AUDITOR-GENERAL'S REPORT PERFORMANCE AUDIT

Implementing Asset Management Reforms



The Legislative Assembly Parliament House SYDNEY NSW 2000 The Legislative Council Parliament House SYDNEY NSW 2000

In accordance with section 38E of the *Public Finance and Audit Act* 1983, I present a report titled **Implementing Asset Management Reforms.**

R J Sendt

Auditor-General

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Sydney

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Foreword

Hospitals, schools, public housing, roads, bridges, buses and trains are just some of the assets used by government in providing services to citizens.

The NSW Government's asset base is impressive in size - with a value of around \$167 billion and with government plans to spend around \$8 billion acquiring or replacing assets in the current year. Another \$2 billion is spent each year on maintenance.

Good asset management is very important to government; even a small efficiency gain in this area can provide significant returns. Good practice by those responsible for managing assets can improve reliability, extend asset life, save on maintenance costs and aid in identifying and disposing of unnecessary or non-performing assets.

Improving the NSW public sector's approach to asset management has been on the reform agenda for at least a decade. Changes in practice have been accelerated more recently by integrating asset management policy with the budget process.

In this audit we examined NSW Treasury's efforts to improve asset management practices in the public sector and the progress made by 3 agencies - the Department of Corrective Services, NSW Fire Brigades and the Powerhouse Museum - towards better managing their asset portfolios.

This report informs Parliament and the community on progress to date and what more needs to be done to ensure that agencies manage assets effectively and achieve best value.

Bob Sendt Auditor-General

October 2005

	Execu	tive summary

Executive summary

The NSW Government currently holds physical assets worth about \$167 billion and spends around \$2 billion each year maintaining them. The cost of replacing these assets is estimated at over \$400 billion.

Around half of these assets are controlled by the general government sector with the remainder controlled by public trading enterprises such as RailCorp, Energy Australia etc. General government sector assets include schools, hospitals, roads, bridges, and prisons whereas public trading enterprises control power generation plants and electricity supply, water supply and transport.

In NSW, the Total Asset Management (TAM) policy was first released in 1992 to improve asset management practices in agencies.

TAM requires agencies to prepare an asset strategy and associated plans to manage asset performance, capability and condition in line with operational requirements. These plans are submitted to NSW Treasury each year and considered as part of the State budget process, assisting in determining priorities for resource allocation. State owned corporations are exempt from TAM. For them, asset management is addressed through corporate governance processes.

In this audit we examine NSW Treasury's efforts to improve asset management practice and the progress made in three agencies: the Department of Corrective Services; NSW Fire Brigades; and the Museum of Applied Arts and Sciences, also known as the Powerhouse Museum. We particularly wanted to identify organisational factors contributing to effective asset management and barriers or impediments to better practice.

Audit opinion

Effective asset management is a key measure of the quality of management and stewardship of a government.

In NSW, asset management for the general government sector is heading in the right direction. The approach taken by NSW Treasury to further improve asset management practices in agencies and better link asset plans to the budget process is sensible and having a positive impact.

From the cases we examined some very good practice can be seen. But overall, a lot of room still exists for improvement.

Agencies need to improve asset management by:

- identifying all assets essential to service delivery and including these in TAM plans
- specifying the contribution that assets make to services
- developing performance standards or measures to help judge whether assets are needed or could be disposed of
- consider the risks assets pose to service delivery if they fail and how best to manage those risks
- implement asset management systems that can provide information on asset condition, maintenance, performance and useful life.

One problem may be the one size fits all approach to TAM which may overwhelm agencies with a small portfolio of assets. About one third of agencies required to submit TAM plans to NSW Treasury control assets worth less than \$10 million yet the reporting requirements are the same for agencies controlling large portfolios.

Government budget deliberations need to be made with full knowledge of the costs of proposals and the impact of tradeoffs. These deliberations would be enhanced if agencies also reported on deferred maintenance and the implications and risks to services if these tradeoffs are made.

Summary of recommendations

Provide further guidance on TAM

It is recommended that NSW Treasury:

- provide further guidance to agencies on developing asset service standards and performance measures (page 18)
- provide further guidance on what assets should be covered in TAM plans in terms of contribution to service delivery (page 20)
- develop TAM plan requirements more suited to agencies holding small asset portfolios (page 22)

Include impact statements in TAM

It is recommended that NSW Treasury require agencies to include in TAM plans:

- the impact on services if proposals to acquire assets or maintenance costs are not funded (page 21)
- deferred maintenance that is consistent with asset age, condition and service requirement (page 21)
- maintenance strategies to address this deferred maintenance and a funding plan (page 21)
- implications if maintenance is not undertaken in terms of effect on service delivery, rectification costs and other risks (page 21)

Improve plan quality

It is recommended that NSW Treasury:

- implement quality assurance procedures to ensure consistent, accurate and timely feedback to agencies (page 21)
- review a sample of agency TAM plans annually to:
 - monitor compliance with TAM policy (page 22)
 - > promote best practice in asset management (page 22).

Key findings

Chapter 1 What is asset management?

Asset management is a comprehensive and structured approach to acquiring, maintaining and upgrading physical assets to provide services to the community.

At the agency level, asset management creates medium to long-term plans that consider the purpose of assets and identify what assets are required at what location; what condition assets need to be in to maintain services and what assets are surplus to needs.

For government, asset management facilitates budget deliberations and the efficient allocation of limited funds amongst competing priorities.

The TAM Policy was introduced in 1992 to encourage agencies to adopt strategic asset management practices. Agencies were required to examine the contribution assets made to service delivery and decide whether assets should be replaced, maintained or disposed of depending on service requirements.

The purpose of TAM was also to remove agency bias towards the acquisition of new assets that was often at the expense of maintaining existing assets.

More recently, responsibility for TAM policy was transferred to NSW Treasury to integrate better asset management with the budget process and to better inform budget allocation decisions.

Chapter 2 Is asset management effective? We found TAM policy provides a best practice framework to improve asset management in NSW.

NSW Treasury's approach to linking asset plans to the budget process is an effective way of making TAM a mainstream part of management practice in NSW. This was a problem with previous arrangements.

Although TAM plans have improved over time, our review of plans prepared by the NSW Fire Brigades and the Powerhouse Museum identified a number of shortcomings such as:

- some assets essential to service delivery were not included and the contribution of assets to outcomes was not clear
- there were no performance standards or measures to help judge whether assets were needed or could be disposed of
- asset registers were not able to provide the necessary information on asset condition, maintenance, performance and disposal schedules required for decision-making.

The approach currently being used in these agencies does not support good asset management. In the Department of Corrective Services, there were examples of best practice that highlight the benefits to be gained from TAM.

NSW Treasury needs to gain a better appreciation of the impact on services if an agency does not receive funding to buy assets or to maintain them as it sees fit. Agencies should address these scenarios in the TAM plans along with the potential impact of deferred maintenance.

Asset management practices in the three agencies

Department of Corrective Services

The Department of Corrective Services (DCS) controls assets worth around \$1.4 billion (see Appendix 1).

The DCS has effectively implemented asset management and its approach represents best practice. For example, DCS:

- examines how its assets contribute to services and results before deciding whether assets need to be enhanced, maintained or disposed of
- uses population imprisonment rates, prison population trends, police numbers and the potential impact of new or proposed legislation in deciding what correctional centres are needed and where they should be located
- uses data such as escapes, assaults against inmates and staff and average operating costs to judge the performance of correctional centres
- has developed performance standards for assets such as compliance with building codes or security requirements
- has implemented an asset management system to monitor asset condition, age and useful life. The system includes all assets critical to service delivery irrespective of value
- has adopted TAM as part of its strategic approach to manage the business. TAM plans are prepared in conjunction with corporate and results and services plans and involve executive management.

NSW Fire Brigades

The NSW Fire Brigades controls assets worth around \$412 million (see Appendix 2).

The NSW Fire Brigades has developed TAM plans for its information technology and telecommunications assets but was yet to establish the same plans for properties, fire appliances and other plant and equipment that are also essential for an emergency response. NSW Fire Brigades reported that it has now drafted an asset strategy for properties and will commence preparing asset strategies for fire appliances and other plant and equipment.

NSW Fire Brigades could improve asset management by:

- developing an asset strategy covering properties, fire appliances and other plant and equipment to demonstrate how these assets support service delivery
- developing performance standards for properties, fire appliances and other plant and equipment to help judge when to enhance, maintain or dispose of these assets
- addressing in all asset strategies, risks to service delivery arising from asset failure
- consolidating information on condition, performance and the maintenance history of all assets required for an emergency service in a single data base
- reporting deferred maintenance in asset plans and indicating what impact this may have on service delivery.

Powerhouse Museum The Powerhouse Museum controls assets worth around \$538 million (see Appendix 3).

> The Museum recognises that it needs to better integrate TAM planning with strategic decision-making. It is in the process of developing new corporate and TAM plans, and is aiming to ensure that assets support services and strategies in the corporate plan.

The Museum could improve asset management by:

- including strategies in TAM plans for managing the collection and information technology assets
- developing performance standards to help judge the efficiency and effectiveness of its assets in delivering services and achieving results
- preparing a risk management plan for assets that identifies risks to service delivery arising from asset failure
- benchmarking its asset management practices and results against other Museums in NSW or nationally
- reporting deferred maintenance in asset plans and indicating what impact this may have on service delivery.

Response from NSW Treasury

Thank you for your letter of 12 September 2005 providing the final draft report of the Performance Audit - Implementing Asset Management Reforms.

I am pleased to note the audit found that Total Asset Management (TAM) policy provides a best practice framework to improve asset management in NSW. Since becoming responsible for TAM policy in mid 2003, Treasury has introduced a number of reforms to improve that policy's effectiveness. I note with particular interest that Treasury's approach in integrating TAM with the Budget process is considered an effective way of instilling TAM into agencies' management practices and is having a positive impact.

In relation to the three sample agencies, the Audit's findings that the Department of Corrective Services' approach to TAM represents best practice and that good practice was evident elsewhere is encouraging. I also note however that further improvement is needed in TAM policy implementation overall.

In relation to the Audit's main recommendations for Treasury:

- Provide further guidance on TAM: Further guidance will be provided in the TAM manual and through Treasury analysts as appropriate on what assets TAM plans should cover and also performance measurement. While common TAM principles apply to all agencies, including those with few assets, reporting requirements are flexible. In liaison with Treasury, an agency may develop plans commensurate with the nature of their services and asset portfolio. To assist with suggested plan structures and coverage/content, an illustrative case study and also a template have been provided.
- Include impact statements in TAM: Alignment of assets with service needs, performance measurement (effectiveness and efficiency) and management of asset related risks (impacts) to services are central to good TAM planning. These core elements prevent a shift in focus from services to assets (for their own sake). They ensure that TAM plans provide the necessary context for consideration of an agency's asset proposals, including maintenance and capital investment. Impact statements should provide a useful supplement to current requirements and this aspect will be addressed in the TAM manual.
- Improve plan quality: Treasury is taking steps to improve its feedback to agencies, to progressively raise TAM plan quality. This includes ongoing upgrading of Treasury analysts' skills in reviewing TAM plans, provision of technical support from the Asset Management section of Treasury to both analysts and agencies and upgrading the present mechanisms for assessing TAM plans. Greater effort is also being made to ensure agencies submit their plans by the due date.

I would like to thank the audit team for its consultative approach and the cooperative manner in which this audit was undertaken. The audit report provides valuable insights into factors contributing to effective asset management and impediments to good practice. The report's recommendations will assist in addressing these impediments and improving asset management generally across government.

(signed)

John Pierce Secretary

Dated: 16 September 2005

1.	What is asset management?

At a glance

The NSW Government currently holds physical assets worth about \$167 billion and spends around \$2 billion each year maintaining them. The cost of replacing these assets is estimated at over \$400 billion.

Asset management is a comprehensive and structured approach to acquiring, maintaining and upgrading physical assets to provide services to the community.

At the agency level, asset management creates medium to long-term plans that consider the purpose of assets and identify what assets are required at what location; what condition assets need to be in to maintain services and what assets are surplus to needs.

For government, asset management facilitates budget deliberations and the efficient allocation of limited funds amongst competing priorities.

The TAM Policy was introduced in 1992 to encourage agencies to adopt strategic asset management practices. Agencies were required to examine the contribution assets made to service delivery and decide whether assets should be replaced, maintained or disposed of depending on service requirements.

The purpose of TAM was also to remove agency bias towards the acquisition of new assets which was often at the expense of maintaining existing assets.

More recently, responsibility for TAM policy was transferred to NSW Treasury to integrate asset management with the budget process and to better inform budget allocation decisions.

1.1 What is asset management?

Asset management is a tool for achieving best value for money from the government's asset portfolio. It ensures that only those assets essential for services are retained and are maintained at a level consistent with age and performance requirements.

Asset management also facilitates budget deliberations providing information to government on the cost of proposals and alternatives to asset acquisition such as refurbishment or maintenance.

1.2 What constitutes the Government's asset portfolio?

Over \$167 billion in assets are held by the NSW Government

In June 2005, the NSW Government held physical assets worth around \$167 billion. The cost of replacing these assets is estimated at over \$400 billion. Each year, the Government spends between \$7-9 billion on new or replacement assets and over \$2 billion on maintenance.

Exhibit 1: Types of assets

Around half of the assets held by the NSW Government are controlled by the general government sector with the remainder controlled by public trading enterprises such as RailCorp, Energy Australia etc. General government sector assets include schools, hospitals, roads, bridges, and prisons whereas public trading enterprises control power generation plants and electricity supply, water supply and transport.

Asset types include land and buildings representing nearly 49 per cent of the portfolio, infrastructure such as roads, bridges, dams etc representing about 45 per cent and plant and equipment representing around 6 per cent.

Source: NSW Treasury

1.3 What are the benefits of good asset management?

Because of the size of the Government's asset portfolio, poor acquisition, maintenance or disposal decisions represent a significant risk to budgetary outcomes and a failure to achieve best value.

Good asset management can improve value for money

Exhibit 2: Some of the benefits of asset management

- → capital savings from adopting solutions that do not involve buying new assets; extending asset life through appropriate risk management and identifying opportunities to outsource to the private sector
- → recurrent cost savings by moving to planned maintenance and reduced breakdown maintenance; improving operational efficiency of existing assets, judging what level maintenance is appropriate to maintain services
- → more realistic allocation of funds to maintain publicly owned assets at a level consistent with service, condition and age
- → identifying the importance of assets in the delivery of services so that appropriate maintenance management strategies can be effectively applied.

Source: Audit Office Research; G Feitelberg Strategic Asset Management Seminar 2004

Effective asset management requires tradeoffs to achieve a balance between acquisition, utilisation and disposal. Agencies need to determine what:

- service levels to provide now and what will be needed in the medium term, say the next 5 years
- assets they need to provide the specified service levels now and in the future
- condition the assets need to be in to meet specified service levels.

The challenge for agencies is to develop strategies for managing asset performance, capability and condition to meet or exceed operational requirements.

1.4 Asset management practices in NSW

The TAM policy was first introduced in 1992

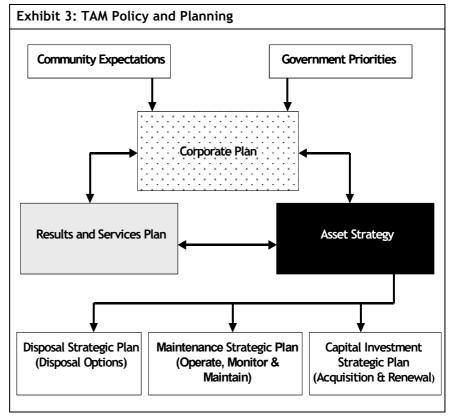
Asset management became popular in the public sector in the 1990s as a means of improving capital investment decisions. In NSW, the TAM policy was released in 1992 followed by a manual on how to prepare TAM plans by the then Department of Public Works.

An important component of the Government's fiscal strategy of reducing debt levels is appropriate asset management by agencies. TAM is considered to provide the necessary tools for agencies to contribute to this outcome.

In June 2003, responsibility for TAM was transferred to NSW Treasury. This change integrates asset management with budget deliberations and aligns TAM with other recent reforms such as the introduction of Results and Services Plans (RSP).

All agencies, except state owned corporations (SOCs) are required to submit TAM plans to NSW Treasury. SOCs, who control nearly 30 per cent of government assets, are encouraged to adopt TAM Policy and prepare plans in line with TAM requirements but are not required to submit them to NSW Treasury.

TAM plans comprise an asset strategy that supports corporate objectives and service requirements and specific plans to deal with asset acquisitions, maintenance and disposal.



Source: Audit Office Research and NSW Treasury

Note: An Office Accommodation Strategic Plan is also required by NSW Treasury as part of TAM, although these plans were not examined as part of the audit.

Each year, agencies should review the asset strategy against the corporate plan to check that the strategy supports service delivery and is consistent with the results outlined in the RSP.

Currently, 63 budget dependent general government sector agencies are required to submit RSPs and TAM plans to NSW Treasury. In addition:

- 14 non-SOC public trading enterprises such as State Transit Authority, Sydney Harbour Foreshore Authority, Sydney Catchment Authority etc are required to submit TAM plans only
- 23 non-budget dependent general government agencies such as Aboriginal Housing Office, NSW Maritime Authority, WorkCover Authority, Public Trustee NSW etc are required to submit TAM plans only.

Although NSW Treasury has always received TAM plans, these are now assessed in conjunction with an agency's corporate plan and where appropriate, the RSP to inform budget deliberations.

1.5 This audit

This audit reviewed the policy framework for asset management in general and the asset management practices in three agencies to identify:

- factors contributing to effective asset management including how agencies have built capacity and capability
- key issues affecting the integration of asset management with other business plans and processes
- barriers and impediments to best practice.

Our sample agencies were:

- Department of Corrective Services
- NSW Fire Brigades
- Museum of Applied Arts and Sciences (Powerhouse Museum).

Comments on each agency's TAM plans are included in Appendices 1 to 3.

Appendix 4, About this audit, provides more detail.

2.	Are	asset	mana	igeme	nt pra	ctices	effectiv	e?

At a glance

We found the TAM policy provides a best practice framework to improve asset management in NSW.

NSW Treasury's approach to linking asset plans to the budget process is an effective way of making TAM a mainstream part of management practice in NSW. This was a problem with previous arrangements.

Although TAM plans have improved over time, our review of plans prepared by the NSW Fire Brigades and the Powerhouse Museum identified a number of shortcomings such as:

- some assets essential to service delivery were not included
- the contribution of some assets to services was not clear
- there were no performance standards or measures to help judge whether assets were needed or could be disposed of
- agencies had not adequately addressed the risks assets pose to service delivery if they fail and how that risk should be managed in planning documents
- asset management systems were not able to provide management with information on asset condition, maintenance, performance or disposal schedules.

These findings contrast the approach taken by the DCS where we found examples of best practice that highlight the benefits to be gained from TAM.

Overall, agencies should include in TAM plans the impact on services if funding is not received and the extent of deferred maintenance. This would enable budget deliberations to be made with full knowledge of the implications and risks where tradeoffs are made.

2.1 TAM and the budget process

TAM policy reflects the Government's objective of achieving best value from its asset portfolio. TAM provides the necessary tools to facilitate:

- better resource allocation decisions
- more appropriate maintenance and management of assets
- improved service delivery.

We are satisfied that the policy provides a best practice framework for NSW. It is similar to approaches taken in other jurisdictions. Although TAM in its original form has been around for over a decade, agencies have been slow to embrace these practices until more recently, when responsibility for policy implementation was transferred to NSW Treasury. NSW Treasury is also facilitating changes in agency practices through guidance material, training and specialist support.

Part of the renewed interest in TAM is due to TAM plans playing a more active role in Treasury's assessment of agencies' funding proposals.



Sound TAM plans enable budget deliberations to be made with knowledge of the costs of proposals, facilitating priority setting and tradeoffs. However, problems with the quality of agency TAM plans and the timeliness of submission may limit the effectiveness of this approach.

2.2 Do agency TAM plans meet requirements?

Although we saw some improvement in agency plans and practices over time, our review of plans prepared by the NSW Fire Brigades and the Powerhouse Museum found they generally did not meet requirements (see also detailed reports at appendix 1,2 and 3).

Exhibit 4: TAM plan requirements

- an asset strategy that addresses the service needs of clients and is consistent with service requirements outlined in the corporate plan and the results and services plan
- → defined service levels and requirements eg response times, accommodation standards, operating hours etc
- → asset performance standards and measures
- strategies to manage risk and minimise the chance of asset failure
- → plans that address capital investment, maintenance, and disposal.

Source: NSW Treasury Total Asset Management Policy 2004

Not all plans had an asset strategy

Assets should be seen as key contributors to efficient and effective service delivery. An asset strategy should be developed that outlines service demands and asset capability, condition and location to meet those requirements.

Although the NSW Fire Brigades had developed an asset strategy for its information technology assets, it did not have one for properties, appliances and equipment, valued at around \$398 million. This meant there was no analysis of these assets against service requirements to identify gaps or excesses, there were no standards for asset performance and no indication of assets' useful life.

NSW Fire Brigades reported that it has prepared an asset strategy for properties, which will be submitted to NSW Treasury as part of the 2006-07 budget process.

Asset plans were not linked to corporate strategy or service standards TAM plans are supposed to represent a strategic approach to asset management. An agency's corporate plan outlines strategic directions whereas the RSP outlines the services to be delivered and priorities. Assets should be judged in light of these requirements. However, in both NSW Fire Brigades and the Powerhouse Museum, there was no link between corporate strategy and TAM plans and there were inconsistencies in content between the documents.

Both agencies report that the latest review of corporate and TAM plans has ensured that the content is consistent in both documents.

In contrast, the DCS sees TAM planning as critical to its business operations. DCS' TAM plan reflects the Department's strategic direction and identifies whether assets need to be enhanced by capital investment, maintained or disposed of.

Asset performance standards had not been developed

Performance standards should be prepared for each asset type. Indicators and measures are used to monitor asset performance against these standards.

Only DCS had developed asset performance measures to demonstrate how the asset portfolio supports services. Both the NSW Fire Brigades and the Powerhouse Museum reported they were in the process of developing both service standards and performance measures for assets.



Exhibit 5: DCS asset performance measures					
Custody management					
Asset	Performance standard	Performance measure			
correctional centres	Asset design suitable for safety of all staff and inmates	Number of assault on staff or inmates Deaths in custody			
	Facilities comply with Building Code of Australia	100% compliance			
Prisoner escorts					
Asset	Performance standard	Performance measure			
Vehicles	Schedule adhered to	No. breakdowns			
	(reliability)	On time arrival ≥ 95%			
		Cost of repairs per vehicle			
	Optimum utilisation	Idle time ≤ 10%			
	Comply with Roads and Traffic Authority requirements	All vehicles registered			

Source: Department of Corrective Services TAM plan 2004-05; Audit Office research

Agencies generally reported this to be a difficult exercise, particularly where service standards have yet to be defined in the results and services plan.

Recommendation

It is recommended that NSW Treasury provide further guidance to agencies on developing service standards and performance measures for assets.

Two agencies had not adequately addressed risks affecting asset performance in plans Maintenance strategies are intended to mitigate against risks associated with:

- service failure or performance levels not being achieved for example water pressure, lifts not working, water cooling towers failing to meet health requirements
- higher maintenance costs from greater asset deterioration or litigation arising from service failures
- occupational health and safety or litigation from accidents or injury.

DCS had reviewed asset risks and developed appropriate strategies (see exhibit 6). Neither the NSW Fire Brigades nor Powerhouse Museum plans adequately dealt with asset related risks such as poor reliability or asset failure. In the case of the NSW Fire Brigades, the risks had been considered and there were strategies and redundancies in place to manage the risk of asset failure although these did not appear in TAM plans. The NSW Fire Brigades and Powerhouse Museum plans also did not address the risk that changes in demand for services may have on its asset base.

For example, the Powerhouse Museum plan did not address the risk that inadequate property maintenance may have on the museum being open to the public year round or the preservation of its collection.



Exhibit 6: DCS asset strategies to address risk				
Service	Risk	Management Measure(s)		
Custody management	Asset design unsuitable for service	Forward planning to allow adequate lead time for new facilities		
	Insufficient space & facilities	Forward planning to allow adequate lead time for new facilities - rolling program of upgrades		
	Insecure and/or spaces not monitored	Forward planning to allow adequate lead time for new facilities - rolling program of facilities upgrades		
	Inadequate equipment	Forward planning to allow adequate lead time for new facilities		

Source: Department of Corrective Services TAM plan 2004-05

Asset management systems were not always adequate

Information on assets is generally maintained in an asset register which records the value and characteristics of the agency's asset portfolio. The asset register forms the basis to which other asset management systems such as capital works and minor works programs can be linked.

All NSW agencies have some form of basic asset register for accounting and budgeting purposes. However, the type and extent of information maintained in these registers varies considerably.



DCS was the only agency that had an asset management system that provided information on:

- service delivery functions and asset performance data
- asset age, condition and disposal schedule
- financial information such as valuations, depreciation
- maintenance data and capital and minor works history
- heritage significance and environmental characteristics.

NSW Fire Brigades reports it submitted a business case in 2003 for a new asset management and maintenance system but did not receive funds for a new system.

Plans did not cover all assets essential to service delivery TAM plans should include all assets. The Powerhouse Museum TAM plan for 2003-04 covers only properties and did not include the collection worth \$370 million. The Museum reports that the collection has now been included in its 2005 TAM submission.

NSW Fire Brigades does not include assets valued under \$5,000 in its TAM plan even where this equipment is essential to emergency services. For example medical treatment packs, breathing apparatus, defibrillators and gas suits are not included.

Recommendation

It is recommended that NSW Treasury provide additional guidance to agencies on what assets should be covered in TAM plans in terms of contribution to service delivery.

Plans did not assess the impact of maintenance on performance Not all assets need to be maintained at the same level and some assets may not need to be maintained at all. However, without some analysis of what is required, the amount of deferred maintenance reported by an agency may over or understate what the true position is.

Agencies should review deferred maintenance to determine the amount of work required to return the asset to a condition that achieves service reliability rather than to maintain the asset in pristine condition. The amount of deferred maintenance reported following this level of analysis should also be commensurate with asset age and the agency's replacement or disposal strategies.

None of the agencies reviewed had tested deferred maintenance to determine whether the amount was valid.

Plans did not assess the impact on services if funding was not received Overall, agencies should also include in TAM plans the impact on services if funding is not received as well as the amount of deferred maintenance. This would enable budget deliberations to be made with the full knowledge of the implications and risks if tradeoffs are made.

Recommendation

It is recommended that NSW Treasury require agencies to include in TAM plans:

- the impact on services if proposals to acquire assets or maintenance costs are not funded
- deferred maintenance that is consistent with asset age, condition and service requirement
- maintenance strategies to address this deferred maintenance and a funding plan
- implications if maintenance is not undertaken in terms of effect on service delivery, rectification costs and other risks.

2.3 Improving asset management

Improving plan quality

Since 2003, NSW Treasury has continued to provide guidance and training for agencies on TAM. More recently, NSW Treasury released a template to help agencies develop and present TAM plans and a best practice case study based on work undertaken with DCS. It is also working with those agencies with high value assets to improve asset management practices.



The content of TAM plans should be reviewed on an annual basis to check that priorities remain unchanged and that it continues to meet the requirements of the corporate plan and the RSP. A comprehensive review should be completed every three years in line with a review of corporate strategy and to address any shift in demand for services.

Improving feedback from NSW Treasury on plan quality and compliance

TAM plans together with an agency's corporate plan and the RSP, are assessed by NSW Treasury to inform budget allocation decisions.

Although NSW Treasury analysts may choose to provide feedback on the quality of TAM plans, it is not a requirement of the process and until 2002, there was no standard form or checklist to guide this analysis.

Agencies indicated that feedback from NSW Treasury on the quality of TAM plans would be useful and an effective way of improving agency compliance.

Recommendations

It is recommended that NSW Treasury improve feedback to agencies on the quality of TAM plans and compliance with policy by:

- using the TAM template as a type of scorecard to provide comment on plans
- implementing quality assurance procedures to ensure Treasury analysts provide consistent, accurate and timely feedback to agencies.

Benefits may also be gained from providing more general feedback on TAM quality and compliance similar to the approach used by NSW Treasury to improve the quality of annual reports. (Each year, Treasury reviews a sample of annual reports for compliance with legislation and to identify best practice. The results of these reviews are made available to all agencies.)

Recommendation

It is recommended that NSW Treasury review a sample of agency TAM plans annually to:

- monitor compliance with TAM policy
- promote best practice in asset management.

Improving the timeliness of TAM plans

TAM plans need to be received in a timely manner to guide budget deliberations. In 2004 TAM plans were required to be submitted to NSW Treasury by 31 August.

NSW Treasury does not monitor the receipt of plans or report on timeliness. Our analysis shows that most agencies failed to meet this deadline.

The late submission of plans limits the amount of time NSW Treasury analysts have to review proposals and to provide feedback to agencies.

Recommendations

It is recommended that NSW Treasury monitor the submission of TAM plans and report on agency performance either as part of the annual review of TAM plans or in its annual report.

TAM needs to be adapted for small portfolios

In improving the quality of TAM plans, one problem may be the one size fits all approach to TAM which may overwhelm agencies with a small portfolio of assets. About one third of agencies required to submit TAM plans to NSW Treasury control assets worth less than \$10 million yet the reporting requirements are the same for agencies controlling large portfolios.

Recommendation

It is recommended that NSW Treasury develop TAM plan requirements more suited to agencies holding small asset portfolios.

	Appendices

Appendix 1: Department of Corrective Services

Audit opinion

The Department of Corrective Services (DCS) has effectively implemented TAM. TAM planning is integral to its business operations, and it has established a clear link between asset management and the delivery of its services. Many of DCS' TAM practices represent best practice and are worthy of consideration by other NSW government agencies.

What assets does DCS manage?

DCS's total assets were valued at \$1,419 million as at 30 June 2005. Its land and buildings were worth \$1,311 million, and its plant and equipment \$55 million. Its major assets comprised 30 correctional centres (eight maximum, eight medium and 14 minimum security facilities), 10 periodic detention centres, 2 transitional centres for female inmates and 69 probation and parole offices. In 2004-05 DCS spent \$21 million on maintenance and \$110 million on capital works.

What is DCS's approach to asset management?

Asset management is a key corporate activity for the Department. A strategic approach has been taken to asset management.

Corporate and asset planning is aligned

The timeframes for corporate, RSP and TAM planning should be aligned and the content of the TAM plan should support the service requirements in the corporate plan and RSP. This facilitates budget deliberations between the Minister, the Budget Committee of Cabinet, the Treasury and the agency.



DCS's asset strategy shows how assets support corporate objectives and services in the RSP. Plans are reviewed annually and in conjunction with each other to ensure priorities are consistent in all documents.

For example, DCS's various asset types are listed in the results hierarchy in the RSP demonstrating their direct contribution to services and results.

The RSP and TAM planning processes have helped clarify what DCS is trying to achieve and have been the catalyst for improved planning across the department.

DCS's TAM planning is comprehensive, and includes all of its major asset types.

Accountability and responsibility for asset management is assigned to

members of the executive team. Officers responsible for managing the

Clear accountability and responsibility for asset management

asset portfolio, the budget and corporate strategy are collectively involved in developing the TAM plan and the RSP. The Commissioner and Minister review TAM plans and approve plans before submitting to NSW Treasury.



DCS has developed policies and procedures to complement the TAM tools provided in NSW Treasury guidance material.

GOOD PRACTICE

How well does DCS use its assets to deliver services?

DCS uses a variety of data to assess the adequacy of its asset portfolio and how well its assets contribute to services and results. Examples include the number of escapes from secure custody, escorts meeting service standards, the number of assaults against inmates and staff, and average operating cost.

DCS also uses data on actual and projected population imprisonment rates, correctional centre utilisation and spare capacity, prison population trends, police numbers and the potential impact of new or proposed legislation to estimate future demand and its impact on assets and service provision.

Plan specifies performance standards

DCS has specified performance standards for its building assets including services. Performance standards for correctional centres include compliance with the Building Code of Australia, occupational health and safety requirements, heritage standards, health standards and reliability of security systems.

DCS explores non-asset alternatives

DCS investigates and implements alternatives to custodial options such as periodic and home detention. However, the extent to which it can employ these measures to relieve the demand on its correctional centres depends on sentencing practices.

TAM planning and asset performance monitoring is supported by:

- annual condition reports on built assets
- revaluation of buildings every five years
- reports from official visitors and recommendations by the Ombudsman concerning accommodation standards
- analysis of reported incidents
- staff satisfaction surveys.

DCS is in the process of improving its asset and condition monitoring by:

- establishing detailed performance measures for buildings including services asset condition assessments
- providing training to DCS Centre staff responsible for maintenance to improve skills in condition assessments and hence the quality of the maintenance program.

How well does DCS manage its assets?

Asset management systems meet requirements



In April 2005, DCS implemented a new computerised asset management system to consolidate asset information into one database, improve the effectiveness of monitoring of capital and maintenance projects, and remove duplication. Prior to this, asset records and associated data were maintained in discrete databases.

The new asset management system, which includes the asset register, links asset planning with operational goals and also meets accounting and financial reporting requirements.

Information on assets feeds into the TAM planning process. The TAM plan incorporates asset maintenance, acquisition and disposal plans and includes:

- service standards consistent with the requirements in the RSP and corporate plan
- asset performance standards and indicators and measures to monitor asset performance
- an assessment of the risks assets pose to expectations and risk mitigation strategies.

The TAM plan does not, however, comment on the useful life of properties or information technology systems nor their life cycle costs.

Opportunities for improvement

DCS should include in its TAM plan information on the useful life of its assets and life cycle costs.

DCS advises that the next TAM plan will be more specific and indicate life cycle costs by asset class and the useful life of assets.

DCS has identified the assets it needs to meet required service levels and the capital investment strategic plan addresses gaps between service requirements and the asset base.

DCS employed value management studies to identify optimal asset solutions such as best correctional centre design to minimise prisoner/guard ratios. These studies are used to ensure new and redeveloped facilities support contemporary operations and meet efficiency benchmarks.

The capital investment plan does not, however, quantify the likely impact on services if government does not fund proposed capital investments.

Opportunities for improvement

DCS should indicate in its capital investment plan the likely impact on services if proposed capital investments are not funded.

DCS has specified asset performance standards in the asset strategy. The maintenance plan monitors condition and performance against these.

While the maintenance plan shows an allocation to address maintenance deferred from previous years, it does not quantify the total value of backlog maintenance. Recently, a number of projects have been deferred in order to divert resources to meet new security requirements, which may contribute further to the maintenance backlog.

DCS advises that improved recording of condition surveys in its new asset management system will help it determine better the full extent of deferred maintenance and enable it to include this in budget estimates.

Opportunities for improvement

DCS should review deferred maintenance to:

- identify the actual maintenance required consistent with asset service, condition, age and disposal strategy
- develop maintenance management strategies and funding plans to address this
- identify implications for service delivery if maintenance is not undertaken (risk and consequences of asset failure)
- include these matters in its TAM plan.

DCS's asset disposal plan identifies surplus properties, and includes a strategy on managing these properties through to disposal. The plan, however, does not estimate the cost of disposing of its surplus properties, or include information on plant and equipment available for disposal.

Opportunities for improvement

DCS's should include in its asset disposal plan:

- an estimate of the costs of disposing of surplus assets
- details of plant and equipment available for disposal.

Response from Department of Corrective Services

I refer to your correspondence of 12 September 2005, regarding the performance Audit Implementing Asset Management Reforms.

Thank you for the opportunity to comment on the report. I note the audit finding in relation to areas of Good Practice and acknowledge the work undertaken by the Finance and Asset Management Division in achieving these outcomes.

In relation to those areas identified as "needing improvement" the most recent TAM Strategy submitted to Treasury in August 2005 incorporates the advice provided by the Audit Office as a part of this review.

Finally, I would like to thank the Audit Team for a very constructive and useful review of the department's Asset Management Reforms.

(signed)

Ron Woodham Commissioner

Dated: 30 September 2005

Appendix 2: NSW Fire Brigades

Audit opinion

The NSW Fire Brigades has effectively implemented TAM for its information technology and telecommunications assets. These assets are linked to service requirements; capital investment plans have been developed to address gaps in capability, and maintenance strategies developed that meet operational requirements.

However, at the time of audit NSW Fire Brigades had yet to establish a clear link between assets and the delivery of services for its portfolio of buildings, vehicles and other plant and equipment that are also integral to its business. TAM planning for these assets has been generally considered a requirement for government funding, rather than good management practice.

NSW Fire Brigades is dependent on assets to deliver emergency services. Its challenge is to develop a comprehensive asset management strategy for managing asset performance, capability and condition to meet or exceed service requirements.

NSW Fire Brigades reported that it has now drafted an asset strategy for properties and will commence preparing asset strategies for fire appliances and other plant and equipment.

What assets does the NSW Fire Brigades manage?

NSW Fire Brigades total assets were valued at \$412 million as at 30 June 2005. Its land and buildings were worth \$266 million, fire appliances and motor vehicles \$123 million, and computers, plant and equipment worth \$23 million. In 2004-05 NSW Fire Brigades spent \$14 million on maintenance and \$15 million on capital works.

Its assets include 338 fire stations and 875 fire appliances.

What is the NSW Fire Brigades approach to asset management?

Aligning planning processes links assets to results

TAM policy requires agencies to take a strategic approach to asset management. This means examining the contribution assets make to service delivery and making decisions and tradeoffs regarding whether assets should be replaced, maintained or disposed of depending on service needs.

The corporate plan outlines an agency's strategic direction. Timeframes for preparing the corporate plan, RSP and the TAM plan need to be aligned and the TAM plan should show the role assets play in providing services. This is necessary to support budget deliberations between the Minister, the Budget Committee of Cabinet, the NSW Treasury and the agency.

The NSW Fire Brigades Corporate Plan 2005-2008 includes:

- risk based allocation of resources to enable fast, skilled service delivery based on identified community needs
- maintenance of fleet and equipment to ensure fast effective protection of communities
- high quality systems for logistics support, operational procedures and methods.

Although there is consistency between the corporate plan and the RSP in terms of services to be delivered and priorities, these are not reflected in asset management plans.

In addition, responsibility for asset management is split between two areas, one responsible for properties and fleet, the other responsible for information technology. Each group in isolation considers asset management and are separate to the corporate planning process.

NSW Fire Brigades reported that it has introduced a new methodology for developing its service delivery strategy which will ensure alignment between corporate and TAM plans.

Opportunity for Improvement

NSW Fire Brigades should align its corporate, TAM and RSP processes to achieve consistency in content and ensure its assets support proposed service levels.

NSW Fire Brigades report it is reviewing its planning framework to better link the corporate plan, TAM practices and the RSP.

The importance of asset strategy

The asset strategy provides the strategic direction for acquisition, maintenance and disposal decisions. It defines the assets required to meet operational requirements, identifies the risks assets pose to service delivery and the performance levels required to achieve service standards. The strategy determines whether assets should be enhanced by capital investment, maintained or disposed of.

NSW Fire Brigades has developed a strategy for information technology and telecommunications assets including standards for asset performance and defined useful life.

However, at the time of our review the NSW Fire Brigades did not have an asset strategy covering properties, fire appliances or other plant and equipment. NSW Fire Brigades has reported that it will soon have a properties asset strategy, and it will be submitted to NSW Treasury as part of the 2006-07 budget process.

It is not possible to judge from the TAM plans for each asset type how the asset supports service delivery and whether there are any gaps (or excesses) in the asset base that may limit NSW Fire Brigades ability to meet service standards.

Opportunity for Improvement

NSW Fire Brigades needs to develop a comprehensive asset strategy that includes each asset type needed to meet services standards.

Insufficient information on the condition of assets

NSW Fire Brigades did not have reliable information on the condition of its properties.



NSW Fire Brigades has recently commenced a condition survey of all properties located in metropolitan areas. This survey will extend to all properties later in the year. NSW Fire Brigades report this information will be used to inform the asset maintenance strategy.

How well does NSW Fire Brigades use assets to deliver services?

NSW Fire Brigades monitors the performance of property and fire appliance assets primarily by comparing expenditure against budget. The NSW Fire Brigades lacks key performance information about these assets and other equipment to make informed judgements about:

- the efficiency and effectiveness of its assets in delivering services and achieving results
- compliance with specified asset performance standards.

The NSW Fire Brigades reported that:

- its primary performance measure for fire appliances was maintaining an average fleet age below 15 years
- when planning station locations it has a target of 7minutes 1 second to respond to calls in the metropolitan area and a target of 10 minutes for calls in non-metropolitan fire districts.



For information technology and telecommunications assets NSW Fire Brigades has developed performance criteria based on user requirements (criticality, availability, reliability, functionality and location) and efficiency measures (utilisation and capacity constraints).

The NSW Fire Brigades has a number of performance measures in its RSP. It has yet to develop service standards or targets for fire fighting activities such as response times or limiting structural damage.

Opportunity for Improvement

The NSW Fire Brigades should:

- develop service standards and targets for the performance measures in the RSP and the corporate plan
- establish key performance indicators to monitor the efficiency and effectiveness of assets in delivering its services and achieving results
- set meaningful performance standards for assets to guide maintenance strategies and priorities and to determine the level of maintenance required consistent with level of service, condition and age.

NSW Fire Brigades has information on incident frequency, location, hazard levels and response times and population demographics that are used to assess risk and priorities for the allocation of resources. However, while the risk assets pose to service delivery has been considered and NSW Fire Brigades reports it has strategies and redundancies in place to manage the risk of failure, these did not appear in TAM plans.

Opportunity for Improvement

NSW Fire Brigades should include in TAM plans a risk management plan for assets that identifies risks to service delivery arising from asset failure.

NSW Fire Brigades reports that it is currently reviewing its risk management framework and will implement a risk based approach to asset management.

How well does NSW Fire Brigades manage its assets?

Managing asset Information management

NSW Fire Brigades maintains an asset register that records details of assets valued at over \$5,000. The primary purpose of the register is to meet financial reporting requirements.

Much of the equipment used in an emergency response such as medical treatment packs, defibrillators, gas suits and breathing apparatus is valued at less than \$5,000 excluding it from the register.

The register also does not include information on asset condition, performance, or maintenance history. This information is maintained in nine unique databases or spreadsheets, dispersed throughout the organisation.

Opportunity for Improvement

NSW Fire Brigades needs to consolidate information on asset condition, performance and maintenance history in a single database.

This database should include equipment that is critical to service delivery even where it is valued at less than \$5,000.

The NSW Fire Brigades reported that in 2003 it submitted a business case for a new asset management and maintenance system to NSW Treasury that did not receive funding.

NSW Fire Brigades reports it has identified the need to consolidate information about assets into a single asset management system. The new system will record asset location, age, value, condition, maintenance history and performance history.

Capital investment plans not linked to services

There are capital investment plans for properties and fire appliances however these plans do not link proposals to service delivery outcomes.

For example, NSW Treasury provides \$18 million each year to replace fire appliances. The target for the replacement program is to maintain an average fleet age of 15 years. The average age is currently 9.7 years. The plan does not discuss fleet utilisation, location or capacity issues to identify service delivery gaps or where assets exceed service requirements.

There is no capital investment plan for other plant and equipment critical to an emergency response.



However, NSW Fire Brigades has developed a capital investment plan for acquiring information technology assets in order to continue to meet service requirements. The strategies include implementing:

- management information and mobile data communication systems to minimise the impact of emergency incidents on the community
- an asset maintenance and management system.

Opportunity for Improvement

Future capital investment plans should link asset acquisition proposals to service delivery requirements.

Deferred maintenance not addressed in plans

The current TAM plan indicates a \$40 million shortfall in building maintenance funding. NSW Treasury has provided \$5.1 million additional funding over 2005-06 to 2008-09 to help address this. Deferred maintenance is not addressed in other asset plans.

The property maintenance plan does not indicate what impact deferred maintenance may have on service delivery and does not include any mitigation strategies if maintenance is not fully funded.

As mentioned earlier, NSW Fire Brigades does not have indicators of asset performance or service levels. These may help it judge better the level of maintenance required to meet service levels.

Opportunity for

NSW Fire Brigades should review deferred maintenance to:

- identify the actual maintenance required consistent with asset service requirements, condition, age and disposal strategy
- develop maintenance management strategies and a funding plan to address this
- identify implications for service delivery if maintenance is not undertaken (risk and consequences of asset failure)
- include these matters in its TAM plan.

Response from NSW Fire Brigades

Thank you for the opportunity to comment on the Performance Audit "Implementing Asset Management Reforms". The NSW Fire Brigades (NSWFB) was pleased to participate in the audit and work with the Audit Office to evaluate our asset management including work in progress to enhance governance and accountability.

I note the report references the NSWFB Corporate Plan 2005-2008 that recognises the

- Risk based allocation of resources to enable fast, skilled service delivery based on identified community needs
- Maintenance of fleet and equipment to ensure fast effective protection of communities, and
- High quality systems for logistics support, operational procedures and methods

together with the alignment between planning and asset management through our new Service Delivery Strategy methodology which has been reviewed to allow for better risk based allocation of resources.

The report also notes the NSWFB commitment to reducing risk to firefighters and the community. The NSWFB has business continuity plans and inbuilt levels of redundancy to counter equipment failures or to increase assets at emergency incidents in response to an escalation of risk to the community.

In addition the NSWFB was the first and is one of only two fire and emergency services in the world with ISO 9002 accreditation for the delivery of specialist technical services and support for breathing apparatus and hazardous materials protective equipment.

The NSWFB has asset management plans for information, communications and technology which supports the triple zero emergency network. In parallel with the audit the NSWFB completed development of a comprehensive asset management plan for our properties.

The NSWFB appliances and minor fleet are managed consistent with industry best practice and existing asset maintenance and fleet replacement plans will be incorporated into a fleet asset management plan.

The NSWFB has also submitted a business case for a new asset management/ maintenance system to the Treasury and identified this need in our 2004 Results and Services Plan. Although the NSWFB expects to have installed a new SAP Financial system by 1 July 2006 which has some asset management modules, to support replacing our asset register, it is not expected that it will have the capability to address the NSWFB needs concerning small asset maintenance and equipment tracking.

I will ensure that where the report makes recommendations for improvements these will be implemented and action has already commenced in a number of areas.

(signed)

Greg Mullins AFSM Commissioner

Dated: 28 September 2005

Appendix 3: Powerhouse Museum

Audit opinion

To date the Powerhouse Museum's TAM plan has not played an important role in business planning. The Museum has yet to establish a clear link between assets and the delivery of services. TAM plans have been seen as a requirement for government funding rather than good management practice.

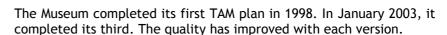
The Museum recognises that it needs to better integrate TAM planning with strategic decision-making. It is in the process of developing new corporate and TAM plans, and is aiming to ensure that assets support services and strategies in the corporate plan.

Other key challenges for the Museum are to address issues with its object collection in its TAM plan, establish better and more accessible information on the condition and maintenance history of its assets, and develop ways to assess the contribution of all assets to service delivery.

What assets does the Museum manage?

The Museum's total assets are valued at \$538 million. Its collection is worth \$399 million. Its land and building assets comprise: the Powerhouse Museum at Ultimo; Sydney Observatory; the former Ultimo Post Office and a storage facility at Castle Hill. The Museum's land is worth \$33 million, buildings \$85 million and plant and equipment \$21 million. In 2004-05 the Museum spent \$3.5 million on maintaining its buildings, plant and equipment and \$5 million on new capital works.

What is the Museum's approach to asset management?



TAM policy requires agencies to take a strategic approach to asset management. This means examining the contribution assets make to service delivery and making decisions and tradeoffs regarding whether assets should be replaced, maintained or disposed of depending on service needs.

The corporate plan outlines an agency's strategic direction. Timeframes for preparing the corporate plan, RSP and the TAM plan should be aligned and the content of the plans should show the role assets play in providing services. This is necessary to support budget deliberations between the Minister, the Budget Committee of Cabinet, the NSW Treasury and the agency.

At the time of audit, the planning timeframes were not aligned and there was no link between the TAM plan and the corporate plan. For example, the Museum had developed its TAM plan before its RSP and had not reviewed the plan to ensure it would support the services and results outlined in the RSP.

The Museum has since adopted new practices to better link the corporate plan, the TAM plan and the RSP for the 2006-07 budget cycle.



Aligning planning processes links assets to results

The Museum is in the process of adopting new practices to better link the corporate plan, the TAM plan and the RSP.

Scope of the TAM plan should be expanded

The Museum's TAM plan focuses on properties. The Museum has yet to include the collection in its TAM plan. The Museum reported that the consultant it engaged to assist in preparing an earlier TAM plan advised that it was not necessary to include the collection in the process.

The Museum did not include detailed information on information technology (IT) infrastructure in its TAM plan. It advises that this information was included in separate submissions to the Office of Information Technology.

Opportunity for Improvement

The Museum should include strategies to manage the collection and IT assets in its TAM plan.

The Museum has advised it will include its IT assets and the collection in the TAM plan now being prepared. However, the Museum also advises that:

- the condition of much of its collection is yet to be assessed
- it is better placed to undertake such an assessment now that much of its collection is housed in its new Castle Hill storage facility
- it does not have sufficient resources to undertake a comprehensive assessment of the condition and treatment needs of its collection.

How well does the Museum use its assets to deliver services?

The Museum monitors asset performance primarily by comparing expenditure against budget. The Museum lacks key performance information to make informed judgements about:

- the efficiency and effectiveness of its assets in delivering services and achieving results
- compliance with specified asset performance standards.

The Museum's 2002-2005 corporate plan did not have key performance indicators either. The Museum reports its new strategic plan for 2005-2008 contains performance indicators.

Opportunity for Improvement

The Museum should:

- establish key performance indicators to monitor the contribution of assets to services and achieving results
- set meaningful performance standards for assets to guide maintenance strategies and priorities and to determine the level of maintenance required consistent with level of service, asset condition and age.

Need for risk management strategies The Museum does not have a comprehensive, structured and systematic process to evaluate and address asset related risks to service delivery and has not developed strategies to manage these risks.

Opportunity for Improvement The Museum should develop a risk management plan for assets that identifies risks to service delivery arising from asset failure.

How well does the Museum manage its assets?

The Museum has an asset management system that records and monitors the condition of its building assets including services. However, in regard to other assets:

- the records for the collection ranges from complete cataloguing to inventory level documentation
- the Museum does not have a complete asset history, such as when and what maintenance has been performed.

The Museum has a collection management and information system containing over 380,000 items not all of which have been fully catalogued. The Museum has also established a standard for preserving the collection and estimates that four per cent of the collection has been preserved in accordance with this standard.

The Museum advises that it is in the process of developing a strategic maintenance plan for the collection for consideration by Government.



The TAM policy recommends reviewing asset performance using benchmarking. The Museum participates in the International Association of Museum Facilities Administrators benchmarking exercise. Areas benchmarked include building maintenance costs, building operation costs and space utilisation.

This benchmarking exercise involves four other international museums. Benchmarking its asset management practices and results against other museums in NSW or nationally may also provide useful information to the Museum, particularly on the efficiency and cost-effectiveness of its assets.

Opportunity for Improvement The Museum should examine opportunities to benchmark asset management with other museums in NSW and nationally to compare processes and performance.

Not all capital projects appear in TAM

The Museum has supported past major capital funding bids with value management studies and economic appraisals and has used relevant NSW Treasury tools (for example financial evaluation and economic analysis to assess costs and benefits).

The Government allocated \$9.3 million capital funds to the Museum for TAM Plan Projects for 2003-2006. However, of the ten projects undertaken in 2003-2005, only three appeared in the TAM plan.

The Museum advises that it revised its asset management priorities:

- because it received less funding from NSW Treasury than it sought
- to address a number of unforseen emergency maintenance issues which emerged after the plan was developed.

We understand there is no requirement for the Museum to spend its allocation in line with the TAM plan or advise NSW Treasury if it intends not to do so.

Deferred maintenance not addressed in plans

The current TAM plan indicates building maintenance funding has been limited and some scheduled preventative maintenance has not been undertaken. The amount and impact of deferred maintenance is not specified or quantified in the plan, nor does it include mitigation strategies.

As mentioned earlier, the Museum does not have indicators of asset performance or service levels. These may help it judge better the level of maintenance required.

Opportunity for Improvement

The Museum should review deferred maintenance to:

- identify the actual maintenance required consistent with asset service requirements, condition and age
- develop maintenance management strategies and a funding plan to address this
- identify implications for service delivery if maintenance is not undertaken (risk and consequences of asset failure)
- include these matters in its TAM plan.

Response from Powerhouse Museum

Thank you for the opportunity to respond to the abovementioned report.

The Powerhouse welcomed the performance audit opportunity. The Museum was, we understand, chosen by the Audit Office as one of three participating agencies to reflect different types and sizes of government agencies.

The performance audit gave an opportunity for the Museum to ask questions and clarify a number of issues with regard to TAM plan development. This audit has been very useful to the Museum in testing our understanding and appreciation of the TAM process and, through the Audit Office, identifying areas and approaches for improvement.

The Audit gave us an opportunity to explore issues relating to TAM plans that have been unclear. For example, there has been lack of clarity as to whether Collection and ICT [Information Communication Technology] assets can be included in TAM plans. The Museum is pleased that the audit takes up this matter.

Another issue for the Museum has been that internal and external budget and strategic planning timetables have not necessarily lent themselves to close co-ordination between the corporate strategy (3 years) and the RSP (annual) and the TAM plan (3 years). Synchronising these strategic planning documents at all points along the cycle is a major challenge.

A further comment for the Audit Office and Treasury was the lack of a feedback loop to inform us as to the efficacy or otherwise of the TAM plan documents. Rightly or wrongly, we were of the opinion that our processes were best in class.

As a result of discussions held with the Audit Office, I'm pleased to report our latest TAM submission included both Collection assets and ICT assets and we have plans in place for continuous improvement in this area.

(signed)

Dr Kevin Fewster AM FRSA Director

Dated: 30 September 2005

Appendix 4: About the audit

Objective

We reviewed asset management practices in a sample of general government agencies to identify:

- factors contributing to effective asset management including how agencies have built capacity and capability
- key issues affecting the integration of asset management with other business plans and processes
- barriers or impediments to best practice asset management.

Scope and focus

The audit examined the:

- policy framework for asset management by NSW Treasury
- approach taken by three agencies to implement asset management.

The three sample agencies were:

- Department of Corrective Services
- NSW Fire Brigades
- Museum of Applied Arts and Sciences (Powerhouse Museum).

Criteria

Our audit examined performance against the following criteria:

- the approach by NSW Treasury to total asset management better links asset needs to resource allocation decisions and improves agency practice
- the model adopted by an agency to manage its assets reflects government policy and ensures best practice
- an agency uses various tools to maintain accurate and complete asset records
- an agency continuously improves its asset management practices.

Exclusions

Our audit did not

- test the accuracy and completeness of office accommodation strategic plans and asset records prepared by sample agencies
- examine asset management practices in public trading enterprises.

Audit approach

We acquired subject matter expertise through:

- interviews with relevant staff in sample agencies to gain an understanding of asset management practice and any plans for improvement
- discussions with NSW Treasury and the Department of Infrastructure, Planning and Natural Resources to clarify roles and responsibilities for asset management
- review of relevant documents including policy, procedures and guidelines on asset management
- examining sample agencies asset strategies and associated plans and reports
- literature search and research, both nationally and internationally, on best practice asset management
- attending training and presentations on asset management.

Acknowledgement

We gratefully acknowledge the co-operation and assistance from representatives of:

- NSW Treasury
- Department of Infrastructure, Planning and Natural Resources
- Department of Corrective Services
- NSW Fire Brigades
- Museum of Applied Arts and Sciences (Powerhouse Museum)
- Legislative Assembly Standing Committee on Public Works (Public Works Committee).

Audit Team

Our team leader for this audit was Steve Sullivan, who was assisted by Alok Ralhan and Neil Avery.

Direction and quality assurance was provided by Jane Tebbatt.

Cost of the audit

Including printing and all overheads, the estimated cost of this audit is \$363,000.

Appendix 5: Glossary

Asset In accounting terms assets are future economic benefits, controlled by

an agency, as a result of past transactions or other past events. An asset is considered worthy of separate identification if it delivers services or benefits to the community of sufficient current or future value to warrant control and management on an individual basis. Unless indicated otherwise in this report the term asset refers to physical

assets such as land, buildings, plant and equipment.

Asset disposal plan
This plan details those assets available for disposal as they no longer

effectively meet their service delivery requirements at the lowest

long-term cost or are surplus to requirements.

Asset efficiency performance indicators

These indicators monitor how much assets cost to operate to achieve a specified service standard/level.

Asset effectiveness performance indicators

These indicators demonstrate the extent to which an asset's performance (for example reliability and failure rates) supports the delivery of services.

Asset management information system

A system for collecting and analysing data on the performance of existing assets including their maintenance and operating costs.

Asset register A record of items considered worthy of identification as discrete assets,

including information such as construction and technical details about each. It should also have the ability to allow cross-referencing and

retrieval of data.

Asset strategy A strategy for asset management covering, at a strategic level, the

development and implementation of plans and programs for asset creation, operation, maintenance, rehabilitation/replacement, disposal and performance monitoring to ensure that the desired levels of service and other operational objectives are achieved at a minimum cost.

Benchmarking The process of measuring performance and analysing practices in key

areas and comparing them to other similar operations or functions, to

find ways of achieving better results.

Budget dependent agencies

Agencies that are predominantly funded from the Consolidated Fund, rather than from user charges.

Capital investment plan

This plan details proposed investment in new assets or significant improvement or upgrading of existing assets.

Condition Survey The process of collecting data on the condition of an asset, for example

the structural or functional condition of a asset in order to determine $% \left(1\right) =\left(1\right) \left(1\right) \left($

the need for preventive or remedial action.

Deferred maintenance

Maintenance activity that, in accordance with stated strategy and/or agreed maintenance intervention levels, should be carried out in the current year but is not because it is not funded.

Economic analysis A structured technique for assessing the economic efficiency of resource

allocation, by quantifying in money terms the costs and benefits of a

range of alternative proposals.

sector

General government Agencies primarily funded from State taxes or Commonwealth taxes passed onto the State. Many general government agencies are budget dependent, relying on the State Budget to fund operations and capital works. The funding provided is used to deliver programs and services of a public policy nature at either no cost to users or at subsidised rates. This sector includes agencies generally known as government departments.

Life cycle costs

The sum of acquisition cost and ownership cost of an asset over its entire life. Acquisition cost includes planning, investigation, design and construction costs. Ownership cost includes maintenance, rehabilitation, operating expenses, and disposal costs.

Maintenance

All actions necessary for retaining an asset in a suitable condition to meet its specified service requirements.

Maintenance plan

A budgeting tool consisting of a list of costed activities scheduled over a period of 3 to 5 years, reviewed annually, with at least year 1 activities funded, and aimed at maintaining the asset within specified maintenance standards.

NSW Treasury

Comprises two Offices:

- the Office of Financial Management (OFM) is the Government's principal adviser on State financial management policy and practice, and economic conditions and issues. It includes the budget management and monitoring function
- the Office of State Revenue (OSR) which collects the majority of State revenue.

NSW Treasury analysts

The main Treasury contact with agencies. They set and monitor compliance with expenditure targets; advise on policy and financial aspects of agency spending proposals and associated resource allocation issues; advise on the efficiency of budget dependent agencies; advise on how asset management strategies can better support service delivery.

Physical asset

See Asset

Preventative maintenance

Maintenance activity before or at an early stage in the development of one or more defects, aimed at preventing occurrence or progression of the defect(s), usually undertaken on a proactive rather than reactive basis.

Public trading enterprises sector

Agencies that have a commercial orientation and rely predominantly on user charges to fund operations while their capital works are funded from borrowings and internal funds. The agencies include State Owned Corporations such as water authorities, electricity generators and distributors.

Results and Services Plan (RSP)

A high-level business plan negotiated between budget dependent agencies and NSW Treasury. It shows what an agency plans to achieve with its current resources, with a focus on results. It supports better resource allocation and management and improved reporting. It shows the relationship between the services delivered by agencies and the results they are working towards.

Risk management

A comprehensive, structured and systematic process to evaluate and address the impact of risks in a cost effective way by using appropriate skills to identify and assess the potential for risks to arise.

Service level A generic term used to describe the quantity and quality of services

provided by an asset.

State budget papers/estimates

The annual fiscal plan supporting government activities. It incorporates the schedules and strategic directions of the Budget Papers. They include the schedules of permitted or authorised expenditures for state government agencies, and the way they will be financed over the financial year. They also include supporting commentary on financial trends, program activities and strategic directions. Forward estimates of expenditure are included for three years beyond the current year, giving the budget a medium-term focus.

the budget a medium-term focus

State Owned Corporation

A government public trading enterprise structured and operated in such a way as to compete with the private sector on 'a level playing field'.

Total Asset Management (TAM) This is the term used in NSW for asset management. In other jurisdictions asset management it is also known as strategic asset

management

Value management A structured, analytical process to assist in project evaluation at the

concept and design stages, by carefully defining project objectives, considering a range of alternative options for achieving the essential objectives, and relating achievement to cost, so that the investment

returns are maximised.

Worth In this report the term worth is taken to mean the book, that is fair,

value of assets and not market value.

Performance Audits	s by
the Audit Office of New South Wa	ales

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*, *Part 3 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 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.

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

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

How do we conduct performance audits?

Performance audits are conducted in compliance with relevant Australian standards for performance auditing and operate under a quality management system 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 Office Services Manager.

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, Monitoring and Reporting on Performance Audits Recommendations, is on the Internet at www.audit.nsw.gov.au/guides-bp/bpglist.htm

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards. This includes ongoing independent certification of our ISO 9001 quality management system.

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.

For further information relating to performance auditing contact:

Stephen Horne Assistant Auditor-General, Performance Audit (02) 9275 7278

email: stephen.horne@audit.nsw.gov.au

Performance Audit Reports

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
78	State Rail Authority (CityRail) State Transit Authority	Fare Evasion on Public Transport	6 December 2000
79	TAFE NSW	Review of Administration	6 February 2001
80	Ambulance Service of New South Wales	Readiness to Respond	7 March 2001
81	Department of Housing	Maintenance of Public Housing	11 April 2001
82	Environment Protection Authority	Controlling and Reducing Pollution from Industry	18 April 2001
83	Department of Corrective Services	NSW Correctional Industries	13 June 2001
84	Follow-up of Performance Audits	Police Response to Calls for Assistance The Levying and Collection of Land Tax Coordination of Bushfire Fighting Activities	20 June 2001
85*	Internal Financial Reporting	Internal Financial Reporting including a Better Practice Guide	27 June 2001
86	Follow-up of Performance Audits	The School Accountability and Improvement Model (May 1999) The Management of Court Waiting Times (September 1999)	14 September 2001
87	E-government	Use of the Internet and Related Technologies to Improve Public Sector Performance	19 September 2001
88*	E-government	e-ready, e-steady, e-government: e-government readiness assessment guide	19 September 2001
89	Intellectual Property	Management of Intellectual Property	17 October 2001
90*	Intellectual Property	Better Practice Guide Management of Intellectual Property	17 October 2001
91	University of New South Wales	Educational Testing Centre	21 November 2001
92	Department of Urban Affairs and Planning	Environmental Impact Assessment of Major Projects	28 November 2001
93	Department of Information Technology and Management	Government Property Register	31 January 2002
94	State Debt Recovery Office	Collecting Outstanding Fines and Penalties	17 April 2002

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
95	Roads and Traffic Authority	Managing Environmental Issues	29 April 2002
96	NSW Agriculture	Managing Animal Disease Emergencies	8 May 2002
97	State Transit Authority Department of Transport	Bus Maintenance and Bus Contracts	29 May 2002
98	Risk Management	Managing Risk in the NSW Public Sector	19 June 2002
99	E-Government	User-friendliness of Websites	26 June 2002
100	NSW Police Department of Corrective Services	Managing Sick Leave	23 July 2002
101	Department of Land and Water Conservation	Regulating the Clearing of Native Vegetation	20 August 2002
102	E-government	Electronic Procurement of Hospital Supplies	25 September 2002
103	NSW Public Sector	Outsourcing Information Technology	23 October 2002
104	Ministry for the Arts Department of Community Services Department of Sport and Recreation	Managing Grants	4 December 2002
105	Department of Health Including Area Health Services and Hospitals	Managing Hospital Waste	10 December 2002
106	State Rail Authority	CityRail Passenger Security	12 February 2003
107	NSW Agriculture	Implementing the Ovine Johne's Disease Program	26 February 2003
108	Department of Sustainable Natural Resources Environment Protection Authority	Protecting Our Rivers	7 May 2003
109	Department of Education and Training	Managing Teacher Performance	14 May 2003
110	NSW Police	The Police Assistance Line	5 June 2003
111	E-Government	Roads and Traffic Authority Delivering Services Online	11 June 2003
112	State Rail Authority	The Millennium Train Project	17 June 2003
113	Sydney Water Corporation	Northside Storage Tunnel Project	24 July 2003

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
114	Ministry of Transport Premier's Department Department of Education and Training	Freedom of Information	28 August 2003
115	NSW Police NSW Roads and Traffic Authority	Dealing with Unlicensed and Unregistered Driving	4 September 2003
116	NSW Department of Health	Waiting Times for Elective Surgery in Public Hospitals	18 September 2003
117	Follow-up of Performance Audits	Complaints and Review Processes (September 1999) Provision of Industry Assistance (December 1998)	24 September 2003
118	Judging Performance from Annual Reports	Review of Eight Agencies' Annual Reports	1 October 2003
119	Asset Disposal	Disposal of Sydney Harbour Foreshore Land	26 November 2003
120	Follow-up of Performance Audits NSW Police	Enforcement of Street Parking (1999) Staff Rostering, Tasking and Allocation (2000)	10 December 2003
121	Department of Health NSW Ambulance Service	Code Red: Hospital Emergency Departments	15 December 2003
122	Follow-up of Performance Audit	Controlling and Reducing Pollution from Industry (April 2001)	12 May 2004
123	National Parks and Wildlife Service	Managing Natural and Cultural Heritage in Parks and Reserves	16 June 2004
124	Fleet Management	Meeting Business Needs	30 June 2004
125	Department of Health NSW Ambulance Service	Transporting and Treating Emergency Patients	28 July 2004
126	Department of Education and Training	School Annual Reports	15 September 2004
127	Department of Ageing, Disability and Home Care	Home Care Service	13 October 2004
128*	Department of Commerce	Shared Corporate Services: Realising the Benefit including guidance on better practice	3 November 2004
129	Follow-up of Performance Audit	Environmental Impact Assessment of Major Projects (2001)	1 February 2005
130*	Fraud Control	Current Progress and Future Directions including guidance on better practice	9 February 2005

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
131	Follow-up of Performance Audit Department of Housing	Maintenance of Public Housing (2001)	2 March 2005
132	Follow-up of Performance Audit State Debt Recovery Office	Collecting Outstanding Fines and Penalties (2002)	17 March 2005
133	Follow-up of Performance Audit Premier's Department	Management of Intellectual Property (2001)	30 March 2005
134	Department of Environment and Conservation	Managing Air Quality	6 April 2005
135	Department of Infrastructure, Planning and Natural Resources Sydney Water Corporation Sydney Catchment Authority	Planning for Sydney's Water Needs	4 May 2005
136	Department of Health	Emergency Mental Health Services	26 May 2005
137	Department of Community Services	Helpline	1 June 2005
138	Follow-up of Performance Audit State Transit Authority Ministry of Transport	Bus Maintenance and Bus Contracts (2002)	14 June 2005
139	RailCorp NSW	Coping with Disruptions to CityRail Passenger Services	22 June 2005
140	State Rescue Board of New South Wales	Coordination of Rescue Services	20 July 2005
141	State Budget	In-year Monitoring of the State Budget	28 July 2005
142	Department of Juvenile Justice	Managing and Measuring Success	14 September 2005
143	Asset Management	Implementing Asset Management Reforms	October 2005

^{*} Better Practice Guides

Performance Audits on our website

A list of performance audits tabled or published since March 1997, as well as those currently in progress, can be found on our website < www.audit.nsw.gov.au>

If you have any problems accessing these Reports, or are seeking older Reports, please contact our Office Services Manager on 02 9275 7116.