



**Australian Government**

**Department of Finance and Deregulation**

Australian Government Information Management Office

# Better Practice Guide

## Financial Considerations for Government use of Cloud Computing

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### Introduction

Many Australian Government agencies are in the process of considering the adoption of cloud-based solutions. The range of offerings from cloud vendors are expected to increase as the cloud market matures and the capability of cloud vendors strengthens.

Adopting a cloud-computing solution often involves a range of complex financial considerations that agencies should consider as part of the evaluation process, such as:

- understanding the commercial principles associated with cloud computing;
  - financial issues related to procurement and contract negotiations.
  - market analysis and competitiveness of the market.
  - entry and exit fees associated with the contract.
  - transitioning funding from capital budgets to operational (departmental) expenditure.
- financial modelling to determine the cost-benefits associated with a cloud-computing solution compared to “in-house” investments and service provision;
- costs involved with disaster recovery and delivery of core business; and
- impacts on the agency’s financial statements and Capital Management Plan where ICT infrastructure will no longer be owned by the Commonwealth.

This guidance advice focuses on the financial issues that agencies need to address when adopting a cloud solution.

# Transitioning capital expenditure to operational expenditure

One of the key financial issues facing agencies in adopting a cloud solution is transitioning funding provided to the agency on the basis of capital expenditure to operational expenditure.

In terms of cloud computing, agencies should seek guidance where it is proposed that funding provided for capital items (like servers and software) are to be transferred to operating items. Such a transfer may also fall within the definition of a New Policy Proposal (NPP) and require Cabinet consideration. In these circumstances, agencies should refer to their respective Department of Finance and Deregulation Budget Agency Advice Unit (AAU) for more information and advice.

Where an agency brings forward an NPP, the accompanying business case should identify the extent of any capital investment for ICT or operating expenditure required and be reflected in ICT investment advice provided to AGIMO each year.

In summary, the areas that agencies should seek guidance from their respective AAUs are:

- Transfer of an agency's appropriations for capital expenditure to operational expenditure;
- Reallocation of departmental appropriations between operating and non-operating expenditure within a financial year; and
- obtaining approval for operating losses.

## Capital Management Plans

Adopting a cloud computing solution may impact on an agency's Capital Management Plan (CMP) where capital investments may be replaced through the purchase of cloud computing services from a vendor. In these instances, as a capital investment is replaced by services provided by a vendor, the agency may decide to retire the respective asset and will need to reflect this outcome in its CMP and their agency Financial Statements. The overall impact will be a reduction in the agency's estimated capital expenditure and associated capital budget, as well as an increase in operational expenditure – although this may not occur on a one-for-one basis in terms of the financial accounts.

If an agency decides not to retire an asset after purchasing cloud computing services - that would effectively render the asset obsolete, or decides to retain the asset for disaster mitigation or some other reason – the CMP should make note of any such decisions. This can be achieved by updating the "Notes" section of the CMP – where changes in the estimated capital expenditure and capital budgets at the Pre-ERC (Expenditure Review Committee) update are explained.

The CMP should reconcile with Capital Budget Statement and Asset Movement Table in the Central Budget Management System (CBMS) for the following sections:

- Approved Departmental Capital Budget / Collections Development and Acquisitions Budget (or depreciation funding prior to 2010-11);
- Own source revenue (S31 or cash reserves); and
- Prior Agreed - equity injection (Bills 2,4,and 6) Funding.

An agency is required to update its CMP to reflect changes in its estimated capital expenditure and capital budget. For further information, it is suggested that agencies contact their respective AAU within the Department of Finance and Deregulation.

## Financial assessment

Agencies considering cloud computing are reminded that this should occur in the context of ensuring proper use of Commonwealth resources (i.e. efficient, effective, economical and ethical use that is not inconsistent with the policies of the Commonwealth), whilst also complying with the financial framework requirements and whole-of-government procurement arrangements (e.g. ensuring compliance with the Financial Management and Accountability Act 1997 (FMA Act) Regulations and Data Centre Strategy).

Agencies should also consider the implications of entering a cloud contract on their Income Statement and Balance Sheet. The following table provides an overview of the key financial implications over the forward estimates period.

**Table 1 - Financial implications over the forward estimates period (\$ million)**

<b>Option</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>Total</b>
ICT cost baseline (existing) Income Statement and Balance Sheet					
New Capital investment or disinvestment (Balance Sheet)					
New Operating expenditure (Income Statement)					
Less savings realised					
<b>Total cost</b>					

The adoption of cloud computing will typically result in a transition from capital expenditure to operating expenditure, which will impact on the value of assets held and hence an agency's balance sheet. As previously discussed, this must also be reflected in the agency CMP. This will continue to be the case as agencies increasingly purchase cloud computing solutions from the private sector.

The transition to cloud computing will also have impacts on the way budgets will need to be managed in future. Traditionally cost savings have been measured against reducing operating expenditure. However, under the cloud model, the percentage of operating expenditure to total expenditure will increase, whilst capital expenditure (and by implication overall expenditure) will decrease over time.

## Financial risks

The key financial risks that agencies should be aware of when considering adopting a cloud computing solution are:

- Ensuring that the contract with the cloud vendor does not “lock” the agency into a relationship with the vendor beyond the duration of the contract.
  - Agencies should be aware of the requirements under Regulation 9 (Approval of Spending Proposals) and Regulation 10 (Arrangements beyond available appropriation) of the FMA Act.
  - One risk may arise following the development of intellectual property by the cloud vendor to support the services provided to the agency client, e.g. data schemas built specifically for the client.
    - This can also be associated with costs of transitioning into the cloud arrangement and transition costs out of the arrangement.
  - If the cloud vendor does not release client specific IP it has built at the termination of the contract, this may result in excessive exit fees for the agency or the need for additional investment in the new services.
- Some cloud vendors may operate using multi-tenanted infrastructure services.
  - This may result in hidden costs for agencies in the situation where any changes to the system requested by an agency will be charged back to the agency.
- It is essential that agencies understand the economic and pricing models used by the cloud vendor, particularly the pricing points associated with increases in service level usage.

Agencies should consider including a service monitoring facility in the cloud contract to assist it in financial monitoring of the contract and service usage, e.g. monitoring may take the form of daily reporting on service use.

## Commercial principles

The adoption of a cloud computing solution involves an array of commercial arrangements, the majority of which contain financial components. The following table highlights emerging commercial issues that agencies should consider.

**Table 2- Emerging commercial issues**

	<b>Current situation</b>	<b>Future situation</b>
Contracts	Generally medium to long-term contracts.	Shorter contracts under cloud arrangements to avoid vendor lock-in and take advantage of market competition.
Pricing	Purchase, licence fee for	Transparency in pricing to be provided by

	technology provided, complex contracts.	vendors. Pay for use, utility, subscription pricing models as well as outcome models where appropriate. Flexibility in pricing is obtained through shorter contract lengths.
Marketplace	Restricted by high investment, limited companies participating in the market and cost of market entry barriers.	Competitive and vibrant market, open to innovation with lower barriers to entry resulting from the availability of Infrastructure as a Service (IaaS) and Platform as a Service (PaaS). The number of market participants will be higher and care is needed in evaluating their capabilities.
Procurement	Lengthy and costly for buyer and seller.	Ease of selection as procurement panels are established for cloud computing vendors. Commonwealth Procurement Guidelines (CPGs) to be followed according to thresholds. FMA Regulation 9 and 10 issues should be considered if long-term contracts are signed.
Contracting	Multiple vehicles, multiple departmental contracts.	In the future, contracting arrangements to be managed by either business areas or CIO's and overseen by central procurement arrangements and CPG's. Within the context of the Australian Government Cloud Computing Strategy we are also considering the establishment of a cloud provider panel.

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## Summary of Checkpoints

1. Transfers between capital and operating expenditure should be discussed with the Department of Finance and Deregulation (Budget Group Agency Advice Units).
  - Ensure that your agency has determined the necessary requirements through discussions with Finance.
2. Capital Management Plans must be updated to reflect any transfers between capital and operational expenditure.
  - Ensure that your agency has updated its Capital Management Plan to reflect changes in the estimated capital expenditure and the associated capital budget.
3. Undertake a high-level financial assessment for the purposes of financial control of your cloud proposal.
  - Ensure that you have considered the financial impacts of your cloud proposal from the perspective of your agency's Income Statement and Balance Sheet including any operating loss approval
  - Understanding the financial aspects of your cloud proposal will help to implement financial controls over the duration of the contract.
  - Ensure that your ICT investment advice to AGIMO reflects the implication of cloud services.
4. Understand the financial risks associated with the contract.
  - Make sure that you understand the financial risks associated with the proposal such as contract lock-in, entry/exit fees, hidden costs and the pricing model used by the vendor.
  - Make sure you check for any implications with the Data Centre Strategy.
5. Consider the commercial principles underlying your cloud proposal.
  - A consideration of the relevant commercial principles will focus your attention on the attributes of your proposal that should be considered in obtaining savings and improved ICT capabilities.
  - Ensure that your cloud proposal will produce value for money.