



Government of **Western Australia**
Department of **the Premier and Cabinet**
Office of **Digital Government**

Whole-of-Government **Cloud Policy**

A Supplementary Guide

Document Control

The Western Australian Whole of Government Cloud Policy: A supplementary guide

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Introduction

The Western Australian (WA) Information and Communications Technology (ICT) Strategy—*Digital WA*—sets the vision and roadmap for digital transformation of the WA public sector.

The WA Whole of Government Cloud Policy (the Policy) and this Supplementary Guide are key components of the implementation of *Digital WA*.

This Supplementary Guide to the Policy describes key considerations for agencies to consider when transitioning to the cloud, and introduces a suite of factsheets that outline practical issues and additional guidance as they progressively mature their cloud capabilities.

What is “the cloud”?

“Cloud” is a catch-all term, that broadly applies to computing resources that are provided at a distance via the internet, rather than locally via an organisation’s own hardware and ICT teams. The term ‘cloud’ is inherited from early descriptions of the internet—which was conceived as a complex mass, or cloud, of interconnected computers.

Cloud computing is near-synonymous with its business model, in which computing resources are provided as a *service* (operational expenditure), as opposed to *products* that are bought and owned (capital expenditure).

This differs from more traditional approaches to computing, where all data, networking, software and physical hardware was typically paid for, maintained and managed individually (and within each building) by organisations’ ICT teams.

Because cloud computing services do not have to be “in the building” where they are used, they provide greater flexibility than traditional ICT procurement, which requires expensive hardware and software to be owned and set up in every location where an organisation operates.

Cloud solutions are also mobile-friendly and flexible by design. Because cloud services are not tied to specific locations, they allow agency staff to work remotely with little additional support from ICT teams.

Key Cloud Concepts

Cloud computing is delivered as a service, not as a product and has little up-front cost. This “as-a-Service” model has three key advantages:

- **Scalability** – services can be speedily increased or decreased to meet needs;
- **No sunk cost**—services are metered so you only pay for what you use, and can turn off what you don’t; and
- **Self-service**—trying a new service does not require up-front investment, or lengthy involvement from ICT teams. Business managers can take charge of what they use.

The three main “as-a-Service” (aaS) categories for cloud computing are:

- **Infrastructure-as-a-Service (IaaS)** – which provides fundamental ‘back-end’ computing such as storage, networks and servers. The WA Government’s new core network, *GovNext-ICT*, is an IaaS solution;
- **Platform-as-a-Service (PaaS)**, which provides everything required to develop and maintain web-based applications and services (e.g. a Government website); and
- **Software-as-a-Service (SaaS)**, which provides applications and services that are based on remote servers, and available to users anywhere (typically through a web browser window).

Cloud represents a significant opportunity for the Western Australian Public Sector to stop paying to run its own computing hardware, and pay only for what it needs—with greater security and flexibility as a result.

An Example of What Cloud Computing Looks Like

One straightforward example is cloud storage—common examples of which include Dropbox and Microsoft OneDrive. Prior to cloud computing, each computer would only have access to the files stored on its own individual hard disk—or those it was directly connected to via a network. Even files from the internet would have to be downloaded and stored “locally” in order to be used, and each organisation would have to maintain its own “servers”—storage computers to provide the data.

With cloud storage, data is instead kept in massive warehouses, called “data centres”, which are built and maintained centrally by the cloud storage provider. Each customer’s files are then made instantly accessible to them (and only them) via an internet connection. The cloud data centre is able to provide data to potentially thousands of separate customers, wherever they are—and typically features far higher levels of security, backup and data availability than separate users could individually provide. The economy of scale, and ability to start and stop serving new data with ease, means that cloud storage can be provided for a relatively low monthly cost—and with no up-front cost to customers.

The same principle applies to virtually any kind of computing service (including the whole operating system of a computer itself, and all the software it runs)—such that it is now possible to run an organisation’s entire corporate ICT system via cloud services. The organisation can start paying only for what it needs, and break free of the costly cycle of buying, maintaining and replacing all its own hardware and software.

The role of the Cloud Policy

Current ICT procurement practices frequently default to the traditional model, without considering the numerous advantages that cloud options can provide. As a result, agencies incur higher up-front costs for ICT solutions which are expensive and may not be the best for their business needs.

The Policy mandates that agencies change this, and instead consider cloud-based options by default—and adopt them wherever business, risk and value-for-money requirements are met.

Key considerations

Several WA agencies have successfully transitioned to cloud services. Their experience indicates that the transition is best managed with a staged approach, moving one manageable workload at a time.

The result is a transition that is easier to plan and implement, where business executives and staff learn through experience, building confidence and capability across the agency.

Regardless of the scale of an agency’s transition to cloud services, common topics for agencies to consider are the project’s governance framework, their workforce capability, and the agency’s current situation. Applying an agency’s existing business and risk management frameworks to plan the process, agencies should assess cloud options, plan their procurement and implement regular review and management processes following the purchase.

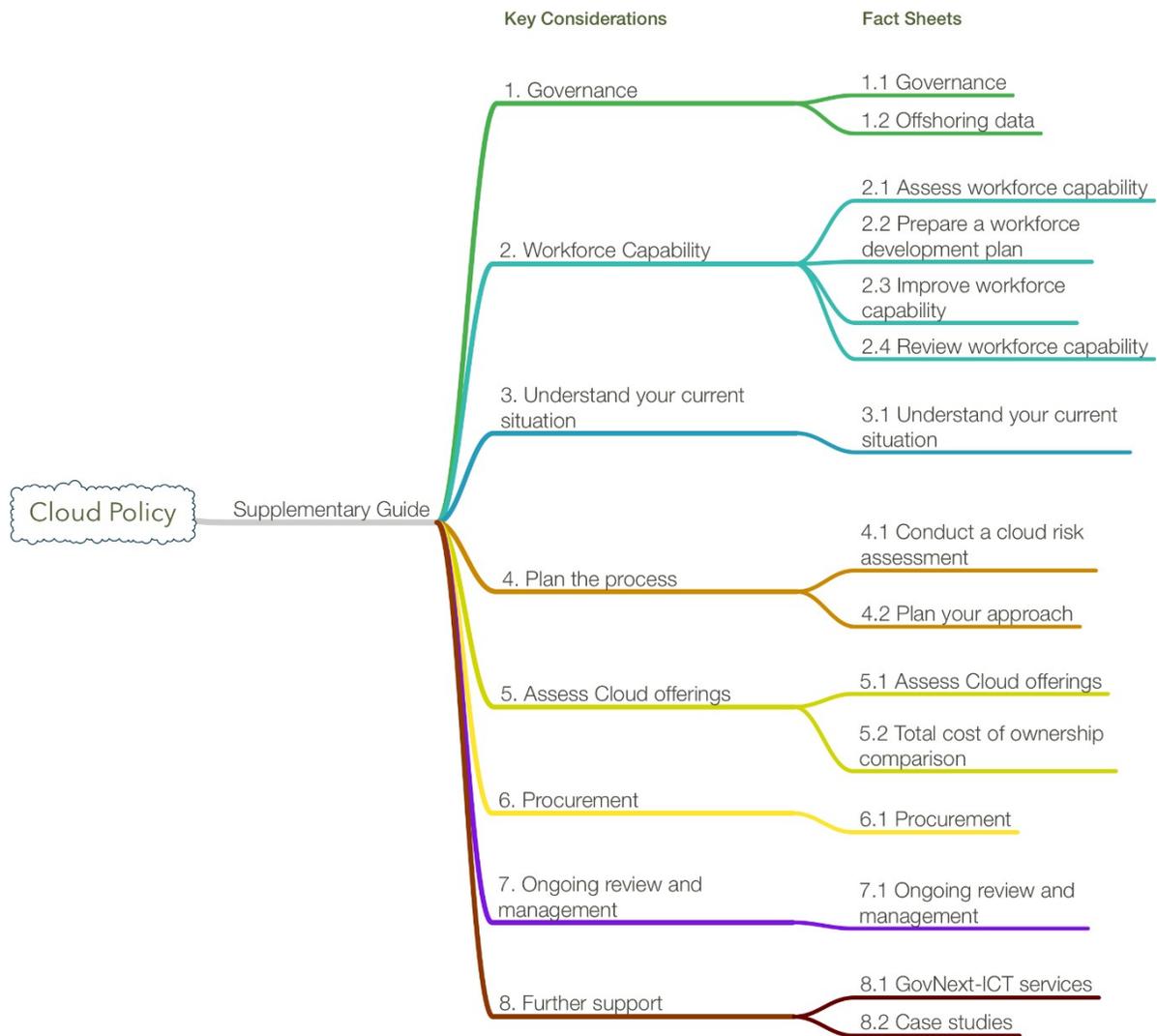


Figure 1: Key Considerations and Fact Sheets

Fact sheets

Fact sheets addressing these key topics have been developed to assist agencies with the move to cloud services, by providing further details on process and key considerations for their transition.

Table 1: Cloud Policy Fact Sheets

Topic	Factsheet	Objective
1. Governance	1.1 Governance	Establish a business-led governance framework with supporting ICT policies and a management framework to enable cloud transformation.
	1.2 Offshoring data	Establish a governance framework to enable transfer, storage and processing of data in compliance with Western Australian law.
2. Workforce capability	2.1 Assess workforce capability	Assess your agency's skills and capability to plan, assess and implement cloud offerings.
	2.2 Prepare a workforce development plan	Establish an ICT workforce development plan that includes cloud capabilities.
	2.3 Improve workforce capability	Determine whether the skills required can be developed through training or if specialist expertise is required.
	2.4 Review workforce capability	Implement regular review of job description forms and update where necessary.
3. Understand your current situation	3.1 Understand your current situation	Assess your agency's workloads, and the maturity of existing policies and systems.
4. Planning the process	4.1 Conduct a cloud risk assessment	Assess the risks associated with transition to cloud.
	4.2 Plan your approach	Develop project documents, with relevant supporting materials, to justify and acquire the appropriate approvals for your agency's transition to cloud.
5. Assess cloud offerings	5.1 Assess cloud offerings	Develop a market sounding approach to determine different service offerings and price models. Choose service model/s based on your agency's needs, and compare the total costs of ownership.
	5.2 Total cost of ownership comparison	
6. Procurement	6.1 Procurement	Plan your procurement strategy in accordance with the Policy, and State Supply Commission Policies.
7. Ongoing review and management	7.1 Ongoing review and management	Implement regular review of market offerings and price points and continually assess service delivery of existing contracts.
8. Further support	8.1 GovNext-ICT services	Learn more about the Office of Digital Government's GovNext Service Broker (GSB) team.
	8.2 Case studies	Learn from case studies of cloud deployments in other agencies.

Further Support

For further support in transitioning to cloud, contact the Office of Digital Government.