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1. Introduction

Enterprise Architecture (EA) principles are a crucial foundation for achieving strategic outcomes as they establish the basis for a set of rules and behaviours for an agency.

The Australian Government Enterprise Architecture Principles (‘principles’) are based upon addressing the importance of getting results, obtaining maximum return-on-investment and cost efficiency of operations, providing quality information and technology, protecting privacy, maintaining secure information, and providing service to the public. The principles, as a key enabler for whole-of-government (WofG) outcomes, will contribute to aligning agency and cross-agency services and solutions with goals and strategies at both the agency and WofG levels. The principles should form not only part of the EA capability of Australian Government agencies, but also the systems life cycle, capital planning and investment decision-making processes at the agency, cross-agency and WofG levels.

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**Shared cross portfolio outcomes in priority areas where more than one portfolio is responsible for achieving government outcomes should be introduced.**

2010, Ahead of the Game: A Blueprint for the Reform of Australian Government Administration, p65

1. Relationship

These principles form part of the Australian Government Architecture (AGA) framework, as illustrated in Figure 1 below. They have been adapted from and supersede the Cross Agency Services Architecture Principles which were published in 2006. Attachment 2 shows a mapping between the two sets of principles.

These principles also incorporate cloud computing concepts.

1.2 Scope

The principles outlined in this document govern the planning and implementation of architectures. The AGA Reference Models, align with the use of these principles.
The scope of these principles includes services that are delivered entirely within the boundaries of Australian Government agencies, along with composite services delivered by the Australian Government and other service providers including other Australian jurisdictions and the private sector. Although some of the principles may appear to cover areas commonly regarded as mandatory requirements or accepted practice within the Australian Government, they are included here for completeness, as this is not necessarily the case across the spectrum of possible service providers.

Agencies should be able to map these principles to their ICT vision and strategic plans, as well as to whole-of-government strategic guidance. Agencies should adapt the principles to meet their specific business needs, through mapping of specific actions (such as EA development, business initiatives, ICT acquisitions and implementation) to the principles. The principles relate to the delivery of business services undertaken by the Australian Government, and should not be seen as being constrained to the delivery of information and communications technology (ICT) related services.

Cloud computing is an emerging option for the design and procurement of innovative services, and is likely to become an enduring part of the Australian Government ICT and service delivery landscape. The use of these principles is likely to encourage the consideration of cloud solutions as part of any new service initiative.

There are two different types of principles:

- **EA Principles** – principles that govern the EA process. They affect the development, evolution and usage of the EA.
- **Enterprise Principles** – business principles that assist in the implementation of architecture. They establish the first tenets and related decision-making guidance for selecting, designing, developing, governing and implementing information systems.
As shown in Figure 2, architectural principles should represent those fundamental requirements and practices that an agency should meet.

**Figure 2. Role of Architecture Principles (agency perspective)**

Agencies can use the principles in a number of different ways:

- to provide an architectural framework for agencies to support explicit, evidence-based decision-making;
- as a guide to establishing relevant evaluation criteria, thus exerting strong influence on the selection of products or solution architectures in the later stages of managing compliance to the EA;
- as drivers for defining the functional requirements of the EA;
- as an input to assessing both existing systems and the future strategic portfolio, for compliance with the defined architectures — such assessments provide valuable insights into the transition activities needed to implement an architecture in support of business goals and priorities;
- using the rationale descriptions as a basis for justifying architecture activities;
- using implication descriptions as insight to provide valuable inputs to future transition initiatives and planning activities; and
- to support the architecture governance activities in terms of:
  - providing a “back-stop” for the standard architecture compliance assessments where some interpretation is allowed or required, and
  - supporting the decision to initiate a waiver request where the implications of a particular architecture amendment cannot be resolved within local operating procedure.

Principles are inter-related, and need to be considered as a set. Principles will sometimes compete; for example, the principles of “accessibility” and “trustworthy” could establish a creative tension. Ultimate design decisions will be made based on requirements and risk and the rationale documented.
A common reaction on first reading of a principle is “this is motherhood”, but the fact that a principle seems self-evident does not mean that the principle is actually observed, even when there are verbal acknowledgements of the principle.

Although specific penalties are not prescribed in a declaration of principles, violations of principles generally cause operational problems and may inhibit the ability of an agency, a cross-agency collaboration, or whole-of-government initiative to fulfil its mission.

1.4 Application

These principles apply to Australian Government agencies. Agencies should apply the principles as the basis for architectural planning and decisions across business environments, for example developing architecture for cloud services, and as a framework for assessing the underpinning capabilities, processes and service design.

Agencies should also apply the following:

- **Australian Privacy Principles**
- **Commonwealth Procurement Rules**;
- **Principles on open public sector information**;
- Principles contained in the Australian Government **Protective Security Policy Framework** (PSPF);
- Principles contained in the Australian Government **Information Security Manual** (ISM);
- **Digital Continuity Principles**; and
- **Whole-of-Government ICT Investment Principles**

1.5 Terminology

The term “consumer” means the user of a service. A consumer may be a citizen, business, community or other organisation, government user or, indeed, another service.

For other terms associated with EA and, in particular, AGA-related terms, refer to the glossary in the *AGA Reference Models*.

1.6 Audience

Architects (all denominations), project managers and line-of-business managers.

1.7 Governance

Principles should be stable, having a “timeless” quality because they define a value system (as a rule, while methodologies frequently change, values do not). Once established, only slight adjustments should be required to address changing business strategies and priorities. If significant modifications are required, their impact will require rigorous assessment through a formal change management process.

AGIMO manages the principles in consultation with the Chief Information Officer Committee (CIOC) and the Australian Government Architecture Working Group (AGAWG).

These principles supersede the Cross Agency Services Architecture Principles, which the CIOC endorsed in December 2006.
AGIMO and the AGAWG will review these principles on an annual basis.
Please direct requests and suggestions for enhancements to these principles to aga@finance.gov.au.
## 2. Summary of principles

The primary use of these principles is to capture the fundamental truths about how an enterprise will use and deploy its resources and assets to achieve its strategic goals and outcomes.

<table>
<thead>
<tr>
<th>Principle</th>
<th>Short description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business</strong></td>
<td></td>
</tr>
<tr>
<td>PR-1: Strategic focus</td>
<td>Investment decisions are defined by business requirements</td>
</tr>
<tr>
<td>PR-2: Cohesiveness</td>
<td>Agencies shall present a consistent face of government through a common and consistent approach to service delivery.</td>
</tr>
<tr>
<td>PR-3: Reliability</td>
<td>Information and information services are reliable, accurate, relevant and timely</td>
</tr>
<tr>
<td>PR-4: Value</td>
<td>Government business initiatives and investments must represent value for money and return a business benefit</td>
</tr>
<tr>
<td>PR-5: Accessibility</td>
<td>Information and services are accessible on an equitable basis.</td>
</tr>
<tr>
<td>PR-6: Trustworthy</td>
<td>The integrity and confidentiality of information and data produced and managed by government is protected.</td>
</tr>
<tr>
<td><strong>Technical</strong></td>
<td></td>
</tr>
<tr>
<td>PR-7: Agility</td>
<td>Capabilities including business processes, information, applications, and technical assets are able to evolve and adapt to a changing environment.</td>
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<tr>
<td>PR-8: Quality</td>
<td>Capabilities including business processes, information, applications and technical assets meet quality service standards for performance, reliability, traceability and usability.</td>
</tr>
<tr>
<td>PR-9: Leverage</td>
<td>Reuse before buy. Buy before build.</td>
</tr>
<tr>
<td>PR-10: Harm minimisation</td>
<td>ICT systems, products and services are designed to meet sustainable requirements to minimise and manage their adverse environmental impacts.</td>
</tr>
<tr>
<td><strong>Information</strong></td>
<td></td>
</tr>
<tr>
<td>PR-11: Asset</td>
<td>Data and information are assets that have value.</td>
</tr>
<tr>
<td>PR-12: Transparency</td>
<td>Information is accessible to the public, where appropriate.</td>
</tr>
</tbody>
</table>
3. Principles in detail

This paper adopts The Open Group Architecture Framework (TOGAF) approach to defining principles, as described in Attachment 1. The reasoning behind this is to promote understanding and acceptance of the principles and to support the use of the principles in explaining and justifying why specific decisions occur.

This section describes each of principle in full detail with:

• the name;
• a short description;
• the rationale for the principle; and
• the implications or consequences (positive and negative) of adopting the principle.

[PR-1] Provide a strategic focus

Short description
Investment decisions are driven by business requirements.

Rationale
Core government needs and priorities should be the primary drivers for investment. Investment decisions should be defined by the agency’s vision and strategic plans as well as the requirements of the business. These should also take into account whole-of-government strategic guidance.

A business-led and business outcome-oriented architecture is more successful in meeting strategic goals, responding to changing needs and serving consumer expectations. Government service requirements will define any required technological support.

A high performing public service engages with citizens and enables the delivery of services to meet their needs


Services for citizens need to be better integrated and more appropriate to citizens’ life experiences and needs. Citizens are increasingly mobile and businesses operate across both domestic and international borders
Implications

- Agencies need to align with whole-of-government strategic direction.
- Agency's strategic plans need to align with whole-of-government strategic direction.
- Investment decisions should be made in accordance with the agency's vision and strategic plan.
- Changes to processes, applications and technology should be made in response to an approved business initiative.
- Design of business solutions will need to be aligned with, and traceable to strategic goals and outcomes.
- Services, processes and applications will need to be designed from the perspective of the service user.
- Building or redevelopment of applications and solutions will be undertaken only after business processes have been analysed, simplified or otherwise redesigned as appropriate.
- Applications are delivered in a collaborative partnership with the business owners to enable solutions to meet user-defined requirements for functionality, service levels, cost and delivery timing.

[PR-2] Cohesiveness

Short description

Agencies shall present a consistent and unified face of government through a common and integrated approach to service delivery.

Rationale

The intent of this principle is to ensure that government services are presented to consumers in a consistent and cohesive manner. This means that consumers of government services should only need to present a piece of information to government once. Similarly, consumers will be presented with a common look, feel and experience regardless of what agency service or channel they are accessing at the time. This presentation of a consistent government face will reduce the impact of internal government change (for example, agency amalgamations and restructures) on consumers, and potentially reduce the flow on costs of such changes. Adoption and continued use of a service by consumers will depend, to an extent, on ease of use enhanced by consistency of service delivery.

With the introduction of common services and the reduction of duplicate services, the Government has the opportunity to reduce costs.
[The recommended] reforms also require integrated information systems and management strategies to ensure more coordinated service delivery across the APS.

2010, Ahead of the Game: Blueprint for Reform of Australian Government Administration, p. xi

To improve outcomes for citizens, strong partnerships between agencies and across state, territory and local government boundaries are important. Systems should be able to communicate with each other to ensure that all services to the public are connected and citizens only have to tell government once”.

2010, Ahead of the Game: Blueprint for Reform of Australian Government Administration, p17

“Shared outcomes across portfolios would create shared agency accountability in critical interrelated areas, such as Indigenous affairs”.

2010, Ahead of the Game: Blueprint for Reform of Australian Government Administration, p xi

“In policy development and service delivery the APS needs to work together as one organisation so that it is equipped to tackle multi-dimensional and interrelated issues”.

2010, Ahead of the Game: Blueprint for Reform of Australian Government Administration, p. 10

**Implications**

- Agencies will need to collaborate in the development of services. This will require open sharing of information, cross-agency planning, and understanding of whole-of-government service channels, segments and lines of business.
- To achieve consistent and interoperable service across the whole-of-government, the Australian Government and its agencies will need to agree and use common mainstream technologies, open industry standards and open architectures.
- Agencies will need to align service delivery with whole-of-government policies, strategies and frameworks.
- Agencies will need to reduce integration complexity.
- Agencies will need to incorporate the seamless use of interoperable applications, data and information across various sourcing models and operating environments.
[PR-3] Reliability

Short description
Information and information systems are reliable, accurate, relevant and timely.

Rationale
The take-up and use of lower cost channels will depend on users of government services trusting the ability of the government to provide reliable, accurate, relevant and timely information to consumers.

Reliable services that provide consistent outcomes [PR-2] will help to reduce complaints, reviews and appeals from consumers.

Implications
- Agencies will need to deliver information which customers can rely upon.
- Good processes create good data. Processes will need to be the focus of ongoing continuous improvement (which in turn will improve reliability, accuracy, relevancy and timeliness).
- The Australian Government will need to provide a trusted service to individuals, businesses and other organisations. The outcome will be a strengthened trust in the Australian Government and its agencies.
- Agencies will need to devote significantly greater effort towards data quality, business continuity, and business process design to ensure reliable information and information systems.
- Agencies will also need to devote more effort towards cross-agency collaboration on data and information management.

[PR-4] Value

Short description
Government business initiatives and investments must represent value for money and return a business benefit.

Rationale
The value and cost of investments need to be measurable in objective terms. A government service that does not have an understood return on investment (ROI) is unlikely to receive the on-going support and commitment that will make it sustainable.

Service delivery can create complicated cost/benefit models, particularly where there are cross-jurisdictional boundaries. The benefits realised through a service may not be recorded by the agency and/or agencies that are required to invest. A thorough understanding of the costs and benefits is required to establish an
appropriate investment model to support the creation and on-going management of the service.

It is mandatory for agencies to meet the Commonwealth Procurement Rules for:

- value for money,
- encouraging competition,
- efficient, effective and ethical use of resources, and
- accountability and transparency.

**Implications**

- Business initiatives will need to be fit for purpose and deliver value and benefit.
- Business initiatives will need to be prioritised in terms of their relation to the Australian Government’s vision, policies, strategies and plans.
- Agencies will need to assess the ROI for each business initiative.

Public ROI should be based on agencies taking a rewards-based approach to ROI measurement and encompass the following three areas:

<table>
<thead>
<tr>
<th>Financial ROI</th>
<th>Social ROI</th>
<th>Political ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional or “classic” measurement of financial</td>
<td>Impact of government services on a societal level</td>
<td>Impacts the system of governing and policy decision making</td>
</tr>
<tr>
<td>gains with quantifiable results</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct, measureable benefits and costs</td>
<td>Indirect and difficult to measure public good benefits and costs</td>
<td>Motivational feasibility of the project, or the benefits of interested parties (champions, opponents, decision makers)</td>
</tr>
<tr>
<td>e.g., reduced transaction costs (such as in procurement by reducing the cost creating a purchase order from $28 to $21) or fewer steps in the workflow of approving a budget request</td>
<td>e.g., are citizens safer? Are children in a particular jurisdiction receiving adequate medical services? Are the vulnerable receiving sufficient support?</td>
<td>e.g., are we delivering government programs that match policies, legislation and mandates? Are we delivering on the promises of our politicians?</td>
</tr>
</tbody>
</table>

- In addition to assessing the public ROI for each business initiative, a total cost of ownership (TCO) approach will be required. The TCO will need to assess the investment against other priorities, as well as balancing the costs of development, support, security, risk mitigation, disaster recovery and retirement against the costs of government’s requirements for flexibility, scalability, ease of use and reduction of integration complexity.
- There will need to be improved whole-of-government usage of business benefit management and benchmarking, e.g. P3M3, MSP approaches.
**[PR-5] Accessibility**

**Short description**

Information and information services are accessible on an equitable basis to consumers.

**Rationale**

Government information needs to be accessible to the widest set of consumers. Channel independence continues to ensure that consumers have a choice of access options. While information and services need to be accessed in a variety of ways, the information and services must be delivered in an integrated, consistent fashion.

... *by early 2015 the target is that all government websites will be more accessible due to their conformance with WCAG 2.0.*

**Implications**

- Services should be designed to operate consistently across multiple delivery channels.
- Agencies will need to comply with WCAG 2.0.
- Agencies will need to resource significant additional effort in human interface design.
- In designing services, agencies will need to consider accessibility by, and interoperability with, automated services.

**[PR-6] Trustworthy**

**Short description**

The integrity and confidentiality of information and data produced and managed by government is protected.

**Rationale**

The consumers of government services must be confident that their privacy and the confidentiality of information is protected. Agencies, businesses and individuals need to be able to trust the integrity and confidentiality of information and data in order to sustainably deliver and access government services.

The Australian Government's *Privacy Act 1988* regulates 'information privacy'. Information privacy is one component in the delivery of trustworthy information services.
The Australian Government’s PSPF has been designed to help agencies deal the concept of confidentiality and integrity, providing agencies with help on identifying their individual levels of security risk tolerance; achieving the mandatory requirements for protective security expected by Government; and developing an appropriate security culture to securely meet their business goals.

The ISM is the standard that governs the security of government ICT systems. It complements the PSPF.

**Implications**

- Agency information and information services are managed in a manner that is accurate, relevant, timely, available and secure.
- A risk-managed approach, in accordance with government requirements, is taken to ensure that:
  - agency staff and contractors entrusted with an agency’s information assets have had their identity established to an appropriate level of assurance and are entitled to have that access and; and
  - businesses and individuals that need to access agency information and information services have satisfied the appropriate identity and authorisation requirements to enable that access.
- Agencies are required to ensure maintenance of confidentiality, integrity and privacy of data and information.
- Agencies will need to be aware of where data and information is stored, both at rest and in transit.
- Agencies and contracted parties are required to comply with legal obligations surrounding storage of information and data, for example, the *Privacy Act 1988* and statutory secrecy provisions.
- Agencies will need to apply different approaches depending on information classification and assessed business impact.
- Agency information assets must be protected against unauthorised access, denial of service, and both intentional and accidental modification / compromise.
- Agency client authentication will need to be defined and implemented in alignment with whole of government identity management policies and frameworks and (as appropriate) other cross agency services.

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**[PR-7] Agility**

**Short description**

Capabilities including business processes, information, applications, and technical assets are designed to evolve and adapt within the context of a dynamic and changing environment.
Rationale

As the priorities and requirements of the Australian Government and consumers of government services change, government services will need to evolve and adapt without needing to be re-created. With the emergence of cloud services, agencies need to promote the use of agile development, services need to be designed to adapt for change, leading to a more rapid and cost-effective reaction, including business assessment and deployment, to changing requirements.

Government services and their associated ICT systems and enhancements will need to be capable of evolving and adapting to meet changing priorities, functionality and capacity needs while minimising the cost, risk and impact of changes on the consumer, the system and the environment.

Implications

- Agencies must adopt more agile approaches.
- Agencies will need to be able to adapt to changing environments, such as increased consumer demand, business improvement and technical innovation.
- Agencies will need to be able to successfully and rapidly respond to change.
- It is likely that agencies will need to spend more effort on analysis of long-term needs and trends.
- Agencies will need to focus on business-centric, loosely-coupled, service-oriented design, e.g. the use of design patterns, rules engines and so on.
- Agencies will need more agile approaches to business, as in the sourcing and selection of solution components (not just technical agility through service design).
- Agencies will need to focus on principles of consolidation, simplification and standardisation, service orientation and interoperability.

[PR-8] Service Quality

Short description

Capabilities including business processes, information, applications and technical assets meet quality and service management standards for performance, as well as reliability, traceability and usability.

Rationale

As online government service delivery becomes more pervasive, consumers will depend more on the information obtained. The Australian Government must consider the performance and the reliability of its information throughout the design and use of its systems. For evidentiary purposes, agencies must also consider the traceability and usability of those services.

Data quality is relative to the purpose to which it is to be applied. Decision makers and consumers need to not only have access to data, they also need to understand
the timing, reconciliation, completeness, and accuracy of that data. Data quality is neither abstract nor qualitative, rather it should be measured in absolute terms.

The complexity of government service delivery is such that managing the services and tracing problems is also complex and difficult. The point of query for an information service will be the service steward as they are the “face to the citizen”. It is essential that this role monitor and manage the service at a level that supports their consumers.

Setting quality and service management standards will also make information more accessible and therefore raise its intrinsic value. It will provide agencies with the capability to continue their business functions regardless of internal and external events. Hardware failure, natural disasters, and data corruption should not be allowed to disrupt or stop government service delivery.

**Implications**

- Capabilities will need to be manageable and measurable. By association, capabilities should have defined metrics and key performance indicators (KPIs), and are monitored and measured on an ongoing basis. The metrics and KPIs will need to be used as the basis for continuous improvement (see the Australian Government Architecture Performance Reference Model).
- Capabilities will need to meet quality standards for reliability, performance and usability.
- Service standards will need to be defined and observed.
- Agencies will need to ensure that services and assets are proactively managed, traceable and dependable in operation.
- Agencies will need to carefully assess service standards so that consumer requirements are appropriately matched to given services. There may be instances where a service is not required to be highly available and resilient — in these cases agencies must assess cost and benefits.
- Agencies will need to encourage the innovative use of commodity services as this may help to raise service quality to a sustainable level.

**[PR-9] Leverage**

**Short description**

Reuse before buy. Buy before build.
**Rationale**

The sharing and reuse of information and ICT assets, capabilities, services and processes, when widely practised across the whole-of-government, will provide the basis for improved long-term utility, efficiency, value for money and performance. In order to maximise value, reduce complexity and increase interoperability, investments will need to reduce the emphasis on program-centric silo funding, and to leverage not only the use of enterprise level, cross-agency and whole-of-government initiatives, capabilities and resources wherever practical but emerging technologies, for example cloud computing, open source, etc.

The case for reuse may be particularly compelling for ICT or information assets and services that support standard or common business processes, for example, financial management, procurement, grants management, records management or parliamentary workflow.

Note that the principle of reuse applies not only to applications and solutions, but also to approaches to solution selection and management, for example, service provider selection, risk assessments, service level agreements, contracts and so on.

>“Automation and simplification of many existing processes (consistent with privacy and secrecy laws) would occur by allowing agencies to:

- Re-use and share existing data where possible;
- Provide more forms in an online format that can be automatically pre-filled;
- Expand and integrate the range of services available to citizens through their preferred approach (e.g. online, mobile, face-to-face);
- Introduce the option of common registration processes across government so that citizens have the convenience of a single login (potentially via the Australian Government Online Service Point); and
- Refocus programs and services to be based on the needs of the citizen, rather than the agency providing the service.

2010, Ahead of the Game: Blueprint for Reform of Australian Government Administration, p 34

**Implications**

- Agencies will enhance their ability to integrate applications, and to provide common functions that could be leveraged by new applications. Integration complexity should be reduced within and across agencies.
- While data and information assets will be commonly identified as offering value for sharing and reuse, there are privacy, secrecy and security constraints that may restrict the simplest forms of this savings area.
- Funding models may need to be modified to limit the effects of silo funding for programs, and to facilitate the development and usage of common or shared building blocks that can be used by many silos.
- In line with the Australian Government ICT Customisation and Bespoke Development policy, agencies will need to consider modifying their business processes (in conjunction with the use of unmodified COTS, for example) before implementing and modifying a new solution.
• Agencies will need to consider cross-agency and whole-of-government reuse, not just intra-agency reuse.
• Agencies will need to control the level of technical diversity where appropriate.
• Agencies will need to consider the use of common processes and patterns, supported by common use applications and solutions.
• In procurement activities, agencies will need to incorporate a requirement for “piggy-backing” by other agencies.
• Interoperable capabilities will be available across all areas including business processes, information, applications and technical assets.
• Agencies will require the ability to publish, discover and consume common capabilities. The use of reference models and taxonomies to identify shareable and reusable components will assist in this task.
• The Australian Government and its agencies will need to spend significant effort in cross-agency collaboration, identification of common and shared services, and whole-of-government solution candidates.

[PR-10] Harm minimisation

Short description
ICT systems, products and services must meet sustainable requirements to minimise and manage their adverse environmental impacts.

Rationale
The Australian Government can reduce the adverse impact of ICT activities on the environment by implementing and applying a sustainable design principle, policy and practice. By doing this, the social, ecological and economic costs of new services and ICT system enhancement will be known and managed efficiently, effectively and ethically. Additionally, the Australian Government’s environmental reporting requirements will be met.

Environmental sustainability of ICT is the responsible acquisition, development, installation, use and disposal of ICT systems, products and services so as to utilise resources more effectively, increase productivity, improve efficiency and reduce the environmental impact of ICT materials and operations.

The materials comprising ICT systems and products are resource intensive where components consist of hazardous, precious and rare metals, as well as containing large volumes of plastics, glasses and other materials. There are serious social, environmental and economic issues associated with the pursuit of rare metals for ICT.

ICT systems, products and services consume significant amounts of energy, which also requires supporting infrastructure to maintain operability – such as large supplementary air conditioner units to cool server rooms and uninterrupted power supply (UPS) units to regulate and/or ensure the supply of electricity to ICT equipment.

Environmental analysis of the ICT life cycle must trace the environmental impacts of existing or proposed designs and use this information to determine the most environmentally sustainable design possible.
The **Energy Efficiency in Government Operations Policy** seeks to improve energy efficiency and reduce the whole of life cost and environmental impact of government operations. The policy sets targets for reduction in energy intensity of government agency operations.

### Implications

- Agencies and their contracted parties are improving environmental performance of ICT through responsible acquisition, installation, maintenance, use and disposal of ICT resources.
- ICT systems, products and services meet the Australian Government ICT Sustainability Plan 2010-2015.
- The Australian Government and its agencies will need to focus more strongly on consolidating, simplifying and standardising shared services arrangements, whole-of-government opportunities, cloud computing services and other emerging initiatives.
- With regard to sustainability, agencies will need to consider whole-of-life maintenance and enhancement of existing assets, especially in relation to infrastructure and data centres.

### [PR-11] Asset

#### Short description

Data and information are assets that have value.

#### Rationale

Accurate, timely data is critical to accurate, timely decisions. Agencies need to manage assets carefully — information should be no exception. Information is the foundation of decision-making, so it must be carefully managed, to ensure that its location is known, its accuracy can be relied upon, and it can be obtained when and where it is needed.

The availability of official information enables:

- More effective participation in the making and administration of laws and policies; and
- Promotes accountability by Australian Government Ministers and officials thereby enhancing respect for the law and the promotion of good government.

It is a requirement that information governance meets:

- the [OAIC Information Principles](https://www.oaic.gov.au/privacy/privacy-principles) under the *Privacy Act 1988 (Cth)*
- the National Archives Digital Transition Policy and Digital Continuity Plan and Principles.
Implications

- Agencies are required to recognise information as an asset that has value to the government.
- Agencies will need to understand their and third-party service provider obligations regarding the management of information, e.g., information will need to be managed in an appropriate manner taking a life-cycle approach, that is, from creation to disposal/archiving.
- Information assets will need to be tracked and maintained.
- Agencies will have, in some cases, an information stewardship role together with associated responsibilities, in others the role will be as information owner.
- Agencies will need to ensure that where a third-party service provider has stewardship of information, the obligations of the service provider are managed in a manner that meets the Australian Government’s information security management requirements as outlined in the Protective Security Policy Framework (PSPF) and the Information Security Manual (ISM).
- The Australian Government will need to define information in a consistent manner, through the use of common classifications and data definitions. These classifications and definitions will need to be understandable and available to consumers.
- The Australian Government will need to provide data assets to the public for reuse and value add, e.g., www.data.gov.au.

[PR-12] Transparency

Short description

Information is accessible to the public, where appropriate.

Rationale

The Australian Government’s support for openness and transparency in Government has three key principles:

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1 The AGA Reference Models defines data (or information) stewardship as “identifying, defining, specifying, sourcing and standardising data (or information) assets across all business areas within a specific business subject area consisting of some set of entity types, e.g., person”. It also defines a data or information steward as “the person or organisation that is delegated the responsibility for managing the specific set of data (or information) resources” (ISO/IEC 11179-1).
1. Informing: strengthening citizen’s rights of access to information, establishing a pro-disclosure culture across Australian Government agencies including through online innovation, and making government information more accessible and usable; 
2. Engaging: collaborating with citizens on policy and service delivery to enhance the processes of government and improve the outcomes sought; and 

By definition, this means that agencies need to: 
• make public their mandate, responsibilities, mission and strategy; 
• perform their duties under a legal framework that provides for accountability and transparency; 
• adopt audit standards, processes and methods that are objective and transparent; 
• instil high standards of integrity and ethics for staff at every level; and 
• ensure that these accountability and transparency principles are not compromised when functions or processes are outsourced. 

The Australian Government now declares that, in order to promote greater participation in Australia’s democracy, it is committed to open government based on a culture of engagement, built on better access to and use of government held information, and sustained by the innovative use of technology. 

Citizen collaboration in policy and service delivery design will enhance the processes of government and improve the outcomes sought. Collaboration with citizens is to be enabled and encouraged. Agencies are to reduce barriers to online engagement, undertake social networking, crowd sourcing and online collaboration projects and support online engagement by employees, in accordance with the Australian Public Service Commission Guidelines. 

Australian Government’s Declaration of Open Government, July 2010 

Implications 
• Agencies and consumers will need to have access to public information and data as required, e.g. www.data.gov.au. 
• Information will need to be open for public access if there is no legal need to protect it (OAIC Principle 1). 
• Information will need to be shared between government agencies where appropriate and justified. 
• Agencies will need to take a standards-based approach to drive reuse of data assets 
• Agencies will need to ensure compliance with appropriate legislation, for example the Privacy Act regarding personal and sensitive information 
• Agencies will need to consider freedom of information requirements, especially with regard to the discoverability of data. Searching will need to be based on broad business categories or specific search keys. Information will have to be discoverable regardless of where it physically resides, whether that be paper-based or in, for example, enterprise resource planning (ERP) systems, content management systems, email, bespoke databases, shared drives, etc.
## Attachment 1: Approach to defining principles

The TOGAF recommended template\(^2\) for defined principles is as follows:

| **Name** | Should both represent the essence of the rule as well as be easy to remember. Specific technology platforms should not be mentioned in the name or statement of a principle. Avoid ambiguous words in the Name and in the Statement such as: “support”, “open”, “consider”, and for lack of good measure the word “avoid”, itself, be careful with “manage(ment)”, and look for unnecessary adjectives and adverbs (fluff). Example: “Maximise benefit to the Enterprise” |
| **Statement** | Should succinctly and unambiguously communicate the fundamental rule. For the most part, the principles statements for managing information are similar from one organization to the next. It is vital that the principles statement be unambiguous. Example: Information management decisions are made to provide maximum benefit to the enterprise as a whole. |
| **Rationale** | Should highlight the business benefits of adhering to the principle, using business terminology. Point to the similarity of information and technology principles to the principles governing business operations. Also describe the relationship to other principles, and the intentions regarding a balanced interpretation. Describe situations where one principle would be given precedence or carry more weight than another for making a decision. Example: Decisions made from an enterprise-wide perspective have greater long-term value than decisions made from any particular organisational perspective. Maximum return on investment requires information management decisions to adhere to enterprise-wide drivers and priorities. No minority group will detract from the benefit of the whole. However, this principle will not preclude any minority group from getting its job done. |
| **Implications** | Should highlight the requirements, both for the business and IT, for carrying out the principle - in terms of resources, costs, and activities/tasks. It will often be apparent that current systems, standards, or practices would be incongruent with the principle upon adoption. The impact to the business and consequences of adopting a principle should be clearly stated. The reader should readily discern the answer to: “How does this affect me?” It is important not to oversimplify, trivialize, or judge the merit of the impact. Some of the implications will be identified as potential impacts only, and may be speculative rather than fully analysed. Examples:  
- Achieving maximum enterprise-wide benefit will require changes in the way we plan and manage information. Technology alone will not bring about this change.  
- Some organisation units may have to concede their own preferences for the greater benefit of the entire enterprise.  
- Application development priorities must be established by the entire enterprise for the entire enterprise.  
- Applications components should be shared across organisational boundaries. |

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Attachment 2: Mapping to Cross-Agency Services Architecture Principles

The following tables show a mapping between the Cross-Agency Service Architecture Principles and the Australian Government Enterprise Architecture Principles.

<table>
<thead>
<tr>
<th>Cross-Agency Services Architecture Principles</th>
<th>EA Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR-1: Defined by business need</td>
<td>PR-1: Strategic focus</td>
</tr>
<tr>
<td>PR-2: Trusted service</td>
<td>PR-2: Cohesiveness</td>
</tr>
<tr>
<td>PR-3: Present a consistent face of government</td>
<td>PR-3: Reliability</td>
</tr>
<tr>
<td>PR-4: Channel independence</td>
<td>PR-4: Value</td>
</tr>
<tr>
<td>PR-5: Defined availability</td>
<td>PR-5: Accessibility</td>
</tr>
<tr>
<td>PR-6: Consistent delivery</td>
<td>PR-6: Trustworthy</td>
</tr>
<tr>
<td>PR-7: Protect security, confidentiality &amp; privacy of info</td>
<td>PR-7: Agility</td>
</tr>
<tr>
<td>PR-8: Return a business benefit</td>
<td>PR-8: Quality</td>
</tr>
<tr>
<td>PR-9: Able to adapt for change and growth</td>
<td>PR-9: Leverage</td>
</tr>
<tr>
<td>PR-10: Certainty of outcome</td>
<td>PR-10: Harm minimisation</td>
</tr>
<tr>
<td>PR-11: Manageable and traceable</td>
<td>PR-11: Asset</td>
</tr>
<tr>
<td></td>
<td>PR-12: Transparency</td>
</tr>
</tbody>
</table>