

PROCUREMENT AND MANAGEMENT OF ICT SERVICES IN THE NSW PUBLIC SECTOR

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1. Background

The Public Accounts Committee Inquiry into procurement and management of Information and Communications Technology (ICT) services in the public sector was established in August 2012 to inquire into the three key concerns of the Auditor-General with regard to ICT project delivery: project management; the management of system migrations and data conversions; and contract management.

The inquiry will focus on:

- i. Measures to improve ICT project and contract management in the public sector, in particular in relation to contract negotiation and on-going contract management;
- ii. The efficacy of central agency policies and strategies that guide ICT projects in the public sector;
- iii. The adequacy of risk management and corruption prevention strategies relating to ICT procurement and contract management;
- iv. Long-term planning to meet the ICT needs of the public sector and ensure the best value for money in the procurement of government ICT products and services; and
- v. Any other related matters.

The Inquiry has advised that it is considering recommendations made in the February 2012 performance audit *Managing IT Services Contracts*; the September 2011 performance audit *Prequalification Scheme: Performance and Management Services*; and financial audits from 2010-2011.

The Department of Finance and Services (DFS) is responsible for whole-of-government policy and strategy in relation to both procurement and ICT, and is well placed to assist the Committee in its consideration of these issues. The Department of Premier and Cabinet (DPC) has also contributed to this submission where it concerns initiatives led by that Department.

2. Context

This inquiry is occurring at a time of significant reform to the procurement and management of ICT services in the NSW public sector. Procurement reform and the *NSW Government ICT Strategy 2012* (ICT Strategy) now set the whole-of-government strategic direction for ICT procurement and investment.

Consistent with these reforms, the NSW Government has also recently clarified the roles and responsibilities of central agencies under the Strategic Centre Initiative.

NSW Government ICT Strategy 2012

The ICT Strategy, endorsed by Government on 10 April 2012, outlines a new whole-of-government approach to ICT investment. The Strategy includes seven priority initiatives and 85 actions that will change the way the public sector invests in, and uses, ICT to derive better value and to deliver better services to NSW citizens.

Implementation of the ICT Strategy is overseen by the ICT Board, comprising Directors-General from across the sector, and the ICT Leadership Group which has representation from all nine principal departments at the senior business leader and Chief Information Officer level. Government also has the benefit of receiving expert advice from the ICT Advisory Panel, a group of seven senior ICT executives from industry and the research sector.

Procurement reform

In January 2012, a discussion paper was released to initiate NSW Government procurement reform. The discussion paper set out the principles and key elements of the procurement reforms (discussed at paragraph 2.2 below).

The reform establishes a new procurement model which devolves responsibility for procurement decisions to agencies, within a simplified overarching policy framework.

In July 2012, amendments to the *Public Sector Employment and Management Act 2002* (PSEM Act) established the NSW Procurement Board to develop a procurement policy framework and procurement strategies, and manage the new Agency Accreditation Scheme for Goods and Services.

The procurement governance arrangements mirror those established under the ICT Strategy. The Procurement Board is supported by a Procurement Leadership Group and an industry advisory panel. The PSEM Act sets out the obligations of agencies, including that agencies comply with Board directions and obtain value for money from their procurement decisions.

The Strategic Centre Initiative

On 24 October 2012, DPC announced the commencement of the Strategic Centre Initiative to clarify the functions, roles, responsibilities and accountabilities of each of the central agencies – DPC, Treasury, DFS and the Public Service Commission (PSC). Key areas of responsibility have been identified:

1. DPC will focus on performance and priorities including policies, initiatives and events;
2. NSW Treasury will focus on effective financial and economic management;
3. DFS will focus on policy reform to support agencies;
4. PSC will focus on people management, capability and workforce development.

The role of central agencies is to add value to service delivery by providing a whole of government perspective on public policy, implementing service delivery initiatives across the public sector and strengthening the organisation and management of the public sector.

Central agencies will focus on outcomes and address systemic barriers to achieving results, without setting excessive process and compliance requirements for agencies. This involves three key aspects: clarifying central agency functions, reconceptualising the relationship between central agencies and clusters, and identifying key strategic initiatives to enable better ways to work within central agencies and between the centre and clusters.

While central agencies are responsible for developing the whole of government policy and governance frameworks at a strategic level, project delivery functions, including those related to ICT projects, are the responsibility of agency heads. Both the ICT Strategy and procurement reforms are consistent with the approach to agency responsibilities and accountabilities outlined in the Strategic Centre Initiative.

This initiative marks a significant shift in the interaction between central agencies and other departments. For this reason, it will impact the implementation of the Auditor General's recommendations, many of which refer to project delivery functions including contract management, risk management, corruption prevention and probity.

An overview of the ICT Strategy and procurement reforms is provided below.

2.1 *NSW Government ICT Strategy 2012 - overview*

The ICT Strategy contains seven initiatives with 85 separate actions to deliver two broad outcomes - better services, and better value for the Government's investment in ICT.

The ICT Strategy balances two objectives. The first is to establish a clear, long-term strategic direction for the Government's investment in and use of ICT. The second is to ensure that ICT policy is sufficiently flexible to allow Government to take advantage of new and innovative ICT solutions in what is a rapidly changing industry.

The ICT Strategy sets out to achieve these objectives by applying four key principles.

1. Strategy implementation is led at the most senior levels of government. The ICT Board, represented by Directors-General of key principal Departments, has been established to drive and be accountable for a whole of government approach to ICT. The ICT Leadership Group, comprised of agency Chief Information Officers and senior public service business leaders from across the sector, reports to the Board on both ICT policy and Strategy implementation.
2. Strategic engagement with industry is integrated into the implementation of the ICT Strategy. An ICT Advisory Panel comprised of senior leaders from the private sector and research community has been established to provide independent advice and expertise.
3. A whole-of-government focus on improving capability in ICT-enabled service delivery.
4. A new portfolio management approach to ICT in NSW to reduce duplication, improve the productivity of government operations, and ensure efficient and effective investment in ICT.

These four principles have been applied to improve performance in five key service capabilities: the provision of on-demand services, improving community and industry collaboration, using emerging technologies to deliver citizen-focused services, promoting information sharing and improving financial and performance management.

2.1.1 Strategic direction

The ICT Strategy sets out a roadmap to change the way the public sector uses, buys and manages ICT assets and services. This includes a shift from owning and managing infrastructure, to acquiring hardware and software through as-a-service models.

Agencies have traditionally purchased and operated their own hardware and software. This approach has resulted in fragmented and inconsistent ICT systems across the sector. Outdated and incompatible systems impact effective and efficient service delivery, and increase costs and duplication.

The ICT Strategy outlines how the public sector will, where appropriate, move to an 'as-a-service' orientation whereby a third party provider owns the ICT infrastructure, and agencies purchase only the services they need. This model of ICT procurement provides agencies with opportunities to lower costs and improve the cost-effectiveness of service delivery.

As-a-service models mean that agencies pay only for the services that they use rather than asset acquisition and ongoing maintenance. A service orientation offers flexibility and agility in ICT service provision, and allows Government to achieve better value for its ICT investment.

This is a significant step change in the way that the public sector traditionally purchases and manages its ICT. An expanded set of skills and capabilities will be required, particularly in vendor management, and the negotiation and management of service agreements. The ICT Strategy recognises that building the right set of skills and capabilities within the public sector will be necessary to support the transition to a service orientation. It outlines a suite of actions to develop the necessary ICT capabilities across the sector.

2.1.2 Key initiatives

The ICT Strategy contains seven priority initiatives:

- **Service NSW** – an initiative to develop a new service culture to make it easier to do business with government
- **Open Government** – enhancing online access to government services and information, increasing accessibility of 'open access' information and improving government website design
- **Open Data** – making government data available to industry and the community to stimulate the development of innovative approaches to service delivery
- **Infrastructure and Managed Services** – a comprehensive roadmap to transition to a service orientation, including the development of a Service Catalogue, virtualisation and consolidation of infrastructure, and the establishment of cloud offerings
- **Procurement Reform** – modernising government procurement and using Government's purchasing power to achieve the best value for common ICT services

- **Managing Information for Better Services** – developing a strategic framework for information management, addressing barriers to information sharing and developing an integrated framework for reporting on service delivery
- **ICT Skills and Innovation** – enhancing the Public Sector Capability Framework to incorporate ICT skills and knowledge, developing a strategy to meet public sector ICT requirements and engaging with industry to take advantage of new opportunities to improve service delivery.

Implementation of these initiatives will have a significant impact on public investment in ICT and service delivery.

Further detail is provided on the actions most relevant to this Inquiry in the sections addressing the Committee's specific areas of focus below.

2.2 Procurement reforms - overview

In January 2012, a discussion paper was released setting out proposals to redesign the NSW Government procurement system. The paper proposed a new government procurement framework that:

- allows for contemporary means of sourcing government goods and services
- brings the form and content of government contracts in line with modern practice
- improves access to government procurement for small and medium enterprises
- introduces greater innovation into government procurement to stimulate a more vibrant NSW economy.

In July 2012, the *Public Sector Employment and Management Act 2002* (the PSEM Act) was amended to abolish the State Contracts Control Board, and establish the NSW Procurement Board. The Procurement Board, comprised of the Directors General of the nine principal departments, is responsible for developing procurement policy, strategy and guidelines, issuing directions to agencies to give effect to procurement policy, and managing the Agency Accreditation Scheme for Goods and Services.

All clusters must be accredited under the Agency Accreditation Scheme by 1 July 2013. Once accredited, agencies are responsible for undertaking their own procurement in accordance with the Agency Accreditation Scheme, and subject to directions from the NSW Procurement Board.

2.2.1 Principles

The new procurement model is based on four guiding principles:

- Agencies have specialist knowledge of the category supply chain and supply sector.

- Sourcing strategies for procuring goods and services are more effective if developed by those with direct interest in the service delivery and financial outcomes.
- The profile of procurement should continue to be raised within the NSW Government to take advantage of procurement opportunities to improve service delivery and value for money.
- Procurement capability development should be treated as a priority, with emphasis on procurement policy and strategy.

The governance structure of the procurement reform mirrors that of the ICT Strategy. The Procurement Board is supported by a Procurement Leadership Group comprised of senior executives with agency procurement and business delivery perspectives. The Procurement Board is also supported by an Industry Advisory Group. The governance structure embeds collaboration across agencies and with industry in the development of procurement policy and strategy.

The Department of Finance and Services supports the new procurement model by providing policy and program support, leading development of procurement strategy for categories with whole of government benefits, and managing the Agency Accreditation Scheme.

2.2.2 Strategic direction

In its report, *Corruption risks in NSW Government Procurement*, the Independent Commission Against Corruption (ICAC) raised a number of concerns about government procurement. These included its complexity, the lack of support and practical information for practitioners, the need to build procurement expertise and the need for better compliance and enforcement mechanisms.

A key element of the procurement reforms is the development of a single policy framework to clarify requirements for agencies. The reforms will move away from a complex, prescriptive, one-size-fits-all approach to a category management model whereby a specific procurement strategy will be developed for each major category of procurement by a working group of category specialists from across government.

DFS is developing a Strategic Directions Statement in consultation with agencies that will outline work to be undertaken in four key areas:

- simplifying the policy framework
- improving support systems
- building capability
- building collaboration across government.

3. Response to each of the Committee's areas of focus

3.1 Measures to improve ICT project and contract management in the public sector, in particular in relation to contract negotiation and on-going contract management

It is considered that the following key initiatives will improve ICT project and contract management:

- amendments to the PSEM Act to establish a new procurement governance framework and clarify roles and responsibilities;
- changes to the Agency Accreditation Scheme for Goods and Services to require contract management plans;
- development of the whole-of-government expenditure data framework;
- mandating the use of the Procure IT contracting framework to set consistent pricing and service levels; and
- ICT skills and capability development.

3.1.1 Amendments to the *Public Sector Employment and Management Act 2002*

The amendments to the PSEM Act regarding procurement provide a framework for improved project and contract management. The Act establishes the NSW Procurement Board, which is tasked with delivering the following objectives under section 144:

- (a) to develop and implement a Government-wide strategic approach to procurement*
- (b) to ensure best value for money in the procurement of goods and services by and for government agencies*
- (c) to improve competition and facilitate access to Government procurement business by the private sector, especially by small and medium enterprises and regional enterprises*
- (d) to reduce administrative costs for government agencies associated with procurement*
- (e) to simplify procurement processes while ensuring probity and fairness.*

Section 145 outlines the functions of the NSW Procurement Board:

(1) The Board has the following functions:

- (a) to oversee the procurement of goods and services by and for government agencies,*
- (b) to develop and implement procurement policies,*

- (c) to issue directions to government agencies under section 148,*
 - (d) to monitor compliance by government agencies with the requirements of this Chapter (including Board directions),*
 - (e) to investigate and deal with complaints about the procurement activities of government agencies,*
 - (f) to develop appropriate procurement and business intelligence systems for use by government agencies,*
 - (g) to collect, analyse and publish data and statistics in relation to the procurement of goods and services by and for government agencies,*
 - (h) such other functions as are conferred or imposed on the Board by or under this or any other Act.*
- (2) The Board has power to do all things necessary or convenient to be done for, or in connection with, the exercise of its functions.*
 - (3) The Board is to exercise its functions in accordance with any applicable Government-wide procurement policies.*

Section 149 of the PSEM Act sets out agencies' obligations:

- (1) A government agency is to exercise its functions in relation to the procurement of goods and services in accordance with:*
 - (a) any policies and directions of the Board that apply to the agency, and*
 - (b) the terms of its accreditation (if any) by the Board, and*
 - (c) the principles of probity and fairness.*
- (2) A government agency is also to ensure it obtains value for money in the exercise of its functions in relation to the procurement of goods and services.*
- (3) A government agency is, at the request of the Board, to provide information to the Board about its activities in relation to the procurement of goods and services.*

These amendments establish clear roles and responsibilities for procurement, and ensure that the principles of probity, fairness and value for money are built into the procurement system. Importantly, the amendments also provide for monitoring and compliance of procurement practice against these principles.

3.1.2 Changes to the Agency Accreditation Framework for Goods and Services

The Agency Accreditation Framework has been updated to specifically include an assessment of whether agencies have processes in place to develop contract management plans for information and communications technology service contracts. It also requires that accredited agencies demonstrate that they conduct audits of individual contracts for

compliance with their policies and procedures, and have structures in place to effectively manage all services contracts, including purchases through State contracts.

The accreditation framework has been adopted by the Procurement Board and clusters are required to have accreditation arrangements in place by 1 July 2013. Accreditation is progressing well.

A range of current panel and standing offer contracts are currently being assessed for conversion into pre-qualification schemes. Pre-qualification schemes ensure that quotations are continuously sought and prices updated accordingly.

3.1.3 Development of the whole-of-government expenditure data framework (Spend Cube)

The Board is also collating whole-of-government expenditure data to identify opportunities for more effective category management and savings. Collated data will be reported to agencies to assist in contract management and cost effectiveness.

3.1.4 Requirement to use the Procure IT contracting framework

In September 2012 the NSW Procurement Board issued a direction requiring agencies to use the Procure IT contractual framework to buy ICT related products and services.

Developed by DFS in collaboration with the Australian Information Industry Association (AIIA), suppliers appointed to a Government ICT panel or pre-qualification scheme now negotiate and sign Procure IT once, with all subsequent agency-level contracts then placed as orders under that prevailing head agreement.

This will reduce complexity, duplication and costs, as it means that terms and conditions are not re-negotiated each time a new contract is entered into.

3.1.5 ICT skills and capability development

The ICT Strategy *ICT Skills and Capability Development* initiative supports the transition to a service orientation. This recognises that the skills and capabilities needed across the public sector will be different in an environment where there is less emphasis on government owning and maintaining infrastructure.

A greater focus on contract and vendor management will be required and, at the executive level, a greater appreciation for the increasing opportunities for ICT-enabled government service delivery.

A review of the characteristics of the ICT labour market, and the needs of the public sector ICT workforce, are key components of this work. Industry associations are being closely consulted in this work to ensure that the public sector can leverage training and accreditation programs to build capability across the sector.

The initiative will map the Strategy's infrastructure and managed services and procurement initiatives against relevant capability requirements and analyse how the public sector needs to be positioned to deliver them.

Another dimension to this project is the enhancement of the overarching NSW Public Sector Capability Framework to better reflect contemporary ICT skills and knowledge.

3.2 The efficacy of central agency policies and strategies that guide ICT projects in the public sector

The ICT Strategy and procurement reforms are expected to deliver significant improvements to the policy frameworks that guide ICT investment decisions and project management. As noted above, the Strategy's skills and capability initiative will identify ICT workforce needs across the public sector, and develop a strategy to build specialist skills and capabilities, especially in the areas of project and contract management, and contract negotiation.

The ICT Strategy sets a clear strategic direction, supported by measures to both simplify and standardise ICT investment. For example, the development of a Service Catalogue from which agencies will be able to procure common products and services from a list of pre-negotiated contracts, will streamline procurement processes.

The Strategy also sets out a role for the ICT Board to set whole of government ICT investment principles, and to ensure that these principles are reflected in relevant investment and business case processes. This is intended to support a move to a more consistent, shared and standardised approach to ICT projects across government.

It is emphasised that the Strategy is a central agency policy that has been developed and implemented through whole-of-government governance arrangements. The governance structure encourages all agencies to participate in the development and implementation of ICT policy and strategy, allowing for the regular monitoring and reporting of progress.

The recent legislative changes to the PSEM Act outline the roles and responsibilities of all agencies under the direction of the NSW Procurement Board and, under the broader procurement reforms, a single procurement policy framework will be established. As has been implemented under the ICT Strategy, procurement governance arrangements will embed collaboration between agencies and with industry.

The mandatory Agency Accreditation Framework provides clear benchmarks for agencies to meet in order to be able to conduct their own procurement, and can be supplemented by directions issued by the NSW Procurement Board where necessary.

The development of an ICT Category Management Plan will set clear and agreed requirements for ICT procurement.

3.3 The adequacy of risk management and corruption prevention strategies relating to ICT procurement and contract management

The Treasury Policy Paper 09-5 *Internal Audit and Risk Management Policy* outlines risk management and corruption prevention measures that all clusters are responsible for applying across their business. All projects, including ICT projects, must comply with the policy.

In the 2010 Auditor General's review, it was noted that most agencies had implemented policies and procedures in order to comply with the policy.

In its *Managing Corruption Risks in NSW Public Sector Procurement* report, ICAC recommended that the Government establish a leadership role for procurement in NSW, simplify the regulatory framework, improve procurement information, advice and support, build procurement competence and oversee policy compliance.

These recommendations are now being implemented as part of the procurement reform initiatives. The PSEM Act establishes clear roles and responsibilities with respect to procurement. As noted above, it outlines the leadership role of the NSW Procurement Board, as well as new agency obligations. The PSEM Act requires both the NSW Procurement Board and agencies to develop procurement policy, and conduct procurement, consistently with the principles of probity and fairness.

The Agency Accreditation Framework for Goods and Services also requires agencies to have risk-based contract management plans in place. Agencies must also demonstrate that there are appropriate guidelines in place to address probity issues.

3.4 Long-term planning to meet the ICT needs of the public sector and ensure the best value for money in the procurement of government ICT products and services

Given the rapid development of new ICT technologies, it is important that the ICT Strategy sets a clear direction that is aligned with broader industry trends, while also allowing the flexibility for government to take advantage of new technologies and services that become available.

The Strategy puts in place the necessary building blocks for the public sector to significantly improve service delivery and derive better value ICT investment. In particular, the development of a Service Catalogue, virtualisation and consolidation of infrastructure, the adoption of a service orientation and the development of an ICT skills and capability framework are key initiatives that will support these objectives. The development of an integrated finance and performance reporting framework (led by DPC) will also contribute indirectly to better value ICT investment by building transparency and accountability in investment decisions.

The ICT Strategy outlines 85 separate actions with delivery deadlines between the second quarter of 2012 to the end of 2014. While the timetable sets out long-term objectives and deliverables, the Strategy will be regularly reviewed to ensure that it positions government to adopt new technologies and ICT-enabled solutions as they arise.

ICT Service Catalogue

A Service Catalogue is a fundamental element of an effective and efficient ICT supply chain. The catalogue defines the essential characteristics of each service, including cost. Delivering services through a whole of government service catalogue will leverage NSW Government purchasing power to secure the most effective pricing, and support consistent service delivery across Government.

A range of ICT products and services are already available through the service catalogue, which is accessed through the NSW Buy e-catalogues. The online catalogue provides information on the products and services available, including price, contract, suppliers, manufacturers and regions serviced. Once individual purchasers are registered, agencies can purchase either directly through their own linked software or from the NSW Buy e-catalogue website.

While agencies will continue to procure the ICT services and products that best meet their own service delivery objectives, the catalogue will ensure that the ICT services provided meet the requirements of government and move agencies toward more common approaches, technologies and systems.

Virtualisation, physical consolidation and managed services

In the traditional ICT provision model, each individual user has their own hardware owned and operated by the agency.

A service orientation opens up a broad range of other ways that ICT can be provided. These include virtualising servers to make more efficient use of hardware, consolidating physical servers in shared data centres, utilising third party managed services providers, and utilising cloud services.

The NSW Government is currently constructing two new government-owned data centres. This will allow the virtualisation and physical consolidation necessary to support greater data sharing amongst agencies, and facilitate the development of multi-agency cloud services. Agencies may then use third party managed services providers to manage their ICT, or purchase their services through a cloud service provider.

Cloud computing is a model of service provision that enables simple, convenient and on demand access to a shared pool of computing resources. 'Cloud services' encompasses a wide range of service provision models, which are continuing to evolve through developing business models. Both the services provided and the method of deployment can vary.

Three currently available service provision models are:

- *Infrastructure-as-a-service (IaaS)* – a utility computing data centre with on demand resources such as servers. Agencies could use IaaS to access virtual machines to run their applications.

- *Platform-as-a-service (PaaS)* – a hosted application environment for building and deploying applications that might be delivered from the cloud. Agencies could use PaaS for application deployment projects and application delivery. It could also be used for the delivery of a virtual desktop to end users.
- *Software-as-a-service (SaaS)* – direct access to standard applications that are typically made available via a web browser. Agencies could use SaaS to deliver standard application services such as email and word processing, or more comprehensive solutions such as finance systems.

Cloud services can be deployed through a private or public cloud, or a combination of both. A private cloud is one in which the supporting physical infrastructure is provisioned for exclusive use by a single organisation. A public cloud is provisioned for open use by the general public or any enterprise.

The ICT service models described above offer opportunities for significant cost savings through utilising ICT infrastructure more efficiently. The ICT Strategy requires agencies to develop and execute virtualisation plans, and includes several actions to test and refine managed services and cloud options for ICT provision.

Role of the ICT Board

The role of the ICT Board is also important in establishing a long-term direction for ICT investment. The ICT Board is responsible for setting whole-of-government ICT investment principles, allowing government to move to a more consistent, shared and standardised approach. The ICT Board will also play a key role in the review of current investment processes to ensure they support the Government's ICT objectives. This work will include consideration of agencies' Total Asset Management Plans and the application of the Gateway Review process to ICT investment.

3.5 Any other related matters

Moving to a service orientation also brings challenges for the public sector. In the traditional model of asset ownership and maintenance, agencies pay for IT infrastructure through capital expenditure for which there are established funding processes under the NSW Treasury policy framework.

It should be noted that with the adoption of the ICT Strategy, there will be increased adoption of as-a-service solutions. Services are paid for through recurrent operational expenditure. There will be a shift away from ICT capital investment. Investigations will need to be made to ensure that agencies are able to adopt this preferential model for the delivery of IT, which is in line with the NSW ICT Strategy 2012. A program of work will assess whether the existing funding policy framework adequately supports the transition.

APPENDIX A: Response to questions on notice and supplementary questions following the Committee briefing on 26 October 2012

PART A – Questions on Notice

Q11. Please explain to the Committee what is meant by virtualisation and cloud technologies.

The Infrastructure and Managed Services initiative outlines priority actions relating to cloud and virtualisation. Work on several actions is underway including the development of a whole of government cloud policy and individual agency virtualisation plans.

The widely adopted US National Institute of Standards and Technology (NIST) definition of cloud is:

Cloud computing is an ICT sourcing and delivery model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services), that can be rapidly provisioned and released with minimal management effort or service provider interaction¹.

Further detail on cloud services is provided in the Department of Finance and Services submission, paragraph 3.4.

Virtualisation refers to the consolidation of multiple virtual environments on single physical machines, for example, multiple operating systems on a single computer.

The benefits to Government of a virtualised ICT environment include more efficient utilisation of server resources and the potential to reduce expenditure on physical server infrastructure. Partitioned environments also enable more reliable disaster recovery measures. Cost savings result from reduced spend on equipment, accommodation and energy.

Q11 (a) How can the NSW public sector keep pace with new and emerging technologies?

The ICT governance framework embeds collaboration between agencies and with industry to ensure that government is able to adopt appropriate new and emerging technologies coming on to the market.

Senior public sector business leaders are represented on the ICT Leadership Group, which drives implementation of the program of reform outlined in the ICT Strategy. The ICT Advisory Panel establishes a formal channel for expert advice from leaders in the ICT industry and research sectors. The Panel is tasked with ensuring that prevailing and emerging technologies and solutions can be effectively aligned with agency requirements

¹ National Institute of Standards and Technology, U.S Department of Commerce. 2011
The NIST Definition of Cloud Computing - Special Publication 800-145.

and government objectives. To assist in achieving this, the Panel membership is actively refreshed each year to ensure the most up-to-date advice is available on emerging technologies and solutions.

The ICT Strategy provides direction for the public sector to be more innovative, open and collaborative. Actions in the ICT Strategy encourage input from government, industry and the community on policy development and service delivery solutions.

Q11 (b) What are the challenges that they face?

Moving to ICT provision through a service orientation entails some significant challenges for the public sector.

As noted in the Department of Finance and Services submission to the Inquiry, agencies have traditionally owned and operated their own ICT infrastructure, which is widely dispersed and isolated from other agencies' ICT infrastructure. This has limited the opportunities for sharing data, information and ICT service provision across agencies.

Agencies also run a significant number of legacy applications, some of which are no longer supported by the original provider. In some cases these are applications that have been extensively customised for particular line-of-business uses. There are significant costs associated with modernising these legacy systems, and risks to be managed around migrating and integrating historical data.

Moving to a service orientation involves several steps that can be undertaken in sequence or simultaneously. Virtualising ICT servers ensures that infrastructure is used efficiently and redundancy of equipment is minimised.

Physical consolidation into data centres servicing multiple agencies provides the infrastructure pathway for agencies to be able to share data, information and services more easily by bringing together dispersed, isolated networks into a consolidated, joined-up network.

There is a lack of consistency in the hardware and software currently in operation across government. In many cases there is also incompatibility between systems that is challenging for integration into a shared ICT infrastructure. Consolidating agency data, information and services will necessitate a level of investment in new ICT infrastructure.

Moving to an as-a-service model will significantly change the way the public sector invests in ICT. Under an asset ownership model, investment occurs through capital expenditure bids to NSW Treasury under the existing policy framework. Under an as-a-service model, services are delivered on a pay-per-service basis. Funding of ICT will shift from a capital expenditure model to a greater emphasis on recurrent operational expenditure.

An as-a-service model is also procured differently to an asset-ownership model. It involves purchasing services from external providers rather than providing those services within agencies. This requires a different set of business planning and analysis skills, and increased capability in high-level vendor and service agreement contract management.

The capacity to share data, information and infrastructure across agencies also poses challenges for managing access to systems, records management, information security and privacy that need to be appropriately addressed through policy and contractual arrangements.

Q11 (c) How does the ICT Strategy address these challenges?

The ICT Strategy includes ten actions under the Infrastructure and Managed Services initiative to encourage virtualisation and consolidation and the development of cloud offerings. Agencies are encouraged to increase levels of virtualisation in the lead up to migration to the trusted government private cloud beginning in mid 2013. A pilot private cloud offering is scheduled to commence by the end of 2012, with further development of cloud offerings in 2013.

A program of work will assess whether the existing funding policy framework adequately supports the transition from capital to recurrent expenditure. Key considerations will be ensuring that agency ICT expenditure aligns with the ICT Strategy, and that there are adequate funding approval, monitoring and reporting frameworks in place.

The ICT Strategy also has a strong focus on skills and capability development to support the transition to an as-a-service model of ICT investment. Paragraph 3.1.4 of the submission provides further details on the skills and capability initiative.

A Digital Information Security Policy has been developed to address information security issues. The policy is expected to be finalised soon.

Q12 There has been an increase in agencies using Enterprise Resource Planning (ERP) applications such as Oracle and SAP.

- a) How will these types of projects be managed under the new Strategy?**
- b) Will it form part of the shared service framework?**
- c) Please provide the Committee with an update on the progress of the shared service framework.**
- d) What whole-of-government policies and procedures have been / are being developed?**
- e) What progress has been made in implementing these?**
- f) What training programs have been / are being developed and implemented?**

The ICT Strategy does not distinguish between ERP and other types of projects. It is a broad strategic framework and is not intended to provide oversight of individual projects conducted within agencies.

The March 2010 Blueprint for Corporate and Shared Services provided a framework for reform within departmental clusters. The Blueprint proposed that corporate functions be

consolidated and delivered centrally within principal departments and that the number of shared services providers be reduced to six from the previous twenty two.

Corporate Shared Services Reform Program (CSSRP) was centrally led established by DPC and was transferred to DFS in April 2011.

Departments are accountable for implementing their own Corporate and Shared Services reform programs consistent with their approved business case.

The Government is considering the next steps in the corporate and shared services reform process, in order to ensure that it properly aligns with other whole of government initiatives, and delivers best value.

The ICT Strategy skills and capability development initiative includes developing a strategy to meet the public sector's ICT workforce needs, and enhancing the public sector capability framework to incorporate ICT skills and knowledge. These pieces of work will include consideration of the skills and capabilities needed to implement complex ICT projects, including ICT related shared services reform projects. Once available, agencies will be able to use the strategy to identify their training needs.

Ongoing capability development across the sector remains a key focus of the Public Service Commission in consultation with departments.

Similar work to improve capability in relation to procurement will also be undertaken.

PART B – Supplementary Questions

Q1. Mr Lean talked about a new contract management system with a repository and workflow. Can you give some more information about the system please?

DFS has implemented and begun using a contract lifecycle management system (CLMS) as a repository and workflow tool for the contracting process. The Procurement Board will consider the development and roll-out of the system across Government by Q1 2013.

This aims to provide a single database of all existing Government procurement contracts and includes features to construct and manage contract documents with appropriate triggers for approval (workflow). Benefits will include:

1. Improved information sharing with visibility of all procurement contracts; the ability to identify where an agency could use a contract already established by another agency will reduce duplication costs in tendering and contract negotiation.
2. Enhanced contract outcomes through improved contract and supplier performance management with consistent clauses and review processes.
3. Reduction in probity risks through greater transparency and audit functions and the ability to construct the contract document from template structures with appropriate approval stages in place in the contract's lifecycle (e.g. a trigger notification to review certain clauses).

Q2. TPP 09-05 - can I have more information about this? I presume it is a standard regarding risk?

The Treasury circular NSW TC 09/08 implements the Internal Audit and Risk Management Policy for the NSW Public Sector (TPP 09-05). The policy requires department heads and governing bodies of statutory bodies to attest and report compliance with a prescribed set of core requirements annually.

The six core requirements are:

- i. Internal Audit Function - this covers the requirement to establish and maintain an Internal Audit function
- ii. Audit and Risk Committee - this covers the requirement to establish and maintain an Audit and Risk Committee
- iii. Independent Chairs and Members - this covers Committee composition, and the requirement to appoint an independent chair and majority of independent members
- iv. Model Charter and Committee operations - this covers the requirement to maintain governance arrangements that ensure both real and perceived independence of the Committee and the rigour and quality of its oversight and monitoring role
- v. Risk Management Standards - this covers the requirement to implement a risk management process that is appropriate to the needs of the department or statutory body and consistent with the current risk standard AS/NZ 4360: 2004 Risk Management.
- vi. Internal Audit Standards - this covers the requirement to ensure that operation of the Internal Audit function is consistent with the relevant standard IIA International Standards for the Professional Practice of Internal Auditing and any additional practice requirements set by the policy.

One of the responsibilities of the Audit and Risk Committee is to review whether a sound and effective approach has been followed in establishing the [department or statutory body]'s business continuity planning arrangements, including whether disaster recovery plans have been tested periodically.

To comply with the policy, the department head or governing body of the statutory body must review existing arrangements for internal audit and risk management against the core requirements, and take steps to either establish relevant governance structures where these do not exist or align existing governance structures with requirements. More information about the Internal Audit and Risk Management Policy can be found on the NSW Treasury website at http://www.treasury.nsw.gov.au/Internal_Audit_and_Risk_Management

Q3. Mr Minns spoke about the 'strategic centre' that was launched last week. Can you give me some information about this please?

The departmental circular C2012-15 Towards a Strategic Centre - New Ways of Working communicates the new Strategic Centre initiative.

The Strategic Centre Initiative acknowledges the areas of intersection between the central agencies: DPC, Treasury, and DFS, and with the Public Service Commission (PSC). Heads of these central agencies have agreed on responsibilities and key functional arrangements.

The key areas of responsibility are:

- i. DPC will focus on performance and priorities including policies, initiatives and events;
- ii. NSW Treasury will focus on effective financial and economic management;
- iii. DFS will focus on policy reform to support agencies;
- iv. PSC will focus on people management, capability and workforce development.

The role of central agencies is to add value to service delivery by providing a whole of government perspective on public policy, implementing service delivery initiatives across the public sector and strengthening the organisation and management of the public sector. More detailed information about the Strategic Centre Initiatives can be found at <http://www.nsw.gov.au/strategic-centre>.