| 13 | Roads and Traffic Authority | <i>Private Participation in the Provision of Public Infrastructure (Accounting Treatments; Sydney Harbour Tunnel; M4 Tollway; M5 Tollway)</i> | 17 October 1994 |
| 14 | Sydney Olympics 2000 | <i>Review of Estimates</i> | 18 November 1994 |
| 15 | State Bank | <i>Special Audit Report: Proposed Sale of the State Bank of New South Wales</i> | 13 January 1995 |
| 16 | Roads and Traffic Authority | <i>The M2 Motorway</i> | 31 January 1995 |
| 17 | Department of Courts Administration | <i>Management of the Courts: A Preliminary Report</i> | 5 April 1995 |
| 18* | Joint Operations in the Education Sector | <i>A Review of Establishment, Management and Effectiveness Issues (including a Guide to Better Practice)</i> | 13 September 1995 |
| 19 | Department of School Education | <i>Effective Utilisation of School Facilities</i> | 29 September 1995 |
| 20 | Luna Park | <i>Luna Park</i> | 12 October 1995 |

| No. | Agency or Issue Examined | Title of Performance Audit Report or Publication | Date Tabled in Parliament or Published |
|------------|--|---|---|
| 21 | Government Advertising | <i>Government Advertising</i> | 23 November 1995 |
| 22 | Performance Auditing In NSW | <i>Implementation of Recommendations; and Improving Follow-Up Mechanisms</i> | 6 December 1995 |
| 23* | Ethnic Affairs Commission | <i>Administration of Grants (including a Guide To Better Practice)</i> | 7 December 1995 |
| 24 | Department of Health | <i>Same Day Admissions</i> | 12 December 1995 |
| 25 | Environment Protection Authority | <i>Management and Regulation of Contaminated Sites: A Preliminary Report</i> | 18 December 1995 |
| 26 | State Rail Authority of NSW | <i>Internal Control</i> | 14 May 1996 |
| 27 | Building Services Corporation | <i>Inquiry into Outstanding Grievances</i> | 9 August 1996 |
| 28 | Newcastle Port Corporation | <i>Protected Disclosure</i> | 19 September 1996 |
| 29* | Ambulance Service of New South Wales | <i>Charging and Revenue Collection (including a Guide to Better Practice in Debtors Administration)</i> | 26 September 1996 |
| 30 | Department of Public Works and Services | <i>Sale of the State Office Block</i> | 17 October 1996 |
| 31 | State Rail Authority | <i>Tangara Contract Finalisation</i> | 19 November 1996 |
| 32 | NSW Fire Brigades | <i>Fire Prevention</i> | 5 December 1996 |
| 33 | State Rail | <i>Accountability and Internal Review Arrangements at State Rail</i> | 19 December 1996 |
| 34* | Corporate Credit Cards | <i>The Corporate Credit Card (including Guidelines for the Internal Control of the Corporate Credit Card)</i> | 23 January 1997 |
| 35 | NSW Health Department | <i>Medical Specialists: Rights of Private Practice Arrangements</i> | 12 March 1997 |
| 36 | NSW Agriculture | <i>Review of NSW Agriculture</i> | 27 March 1997 |
| 37 | Redundancy Arrangements | <i>Redundancy Arrangements</i> | 17 April 1997 |
| 38 | NSW Health Department | <i>Immunisation in New South Wales</i> | 12 June 1997 |
| 39 | Corporate Governance | <i>Corporate Governance Volume 1 : In Principle Volume 2 : In Practice</i> | 17 June 1997 |
| 40 | Department of Community Services and Ageing and Disability Department | <i>Large Residential Centres for People with a Disability in New South Wales</i> | 26 June 1997 |
| 41 | The Law Society Council of NSW, the Bar Council, the Legal Services Commissioner | <i>A Review of Activities Funded by the Statutory Interest Account</i> | 30 June 1997 |
| 42 | Roads and Traffic Authority | <i>Review of Eastern Distributor</i> | 31 July 1997 |
| 43 | Department of Public Works and Services | <i>1999-2000 Millennium Date Rollover: Preparedness of the NSW Public Sector</i> | 8 December 1997 |

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| 44 | Sydney Showground, Moore Park Trust | <i>Lease to Fox Studios Australia</i> | 8 December 1997 |
| 45 | Department of Public Works and Services | <i>Government Office Accommodation</i> | 11 December 1997 |
| 46 | Department of Housing | <i>Redevelopment Proposal for East Fairfield (Villawood) Estate</i> | 29 January 1998 |
| 47 | NSW Police Service | <i>Police Response to Calls for Assistance</i> | 10 March 1998 |
| 48 | Fraud Control | <i>Status Report on the Implementation of Fraud Control Strategies</i> | 25 March 1998 |
| 49* | Corporate Governance | <i>On Board: guide to better practice for public sector governing and advisory boards (jointly published with Premier's Department)</i> | 7 April 1998 |
| 50 | Casino Surveillance | <i>Casino Surveillance as undertaken by the Director of Casino Surveillance and the Casino Control Authority</i> | 10 June 1998 |
| 51 | Office of State Revenue | <i>The Levying and Collection of Land Tax</i> | 5 August 1998 |
| 52 | NSW Public Sector | <i>Management of Sickness Absence NSW Public Sector Volume 1: Executive Briefing Volume 2: The Survey - Detailed Findings</i> | 27 August 1998 |
| 53 | NSW Police Service | <i>Police Response to Fraud</i> | 14 October 1998 |
| 54 | Hospital Emergency Departments | <i>Planning Statewide Services</i> | 21 October 1998 |
| 55 | NSW Public Sector | <i>Follow-up of Performance Audits: 1995 - 1997</i> | 17 November 1998 |
| 56 | NSW Health | <i>Management of Research: Infrastructure Grants Program - A Case Study</i> | 25 November 1998 |
| 57 | Rural Fire Service | <i>The Coordination of Bushfire Fighting Activities</i> | 2 December 1998 |
| 58 | Walsh Bay | <i>Review of Walsh Bay</i> | 17 December 1998 |
| 59 | NSW Senior Executive Service | <i>Professionalism and Integrity Volume One: Summary and Research Report Volume Two: Literature Review and Survey Findings</i> | 17 December 1998 |
| 60 | Department of State and Regional Development | <i>Provision of Industry Assistance</i> | 21 December 1998 |
| 61 | The Treasury | <i>Sale of the TAB</i> | 23 December 1998 |
| 62 | The Sydney 2000 Olympic and Paralympic Games | <i>Review of Estimates</i> | 14 January 1999 |
| 63 | Department of Education and Training | <i>The School Accountability and Improvement Model</i> | 12 May 1999 |

| No. | Agency or Issue Examined | Title of Performance Audit Report or Publication | Date Tabled in Parliament or Published |
|-----|--|---|--|
| 64* | Key Performance Indicators | <ul style="list-style-type: none"> • <i>Government-wide Framework</i> • <i>Defining and Measuring Performance (Better practice Principles)</i> • <i>Legal Aid Commission Case Study</i> | 31 August 1999 |
| 65 | Attorney General's Department | <i>Management of Court Waiting Times</i> | 3 September 1999 |
| 66 | Office of the Protective Commissioner Office of the Public Guardian | <i>Complaints and Review Processes</i> | 28 September 1999 |
| 67 | University of Western Sydney | <i>Administrative Arrangements</i> | 17 November 1999 |
| 68 | NSW Police Service | <i>Enforcement of Street Parking</i> | 24 November 1999 |
| 69 | Roads and Traffic Authority of NSW | <i>Planning for Road Maintenance</i> | 1 December 1999 |
| 70 | NSW Police Service | <i>Staff Rostering, Tasking and Allocation</i> | 31 January 2000 |
| 71* | Academics' Paid Outside Work | <ul style="list-style-type: none"> ▪ <i>Administrative Procedures</i> ▪ <i>Protection of Intellectual Property</i> ▪ <i>Minimum Standard Checklists</i> ▪ <i>Better Practice Examples</i> | 7 February 2000 |
| 72 | Hospital Emergency Departments | <i>Delivering Services to Patients</i> | 15 March 2000 |
| 73 | Department of Education and Training | <i>Using computers in schools for teaching and learning</i> | 7 June 2000 |
| 74 | Ageing and Disability Department | <i>Group Homes for people with disabilities in NSW</i> | 27 June 2000 |
| 75 | NSW Department of Transport | <i>Management of Road Passenger Transport Regulation</i> | 6 September 2000 |
| 76 | Judging Performance from Annual Reports | <i>Review of eight Agencies' Annual Reports</i> | 29 November 2000 |
| 77* | Reporting Performance | <i>Better Practice Guide A guide to preparing performance information for annual reports</i> | 29 November 2000 |
| 78 | State Rail Authority (CityRail) State Transit Authority | <i>Fare Evasion on Public Transport</i> | 6 December 2000 |
| 79 | TAFE NSW | <i>Review of Administration</i> | 6 February 2001 |
| 80 | Ambulance Service of New South Wales | <i>Readiness to respond</i> | 7 March 2001 |
| 81 | Department of Housing | <i>Maintenance of Public Housing</i> | 11 April 2001 |
| 82 | Environment Protection Authority | <i>Controlling and Reducing Pollution from Industry</i> | 18 April 2001 |
| 83 | Department of Corrective Services | <i>NSW Correctional Industries</i> | 13 June 2001 |

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|-----|---------------------------------|--|--|
| 84 | Follow-up of Performance Audits | <i>Police Response to Calls for Assistance The Levying and Collection of Land Tax Coordination of Bushfire Fighting Activities</i> | 20 June 2001 |
| 85* | Internal Financial Reporting | <i>Internal Financial Reporting including a Better Practice Guide</i> | 27 June 2001 |
| 86 | Follow-up of Performance Audits | <i>The School Accountability and Improvement Model (May 1999) The Management of Court Waiting Times (September 1999)</i> | 14 September 2001 |
| 87 | e-government | <i>Use of the Internet and related technologies to improve public sector performance</i> | 19 September 2001 |
| 88* | e-ready, e-steady, e-government | <i>e-government readiness assessment guide</i> | 19 September 2001 |
| 89 | Intellectual Property | <i>Management of Intellectual Property</i> | October 2001 |
| 90* | Better Practice Guide | <i>Management of Intellectual Property</i> | October 2001 |

* Better Practice Guides

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