# Working Paper 2012/02:
# International Data Management for Government
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## 1       Purpose

A large number of future-focused data management policies and initiatives exist globally, and many governments, businesses and organisations are implementing strategies and frameworks to address the increasingly challenging trends in this area. Any overarching New Zealand government strategy must be developed in line with international best practice.

The purpose of this working paper is to provide a global context for discussing data management policy in New Zealand and examining global trends in this area. An analysis of the information presented in the working paper will be completed in *Project 2058*'s Report 10: *Data Matters: A Whole-of-government Approach to Data Management Policy.*

This scan of the current global context first looks at two multilateral approaches to data management: the *Fundamental Principles of Official Statistics* and the *Open Government Partnership*. The paper then examines the individual policies and initiatives of four countries: Singapore, Australia, the United Kingdom and the United States. These are countries that either offer examples of best practice data management policy or have features in common with New Zealand in terms of models of governance, demographic makeup, or population size. In looking at a range of initiatives within each country, it is our intention to explore initiatives that link to overarching global trends in data management policy that can be further explored in our report *Data Matters*.

## 2       Methodology

To fulfil the purpose outlined above, research was undertaken and the results formulated to provide the following:

1.    A brief overview of two major multilateral government data initiatives; the *Fundamental Principles of Official Statistics* and the *Open Government Partnership*

2.    A profile of data management initiatives in four countries (Singapore, Australia, the United Kingdom and the United States) that are relevant when considering initiatives in New Zealand; and

3.    A comparative analysis of the *New Zealand Data and Information Management Principles* with data management principles in these four countries.

# 3    Multilateral Government Data Management Initiatives

In a digitalised world, where information and data often transcend borders both in their nature and in their use, multilateral governmental approaches to data management are becoming increasingly prevalent. In purely practical terms, multilateral partnerships allow governments to pool resources and technologies to create initiatives and programmes that work on both national and global levels.

## 3.1    Fundamental Principles of Official Statistics

Government management of statistics is often closely aligned with a country's wider data management policy. The *United Nations' Fundamental Principles of Official Statistics* sets out ten principles for national statistics systems. These fundamental principles define the role of official statistics and lay down general criteria that a good system of official statistics must meet (UNSD, 2007a). The principles, listed below, were adopted by the UN's Statistical Commission in 1994.

**UN Principle 1: Relevance, Impartiality and Equal Access:** Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.

**UN Principle 2: Professional Standards and Ethics:** To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

**UN Principle 3: Accountability and Transparency:** To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

**UN Principle 4: Prevention of Misuse:** The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

**UN Principle 5: Cost-effectiveness:** Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

**UN Principle 6: Confidentiality:** Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

**UN Principle 7: Open Legislation:** The laws, regulations and measures under which the statistical systems operate are to be made public.

**UN Principle 8: National Coordination:** Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

**UN Principle 9: International Standards:** The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

**UN Principle 10: International Cooperation:** Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries. (UNSD, 2006)

The *Principles of Official Statistics* provides a useful tool for analysing best practice not only in the area of statistical management but in the wider area of data management. The New Zealand government deems them to be 'complementary principles' to the *New Zealand Data and Information Management Principles* (see Appendix 1) (DIA, n.d.).

To encourage best practice in the area of statistical management, the UN's Statistical Commission provides direct assistance in the implementation of the *Fundamental Principles*. Its *Country Practices Database*, established in 2000, provides examples of policies and practices used in various national statistical systems for implementing the *Fundamental Principles of Official Statistics* (UNSD, 2007b). The database provides a comprehensive 'country profile' for each state, detailing key features of each country's statistical management policy.[1] In addition, the database can be used to search by a specific principle and details the approach taken by each country in relation to that principle. The database provides a useful tool in assessing statistical management policies and comparing the progress of different countries in adapting to wider trends in data management policy.

## 3.2    Open Government Partnership

The Open Government Partnership (OGP) is an initiative aimed at promoting transparent, effective and accountable governance globally. It acts as both a commitment by member states to the principles of open governance, and a mechanism for supporting wider action by governments and civil society. The initiative was launched in September 2011, with the eight founding states signing the *Declaration of Open Partnership*.[2] In the Declaration, member states affirm their commitment to increasing the availability of information about government activities, supporting civic participation, implementing the highest standards of professional integrity throughout their own administrations, and increasing access to new technologies for openness and accountability (OGP, 2011).

From the outset, the OGP identified five 'grand challenges' that governments are facing globally in the area of data management. These five grand challenges are: Improving Public Services, Increasing Public Integrity, More Effectively Managing Public Resources, Creating Safer Communities, and Increasing Corporate Accountability (OGP, n.d.[a]). In the first year of the partnership, member states are expected to identify at least one of these challenges around which it will focus on developing concrete commitments to open governance (ibid.). Be it at a national, local or sub-national level, each government is able to determine where to focus its commitments.

Since its inception in September 2011, the OGP has expanded to include 47 new member states (OGP, n.d.[b]). In order to participate in the partnership, governments must demonstrate a commitment to open government in four different key areas, as measured by objective indicators and validated by independent experts (OGP, n.d.[a]). These four areas are: Fiscal Transparency; Access to Information; Disclosures Related to Elected or Senior Officials, and Citizen Engagement.

The project is still in its early stages and the impact of the partnership and its initiatives is yet to be seen. Its website will feature a number of resources, as well as case studies and examples of international best practice in the area of data management and open governance. In providing resources and support, the OGP is seen as more than simply a membership body; instead it is hoped it will function as a 'social network for reform-minded officials wanting to meet counterparts and experts to swap tips and expertise' (Economist, 2011). Importantly, the OGP has shown that open governance and transparency are no longer just the domains of developed countries. For example, the OGP is led by less conventional states in terms of international leadership – such as Mexico and Indonesia – and technology advances have ensured the tools of open governance are now sufficiently affordable and simple to be widely used in less developed countries (ibid.). The OGP shows the international community's willingness to embrace the increasingly interconnected and collaborative global environment.

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1    The country profile includes details such as the country's main statistical agency; its legal basis, position in the government, organisational structure and finance, work programme and main duties; other producers of official statistics and statistical advisory bodies; details of the most recent population census; access to administrative data; data confidentiality; release calendar (existence of data, as well as when and how it is published); main publications; languages of main publications; how data is disseminated (paper, CD rom, website, online databases, databanks), and the availability of microdata for research purposes (UNSD, 2007c).

2    The eight founding states were Brazil, Indonesia, Mexico, Norway, the Philippines, South Africa, the United Kingdom and the United States (OGP, 2011).

# 4    International Profile: Singapore

## Data Management Initiatives

In Singapore, data and information management largely falls within the ambit of the Ministry of Information, Communication and Arts, the Singapore Department of Statistics, the Ministry of Finance, and the Info-communications Development Authority of Singapore (IDAS).[3] A strong Information Communication Technology (ICT) framework is at the core of the Singaporean government's data management policy and central to this is the eGov project (IDAS, 2011a). This project, which had its beginnings over thirty years ago, is led by IDAS under the direction of the Ministry of Finance and aims to provide an optimal experience for users (be they citizens, business or government) in making public services available online. The project offers an example of a long-term, multi-faceted data management initiative, at the heart of which is a desire to progress Singapore's economy and society through the development of ICT tools.

The first phase of the eGov project, the Civil Service Computerisation Programme (CSCP), spanned from 1980–1999 and focused on improving public administration through the effective use of ICT (IDAS, 2011b). This included manually converting data into digital format, which, over time, evolved into the provision of one-stop services whereby government systems were extended to the private sector and, in the early 1990s, towards the consolidation of computing resources in the form of a shared data centre and a civil service-wide network (ibid.).

The second and third phases focused on the eGAP project, which aimed to facilitate an e-Government framework that would better serve the nation in the digital economy. The project was divided into two work programmes; the first sought to ensure all government services that were capable of being delivered electronically were delivered through electronic means, while the second aimed to transform the public service into a provider of accessible, integrated and value-added e-services (IDAS 2011c; 2011d). This reflects the government's on-going commitment to adapting changing technologies to government services and infrastructure. Key to this adaptation is ensuring that the optimal performance of government services is not hindered by slow technological uptake. Under the eGAP project, the government implemented a number of new policies and initiatives in the field of data management, including the Access to Archives Online (a2O) project, the eCitizen Portal, SingPass, and the Singapore Online Search Engine, as well as a range of solutions for businesses interfacing with government.

### Access to Archives Online (a2O)

The Access to Archives Online (a2O) project was initiated under the second phase of the eGAP project. This project aims to provide a one-stop portal for Singapore's heritage information. The portal enables users to search information across the National Archives of Singapore (NAS) collections, which include data such as pictures, moving images and sound archives, political speeches, national architectural records, private and government records, online posters, and oral history dating back to the 17th century (IDAS, 2011e; NAS, 2011). Further, a2O allows virtual visitors to view online exhibitions, opening the archives of Singapore to a far broader audience than would be possible if collections were confined to physical displays. The a2O project affirms the Singaporean government's commitment to using the most advanced digital technology in the provision of information and data to the public

### eCitizen Portal

The eCitizen Portal provides one-stop access to government information and services. Citizens can interact online with the government on a vast range of matters at all times. The eCitizen Portal allows citizens to search for and access a range of information from government agencies and to conduct transactions online with such agencies (GOS, 2011a).

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3    IDAS has four key roles in driving Singapore's transformation into an `Intelligent Nation' and a `Global City' through ICT. It acts as chief information officer for the government; it seeks to encourage and facilitate ICT industry development; it works across a number of sectors to promote the adoption of ICT as a means for sectoral transformation, and it works to support the uptake of ICT by the public (IDAS, 2010).

**SingPass**

The SingPass (Singapore Personal Access) project aims to provide one authentication system for access to all government e-services requiring single-factor authentication, so that only one password needs to be provided when undertaking transactions with the government (IDAS, 2011f). This technology is utilised across a number of other government initiatives, including the eCitizen Portal (GOS, n.d.).

**The Singapore Government Online Search Engine**

The Singapore Government Online Search Engine serves to improve the accuracy of search results obtained for searches on government-wide information and services on the Internet. Searches are facilitated by a metadata standard based search engine and user interface (IDAS, 2011g).

The iGov2010 phase, which ran from 2006–2010, was focused on further developing ICT tools for the provision of government services and included a range of advanced mobile and web services to provide additional channels for accessing public services (IDAS, 2011h). The emphasis of this project was on creating synergies across government and partner organisations in order to explore new opportunities and provide a richer service to end users. During this phase a number of new initiatives were launched, including the SG-SPACE project, the Unique Entity Number project, and other projects aimed at making government information and data more readily accessible to users across the public and private sectors.

**SG-SPACE**

SG-SPACE is a unique geospatial information-sharing and collaboration project. It aimed to create an environment in which both public and private sectors and the community could collaborate on a wide range of innovative applications and services using geospatial information (IDAS, 2011i). The project focuses on providing the necessary infrastructure, mechanisms, and policies to enable convenient access to quality geospatial information in usable form. Under this initiative, committees established projects to engage the agencies that planned to adopt spatial information in their decision-making and service delivery. These projects included: the integration and discovery of potential applications of different types of data, such as business data, personal data and property data from different agencies; exploration of spatial analysis tools for public-health policy planning, and spatially enabling business data to make them available for business profiling for a wide variety of applications (SLA, 2012). Lam Joon Khoi, the chief executive of the Singapore Land Authority, identified the two major challenges of the project as '[g] etting good authoritative data, and convincing decision makers to invest in geospatial applications and information' (ibid.). He highlighted the importance of creating a transparent and collaborative environment to give confidence to data owners to share their data and to reap its benefits. These are issues that extend beyond this specific project and represent the wider challenges faced in government data management and open government initiatives.

**Unique Entity Number project**

This project sought to create a common means of identifying establishments across public sector agencies, thus facilitating the effective sharing of basic non-confidential information to enable the delivery of better and more personalised services. In allocating a unique number to each different entity and allowing this to be used across government, the project sought to make interactions with the government simpler, faster and easier (IDAS, 2011j).

The most recent e-Gov master plan, eGov2015, will focus on implementing an ideological shift from a 'Government-to-You' approach to a 'Government-with-You' approach and incorporates a range of initiatives aimed at strengthening the interface between the government, the private sector and citizens through the enabling power of info-communication technologies (IDAS, 2011a; 2011k). The vision of this phase is 'To be a Collaborative Government that Co-creates and Connects with Our People' (IDAS, 2011k). To achieve this, one of the three strategic thrusts will be catalysing a 'Whole-of-Government Transformation', with a focus on empowering citizens and businesses to co-create new e-services with the government (ibid.). There is a strong emphasis on creating an effective public–private sector interface, and developing solutions in an open, collaborative relationship, with accessible and open data management at its heart. A number of initiatives have been launched to facilitate this relationship of coordination and collaboration, and of progress and engagement through ensuring data is accessible and discoverable. These include the mGov@SG project, Cloud Computing for Government, and the Data.gov.sg site.

**mGov@SG**

mGov@SG is a mobile site that allows individuals and businesses to easily search for, identify, and access mobile services provided by the government, and acts as a centralised information portal. The first phase of mGov@SG was officially launched at the eGov Global Exchange on 20 June 2011 (IDAS, 2011l).

**Cloud Computing for Government**

The government cloud aims to provide a cloud infrastructure for the whole-of-government to leverage on. It provides a resilient and secure ICT shared environment that allows government agencies to procure computing resources on-demand, with greater ease and speed (IDAS, 2011m).

**Data.gov.sg**

The Data.gov.sg website provides easy discovery of and access to publicly available government datasets through a centralised data portal. These datasets are then available to users and developers for reuse and application development. The site was launched in June 2011 and, to date, over 5000 datasets from 50 government ministries and agencies have been added (GOS, 2011b). The main focus of this initiative is accessibility; it has been recognised that while many public agencies already share publicly available data and statistics on their websites and publications, it is not always easy for the public and researchers to locate them (IDAS, 2011n). Over time, the site seeks to make more government data available in machine-readable formats and to ensure data can be used to develop innovative applications and services (ibid.).

As part of its Data Dissemination Policy the Singapore government has also developed a set of principles to guide the dissemination of data.

**Singapore Data Dissemination Policy**
(SDS, n.d.)

**Principle 1**: Relevance to Policy Issues: The mission of the Singapore Department of Statistics (DOS) is to provide reliable, relevant and timely statistics to support Singapore's social and economic development.

**Principle 2**: Reliability and Timeliness of Data Disseminated: Many business decisions are based on the key economic indicators on the performance of the economy and specific industries. To facilitate business planning, the data disseminated must be the best available within reasonable timeframe.

**Principle 3**: Transparency: The Advance Release Calendar (http://www.singstat.gov.sg/stats/arc.html), which covers key Singapore economic indicators, keeps the data users informed of the release dates of these indicators. Key statistical indicators released by the Singapore Department of Statistics (DOS) such as the Consumer Price Index and Retail Sales and Catering Trade Indices are also released according to scheduled release dates and times.

**Principle 4**: Responsiveness to User Requirements: Data dissemination has to be "customer-centric", delivering what is needed by users in both the public and private sectors. Given an increasing need by users for existing data on more frequent basis and at more disaggregated levels, and more new data, there is a need to manage user expectations while responding to those demands that can be met.

**Principle 5**: Protection of Data: In order to maintain the trust of survey respondents, data disseminated must be made within a credible data protection framework. Protection of confidentiality of individual information is provided for under the Statistics Act.

# 5    International Profile: Australia

## Data Management Initiatives

Data management policy operates at both a state and federal level in Australia. At a federal level, policy is formulated across a number of government agencies, including the Australian Bureau of Statistics (ABS), the Australian Government Information Management Office (AGIMO), the Office of the Australian Information Commissioner (OAIC), and the National Archives of Australia (NAA). At a state level, a number of different agencies exist across all six states.

Since 2009, Australian federal government information and data management policy has undergone a number of major changes, particularly in relation to the use of and access to public information. A central principle underpinning the recent changes is the notion that government-held data and information is a national resource (OAIC, n.d.). Recent reforms and initiatives include the establishment of the Government 2.0 Taskforce, the Office of the Australian Information Commissioner, and the National Archives of Australia Xena project.

**Government 2.0 Taskforce**

The Government 2.0 Taskforce was established in 2010 to consider how the government could best use the new collaborative tools and approaches of Web 2.0 to achieve more open, accountable, responsive and efficient government (Government 2.0 Taskforce, 2010).

**Office of the Australian Information Commissioner**

The overarching purpose of the OAIC is 'protecting information rights – advancing information policy' (OAIC, n.d.). One of the OAIC's three broad responsibilities is information policy, which includes advising the Attorney-General on matters relating to Australian government information management policy and practice, including freedom of information and privacy; implementing the agreed recommendations of the Government 2.0 Taskforce, and education and training on the new freedom of information reforms (ibid.).

**National Archives of Australia Xena project**

A recent Australian government project in the area of data management is the National Archives of Australia Xena project. The Xena programme offers free and open source software that allows agencies and individuals to place their digital documents and records in open, documented, and accessible formats, to aid in the long-term preservation of digital records (NAA, n.d.[a]). At the heart of the Xena project and other initiatives by the National Archives of Australia is the importance of digital continuity and ensuring information is 'useable'. National Archives of Australia states that digital continuity 'ensures information is complete, available, and useable by those with a need for it. It also ensures the information is not kept for longer than needed. Information is useable when you can: find it when you need it; open it when you need it; work with it in the way you need to; understand what it is and what it is about, and trust that it is what it says it is' (NAA, 2011). In line with these priorities, National Archives has released a Digital Continuity Plan to provide practical guidance to agencies on the management of digital information for as long as it is needed (NAA, n.d.[b]). The document is intended to allow businesses to formulate and implement their own plans to address digital continuity. The Archives will provide opportunities for agencies to receive additional guidance and advice on digital continuity policy through a number of different networks and forums (ibid.).

The central recommendation of the Government 2.0 Taskforce was the need for a declaration of open government to be made at the highest level. The declaration would emphasise the role of Web 2.0 tools and approaches in achieving more consultative, participatory and transparent government; realising the full social and economic value of public sector information (PSI) as a national resource and asserting the centrality of Government 2.0 in the achievement of the government's broader reform objectives (Government 2.0 Taskforce, 2010: xiii). This recommendation led the government to announce its *Declaration of Open Government*, the purpose of which is described as promoting greater participation in Australia's democracy by facilitating better access to and use of government-held information through the

innovative use of technology (DFD, 2010). The *Declaration* emphasises the desire to increase collaboration with citizens and to encourage the access and use of government data by reducing barriers to online engagement.

**Declaration of Open Government**
(DFD,2010)

> The Australian Government's support for openness and transparency in Government has three key principles:
>
> **Informing**: strengthening citizens' 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;
>
> **Engaging**: collaborating with citizens on policy and service delivery to enhance the processes of government and improve the outcomes sought; and
>
> **Participating**: making government more consultative and participative.

Another key recommendation of the Government 2.0 Taskforce was the establishment of a central portal, which would enable access to and discovery of the data and skills necessary to prepare government information to be released as open public sector information (Government 2.0 Taskforce, 2010: xv). The resulting site, data.govt.au, provides an easy way to find, access and reuse public datasets from the federal government and state and territorial authorities (Australian Government, n.d.). In recommending the creation of such a site, the Taskforce recognised the need for agencies to protect privacy and confidentiality, which includes ensuring they can reliably de-identify personal and commercial-in-confidence public service information (Government 2.0 Taskforce, 2010: xv).

**Data.gov.au**

The Data.govt.au project seeks to facilitate public access to and reuse of government data by providing it in useful formats and under open licences (Australian Government, n.d.). The site provides a combination of downloadable datasets from a range of government agencies and, in some cases, links to other data catalogues or sources (ibid.). A range of upgrades and additional features are planned for the site.

A number of frameworks and principles have been established to guide data management policy in Australia. Two of note are the *Principles on Open Public Sector Information*, released by the OAIC in 2011, and the *ABS Data Quality* framework.The *Principles of Open Public Sector Information* form part of a core vision for government information management in Australia and set out the central values on which this vision is based. The OAIC reports that it chose a principles-based approach 'in order to ensure the principles could apply broadly, would be flexible in the face of technological advance, and would be relevant to a wide range of government agencies with varied information holdings' (OAIC, 2011: 2). The principles were developed through a public consultation process, which included both formal submissions and a range of alternative public engagement platforms such as blogs and forums.

**Principles of Open Public Sector Information**
(OIAC, 2011: 33–35)

> **Principle 1: Open access to information – a default position**
> Information held by Australian Government agencies is a valuable national resource. If there is no legal need to protect the information it should be open to public access. Information publication enhances public access. Agencies should use information technology to disseminate public sector information, applying a presumption of openness and adopting a proactive publication stance.

**Principle 2: Engaging the community**

Australian Government policy requires agencies to engage the community online in policy design and service delivery. This should apply to agency information publication practices. Agencies should:

- consult the community in deciding what information to publish and about agency publication practices
- welcome community feedback about the quality, completeness, usefulness and accuracy of published information
- respond promptly to comments received from the community and to requests for information
- employ Web 2.0 tools to support community consultation.

**Principle 3: Effective information governance**

Australian Government agencies should manage information as a core strategic asset. A senior executive 'information champion' or knowledge officer in the agency should be responsible for information management and governance, including:

- providing leadership on agency compliance with the Information Publication Scheme and Disclosure Log
- ensuring agency compliance with legislative and policy requirements on information management and publication
- managing agency information to ensure its integrity, security and accessibility instigating strategic planning on information resource management
- ensuring community consultation on agency information policy and publication practices.

The senior officer should be supported by an information governance body that may include people from outside the agency.

**Principle 4: Robust information asset management**

Effective information management requires agencies to:

- maintain an asset inventory or register of the agency's information
- identify the custodian of each information holding and the responsibilities of that officer
- train staff in information management
- establish clear procedures and lines of authority for decisions on information publication and release
- decide if information should be prepared for publication at the time it is created and the form of publication
- document known limitations on data quality
- identify data that must be managed in accordance with legislative and legal requirements, including requirements relating to data security and protection of personal information, intellectual property, business confidentiality and legal professional privilege
- protect information against inappropriate or unauthorised use, access or disclosure
- preserve information for an appropriate period of time based on sound archival practices.

**Principle 5: Discoverable and useable information**

The economic and social value of public sector information can be enhanced by publication and information sharing. This requires that information can easily be discovered and used by the community and other stakeholders. To support this objective agencies should:

- publish an up to date information asset register
- ensure that information published online is in an open and standards-based format and is machine-readable
- attach high quality metadata to information so that it can be easily located and linked to similar information using standard web search applications
- publish information in accordance with the *Web Content Accessibility Guidelines Version 2* (WCAC 2.0) endorsed by the Australian Government in November 2009.

**Principle 6: Clear reuse rights**

The economic and social value of public sector information is enhanced when it is made available for reuse on open licensing terms. The *Guidelines on Licensing Public Sector Information for Australian Government Agencies* require agencies to decide licensing conditions when publishing information online. The default condition should be the Creative Commons by standard, as recommended in the *Intellectual Property Principles for Australian Government Agencies*, that apply to agencies subject to the *Financial and Management Accountability Act 1997*. Additional guidance on selecting an appropriate licence is given in the *Australian Government Open Access and Licensing Framework* (AUSGOAL).

**Principle 7: Appropriate charging for access**

The FOI Act requires agencies to facilitate public access to information at the lowest reasonable cost. This Principle applies when information is provided upon request or is published by an agency. Other Acts also authorise charges for specific documents or information access.

Agencies can reduce the cost of public access by publishing information online, especially information that is routinely sought by the public. Charges that may be imposed by an agency for providing access should be clearly explained in an agency policy that is published and regularly reviewed.

**Principle 8: Transparent enquiry and complaints processes**
Agency decision making about information publication should be transparent. This can be supported, within the agency's information governance framework, by an enquiry and complaints procedure for the public to raise issues about agency publication and access decisions. The procedure should be published, explain how enquiries and complaints will be handled, set timeframes for responding, identify possible remedies and complaint outcomes, and require that written reasons be provided in complaint resolution.

**The ABS Data Quality Framework**

The ABS Data Quality Framework is designed to enable a comprehensive and multi-dimensional assessment of the quality of a statistical dataset, and sets out seven quality dimensions (ABS, 2009). These are: an institutional environment that focuses on quality, emphasises objectivity and professionalism, and is adequately resourced; relevance; timeliness of information release and provision; accuracy; coherence and consistency; interpretability; and accessibility. These quality dimensions allow for a quality statement to be attached to a data item, dataset or other statistical product. This presents information on the quality of the data using the ABS Data Quality system. The purpose of the quality statement is to 'clearly communicate key characteristics of the data which impact on quality, so that potential users can make informed decisions about fitness for use' (ibid.). The intention is to have a simple, standardised format for commenting on the quality of data.

# 6    International Profile: United Kingdom

## Data Management Initiatives

The main government bodies concerned with data and information management in the United Kingdom on a national level are the Office for National Statistics, National Archives, and the Prime Minister's Office. Within this framework, the government has established a number of initiatives and projects designed to increase government transparency and harness the potential of recent technological advances. These include the Opening Up Government initiative, the National Archives' Digital Continuity Project, and the National Digital Archive of Datasets.

**Opening Up Government initiative**

The 'Opening Up Government' website is part of the government's Transparency Agenda and an example of a centralised data portal. The website makes available a wide range of public data, with the goal of providing citizens with the necessary information about how government works and how policies are made so that they can make decisions and suggestions about government policies based on detailed information (UK Government, n.d.[a]). The Opening Up Government initiative stemmed from the public consultation process Making Open Data Real, during which the Cabinet Office received over 500 responses. The consultation posed a series of questions aimed at informing the government's strategy to embed transparency and open data as core operating principles of the public services (UK Government, n.d.[b]). So far over 5400 datasets have been made available, from all central government departments and a number of other public sector bodies and local authorities, and consolidated into one searchable website. The project is continually evolving; in 2012 the government aims to release a range of data in key areas, including education, welfare, transport, health and life sciences (ibid.).

It is hoped that this project will provide citizens with more control over their interaction with public services and create an environment for innovation and growth in the UK using public data. The Opening Up Government initiative demonstrates the UK government's willingness not only to embrace the global trend towards open and accountable governance, but also to embrace new technological developments to facilitate greater accessibility. In the past, large quantities of public sector information have been made available in the UK, but often it has not been in a way that facilitates reuse; most government data has been published online in text formats with little structure, thus inhibiting its reuse (Alani et al., 2007). The Opening Up Government initiative provides information on semantic web technology, which facilitates the large-scale integration and sharing of distributed data, and ensures machines can understand and integrate information.

**National Archives' Digital Continuity Project**

The National Archives' Digital Continuity Project provides the public sector with a solution to issues around digital continuity and the use, preservation and obsolescence of public service information. The Digital Continuity Service  project comprises guidance, risk assessment, a catalogue of commercially provided tools and services, training, and a free file profiling tool called DROID (Digital Record Object Identification) (NA, n.d.[a]). This allows the public sector to keep valuable digital information usable over time. The service also provides guidance and support for businesses and other organisations in keeping data reusable, complete and available. The DROID tool is available for free download, and allows users to profile a wide range of file formats that allow risks to be identified and information to be managed more effectively (NA, n.d.[b]). Specifically, DROID allows users to identify issues around digital continuity by gathering the necessary information to understand information assets and digital continuity requirements, and then assess risk and plan mitigating action.

**National Digital Archive of Datasets**

The National Digital Archive of Datasets (NDAD) both preserves and enables online access to a range of digital records, including records from central government departments and agencies. Database management systems are used to gather, store and analyse large amounts of statistical information and this information is used in the process of policy and legislation formation (NA, n.d.[c]). The NDAD stores and preserves these databases to ensure the processes of the UK government are transparent and enables citizens to analyse information and statistics gathered from a wide variety of departments and subjects (ibid.). Like the Opening Up Government initiative, the Digital Archive of Datasets reflects a commitment to open governance and accountability. Whereas archives are sometimes perceived as being primarily concerned with preservation, technological advances now enable citizens to access and use archives to scrutinise government.

There have also been a number of locally based initiatives in line with these trends, including the London Datastore project.

**London Datastore**

The London Datastore, an initiative of the Greater London Authority (GLA), is aimed at providing citizens with free access to data that the GLA and other public sector organisations hold, and enabling them to use that data however they see fit (GLA, n.d.[a]). The Datastore provides a centralised portal where users can find links to the websites of organisations that already make their data accessible, in one place. Where possible, the GLA adds value to this: for example, by focusing on just the data for London; by saving users from having to download separate datasets for multiple years, or by making data available in a standardised and easy-to-use format (GLA, n.d.[b]). It believes that developing a central repository will help make datasets more accessible in the long run. The GLA also has a lobbying function, encouraging other public sector organisations to release their data. The website allows citizens not only to access the data, but to use and develop it through tools and applications. The site documents frequently suggested and requested datasets, as well as 'inspirational uses' where people have used the data in interesting or innovative ways (GLA, n.d.[c]). This is just one of many initiatives taking place beyond central government, and demonstrates the widening commitment to open governance and effective data management.

In 2010 the United Kingdom government announced a set of principles for public sector transparency. The principles are far-reaching and drive the government's transparency agenda, in particular the opening up of data sets.

**Principles of Public Sector Transparency**
(UK Government, n.d.[c])

**Principle 1:** Public data policy and practice will be clearly driven by the public and businesses who want and use the data, including what data is released when and in what form – and in addition to the legal Right To Data itself this overriding principle should apply to the implementation of all the other principles.

**Principle 2:** Public data will be published in reusable, machine-readable form – publication alone is only part of transparency – the data needs to be reusable, and to make it reusable it needs to be machine-readable. At the moment a lot of Government information is locked into PDFs or other unprocessable formats.

**Principle 3:** Public data will be released under the same open licence which enables free reuse, including commercial reuse – all data should be under the same easy to understand licence. Data released under the Freedom of Information Act or the new Right to Data should be automatically released under that licence.

**Principle 4:** Public data will be available and easy to find through a single easy to use online access point (data.gov.uk) – the public sector has a myriad of different websites, and search does not work well across them. It's important to have a well-known single point where people can find the data.

**Principle 5:** Public data will be published using open standards, and following relevant recommendations of the World Wide Web Consortium. Open and standardised formats are essential. However to increase reusability and the ability to compare data, it also means openness and standardisation of the content as well as the format.

**Principle 6:** Public data underlying the Government's own websites will be published in reusable form for others to use – anything published on Government websites should be available as data for others to reuse. Public bodies should not require people to come to their websites to obtain information.

**Principle 7:** Public data will be timely and fine grained – data will be released as quickly as possible after its collection and in as fine a detail as is possible. Speed may mean that the first release may have inaccuracies; more accurate versions will be released when available.

**Principle 8:** Release data quickly, and then re-publish it in linked data form – linked data standards allow the most powerful and easiest re-use of data. However, most existing internal public sector data is not in linked data form. Rather than delay any release of the data, our recommendation is to release it 'as is' as soon as possible, and then work to convert it to a better format.

**Principle 9:** Public data will be freely available to use in any lawful way – raw public data should be available without registration – although for API-based services a developer key may be needed. Applications should be able to use the data in any lawful way without having to inform or obtain the permission of the public body concerned.

**Principle 10:** Public bodies should actively encourage the re-use of their public data – in addition to publishing the data itself – public bodies should provide information and support to enable it to be reused easily and effectively. The Government should also encourage and assist those using public data to share knowledge and applications, and should work with business to help grow new, innovative uses of data and to generate economic benefit.

**Principle 11:** Public bodies should maintain and publish inventories of their data holdings – accurate and up-to-date records of data collected and held, including their format, accuracy and availability.

# 7     International Profile: United States

## Data Management Initiatives

In the United States, data, information and statistical management policy is spread over a number of both state and federal agencies. Two of the main bodies concerned with data and information management are the Office of Management and Budget, and the Chief Information Office. In recent years, both at national and state levels, government has implemented a number of initiatives around data management. At a federal level, many of these initiatives fall within the Opening Up Government project, and a number of state and more localised initiatives have also been initiated or built upon in the area of open data.

The Opening Up Government initiative was launched on President Barack Obama's first day in office, a move seen to be symbolic of the Administration's wider commitment to making government more accountable and responsible (WH, n.d.). President Obama issued a Memorandum of Transparency and Openness, which spoke of the government's aim to create 'an unprecedented level of openness in government' (Obama, 2009). The overarching goals of the memorandum are that government should operate in ways that are transparent, participatory and collaborative. It affirmed a commitment to using online engagement tools to facilitate open government, directing that 'executive departments and agencies should harness new technologies to put information about their operations and decisions online and readily available to the public' (ibid.). Further, in making government more collaborative, the memorandum directs executive departments and agencies to use innovative tools, methods and systems to cooperate amongst themselves, across all levels of government, and with non-profit organisations, businesses, and individuals in the private sector, to enable citizens to work alongside government (ibid.). Central to data management policy, the Opening Up Government initiative has seen the creation of the Data.gov site.

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**Data.gov**

The Data.gov website provides descriptions of federal datasets (metadata), information about how to access the datasets, and tools that leverage government datasets (Data.gov, n.d.[a]). It allows users to discover, explore, share and contribute to data interactively. The original premise was to have one web address from which the public could easily and practically access data of interest. As its primary goal, Data.gov aims 'to improve access to Federal data and expand creative use of those data beyond the walls of government by encouraging innovative ideas' (ibid.). Search tools make it easy to find relevant data, use it (for example, by providing visualisation tools to create charts and maps or creating applications), and then to share it, be it through social networks or other web platforms. The Data.gov project was initiated by the Federal Chief Information Officers' Council and the E-Government and Information Technology Office at the Office of Management and Budget, by way of a memorandum to government agencies requesting datasets for the initiative (Austin et al., 2010: 7). Since its inception, the site has continued to expand both in its functionality and the data available. Other recent initiatives through the Data.gov site also make it easier for government agencies to share their public data. The latest developments include a cloud-based open data platform for citizens, developers and government agencies.

**Data.gov Principles**
(CIOC, 2010: 2–3)

**Principle 1: Focus on Access**
Data.gov is designed to increase access to authoritative sources of Federal data. The goal is to create a transparent, collaborative, and participatory platform that fosters the development of innovative applications (e.g. visualizations and mash-ups) and analyses by third parties. Policy analysts, researchers, application developers, non-profit organizations, entrepreneurs, and the general public should have numerous resources for accessing, understanding, and using the vast array of government datasets.

**Principle 2: Open Platform**
Data.gov uses a modular architecture with Application Programming Interfaces (API) to facilitate shared services for agencies and enable the development of third party tools. The architecture, APIs, and services will evolve based on public and Federal agency input.

**Principle 3: Disaggregation of Data**
Data.gov promotes and facilitates the disaggregation of data from Federal reports, tools, or visualizations, thereby enabling users to directly analyze the underlying information. Agencies should report data at the lowest analytical unit possible; summaries should be avoided. Data catalogs and tools may additionally combine and display data within a meaningful context.

**Principle 4: Grow and Improve Through User Feedback**
Data.gov uses feedback from the public to identify and characterize high value data sets, set priorities for integration of new and existing datasets and Agency provided applications, and drive priorities and plans to improve the usability of disseminated data and applications.

**Principle 5: Program Responsibility**
Data.gov is structured to ensure that Federal program executives and data stewards retain responsibility for ensuring information quality, providing context and meaning for data, protecting privacy, and assuring information security. Agencies are also responsible for establishing effective data and information management, dissemination, and sharing policies, processes, and activities consistent with Federal policies and guidelines.

**Principle 6: Rapid Integration**
Data.gov provides the vehicle for agencies to achieve the Open Government Directive mandate to rapidly disseminate new data, as well as immediately improve access to and usability of currently available data. Agencies should ensure that both new and currently available data have sufficient documentation to allow the public to determine fitness for use in the targeted context.

**Principle 7: Embrace, Scale, and Drive Best Practices**
Data.gov continually implements, enhances, and propagates best practices for data and information management, sharing, and dissemination across agencies with our international, state, local, and tribal partners.

A range of other projects have also been instigated by the Opening Up Government initiative. These include reducing the influence of special interests by writing new ethics rules that prevent lobbyists from coming to work in government or sitting on its advisory boards, and tracking how government uses taxpayer money with websites like recovery.gov, USASpending.gov, and IT.usaspending.gov. Such initiatives aim to empower the public – through greater openness and new technologies – to influence the decisions that affect their lives (WH, n.d.). Two initiatives of particular relevance to this goal are the Open Government Platform, and the Memorandum on Government Records and the National Archives and Records Administration (NARA).

**Open Government Platform**

As a side project to Data.gov, the governments of the United States and India have been working to create an open source version of the US Data.gov data portal and the India.gov.in document portal to make available to other countries around the world – a 'data.gov-in-a-box' (Data.gov, n.d.[b]). The aim is to encourage governments around the world to establish open data sites that promote transparency, improve citizen engagement, and engage application developers in continuously improving these efforts (ibid.). This platform is part of the US government's broader commitment to the Open Government Partnership, in seeking to support open governance on a global level.

**Memorandum on Government Records and NARA**

The Memorandum on Government Records issued by President Obama on 28 November 2011 seeks to reform the record-management policies and practices of the executive branch of government (WH, 2011). This initiative aims to increase openness and accountability, and improve performance by better documenting agency actions and decisions. It works alongside the National Archives and Records Administration (NARA), which is responsible for preserving governmental and historical records and increasing public access to them (NARA, n.d.).

Government agency heads have been required to ensure successful implementation of records management (WH, 2011). Within 120 days of issue of the memorandum, each agency head was required to report to the Archivist and Director of the Office of Management and Budget (OMB) on current plans for improving or maintaining its record-management programme. They were also required to identify what obstacles existed to

the agency's adoption of sound, cost-effective record-management policies and practices, and which policies and programmes assisted the agency's efforts to improve record management (ibid.). The Director of the OMB and the Archivist of the United States, with the Associate Attorney General, had a further 120 days to issue a Records Management Directive with specific steps for agency heads to take in order to reform and improve record-management policies and practices within their agency (ibid.). The Archivist was also tasked with reviewing relevant statutes, regulations and official NARA guidance to identify opportunities for reform. The results of this review are to be presented to the president to enable potential updates of the laws, regulations and policies governing the management of federal records.

At the same time as it launched its Opening Up Government initiative, the US government also appointed its first Chief Information Officer, Vivek Kundra. The decision to appoint a CIO was a move by the White House to give it more control over the US$80 billion that federal agencies spend annually on technology (Thibodeau, 2009).

**Chief Information Officer**

The role of the Chief Information Officer is to support the president's goals of greater transparency, accountability and public participation in government through the use of innovative IT (CIOC, 2012). Key goals for the office include assuring information security, protecting individual privacy, and saving taxpayer dollars (ibid.).

# Appendix 1 International Data Management Principles: Comparative Analysis

The *New Zealand Data and Information Management Principles* were released in August 2011 alongside the *Cabinet Declaration on Open and Transparent Government* and are briefly outlined in the table below. These principles are further explored in Report 10: *Data Matters: A Whole-of-government Approach to Data Management Policy.*

| New Zealand | Example of best practice: Australia | Example of best practice: Singapore | Example of best practice: United Kingdom | Example of best practice: United States |
|---|---|---|---|---|
| **New Zealand Data and Information Management Principles (DIA, n.d.)** | **Principles of Open Public Sector Information (OIAC, 2011: 33–35)** | **Singapore Department of Statistics' Data Dissemination Policy (SDS, n.d.)** | **Draft Public Data Data Transparency Principles (UK Government, n.d.[c])** | **Guiding Principles of Data.gov Initiative (CIOC, 2010: 2–5)** |
| **Principle 1: Open**<br><br>Data and information held by government should be open for public access unless grounds for refusal or limitations exist under the Official Information Act or other government policy. In such cases they should be protected. | 'If there is no legal need to protect the information it should be open to public access. Information publication enhances public access. Agencies should use information technology to disseminate public sector information, applying a presumption of openness and adopting a proactive publication stance.' *(Principle 1: Open access to information – a default position)* | | 'Public data policy and practice will be clearly driven by the public and businesses who want and use the data, including what data is released when and in what form – and in addition to the legal Right To Data itself this overriding principle should apply to the implementation of all the other principles.' *(Draft Principle 1)* | 'Policy analysts, researchers, application developers, non-profit organizations, entrepreneurs and the general public should have numerous resources for accessing, understanding, and using the vast array of government datasets.' *(Principle 1: Focus on Access)* |
| **Principle 2: Protected**<br><br>Personal, confidential and classified data and information are protected. | 'Effective information management requires agencies to: … identify data that must be managed in accordance with legislative and legal requirements, including requirements relating to data security and protection of personal information, intellectual property, business confidentiality and legal professional privilege… [and] protect information against inappropriate or unauthorised use, access or disclosure.' *(Principle 4: Robust information asset management)* | 'Protection of Data - In order to maintain the trust of survey respondents, data disseminated must be made within a credible data protection framework. Protection of confidentiality of individual information is provided for under the Statistics Act.' *(Principle 5: Protection of Data)* | | |

| New Zealand | Example of best practice: Australia | Example of best practice: Singapore | Example of best practice: United Kingdom | Example of best practice: United States |
|---|---|---|---|---|
| **Principle 3: Readily Available** Open data and information are released proactively and without discrimination. They are discoverable and accessible and released online. | 'The economic and social value of public sector information can be enhanced by publication and information sharing. This requires that information can easily be discovered and used by the community and other stakeholders. To support this objective agencies should: publish an up to date information asset register; ensure that information published online is in an open and standards-based format and is machine-readable; attach high quality metadata to information so that it can be easily located and linked to similar information using standard web search applications; [and] publish information in accordance with the *Web Content Accessibility Guidelines version 2*.' *(Principle 5: Discoverable and useable information)* | 'Many business decisions are based on the key economic indicators on the performance of the economy and specific industries. To facilitate business planning, the data disseminated must be the best available within reasonable timeframe.' *(Principle 2: Reliability and Timeliness of Data Disseminated)* | 'Public data will be available and easy to find through a single easy to use online access point (data. gov.uk) – the public sector has a myriad of different websites, and search does not work well across them. It's important to have a well-known single point where people can find the data.' *(Draft Principle 4)* 'Public data will be timely and fine grained – Data will be released as quickly as possible after its collection and in as fine a detail as is possible. Speed may mean that the first release may have inaccuracies; more accurate versions will be released when available.' *(Draft Principle 7)* 'Release data quickly, and then re-publish it in linked data form – Linked data standards allow the most powerful and easiest re-use of data. However most existing internal public sector data is not in linked data form. Rather than delay any release of the data, our recommendation is to release it "as is" as soon as possible, and then work to convert it to a better format.' *(Draft Principle 8)* | 'Data.gov is designed to increase access to authoritative sources of Federal data. The goal is to create a transparent, collaborative, and participatory platform that fosters the development of innovative applications (e.g. visualizations and mash-ups) and analyses by third parties. Policy analysts, researchers, application developers, non-profit organizations, entrepreneurs, and the general public should have numerous resources for accessing, understanding, and using the vast array of government datasets.' *(Principle 1: Focus on Access)* |

| New Zealand | Example of best practice: Australia | Example of best practice: Singapore | Example of best practice: United Kingdom | Example of best practice: United States |
|---|---|---|---|---|
| **Principle 3: Readily Available**<br><br>Open data and information are released proactively and without discrimination. They are discoverable and accessible and released online. | | | 'Public bodies should actively encourage the re-use of their public data – in addition to publishing the data itself, public bodies should provide information and support to enable it to be reused easily and effectively. The Government should also encourage and assist those using public data to share knowledge and applications, and should work with business to help grow new, innovative uses of data and to generate economic benefit.' *(Draft Principle 10)* | |
| **Principle 4: Trusted and Authoritative**<br><br>Data and information support the purposes for which they were collected and are accurate, relevant, timely, consistent and without bias in that context. Where possible there is an identified authoritative single source. | 'Effective information management requires agencies to: … decide if information should be prepared for publication at the time it is created and the form of publication; document known limitations on data quality; preserve information for an appropriate period of time based on sound archival practices.' *(Principle 4: Robust Information Asset Management)* | 'The mission of the Singapore Department of Statistics (DOS) is to provide reliable, relevant and timely statistics to support Singapore's social and economic development.' *(Principle 1: Relevance to Policy Issues)* | 'Public bodies should maintain and publish inventories of their data holdings – accurate and up-to-date records of data collected and held, including their format, accuracy and availability.' *(Draft Principle 11)* | |

| New Zealand | Example of best practice: Australia | Example of best practice: Singapore | Example of best practice: United Kingdom | Example of best practice: United States |
|---|---|---|---|---|
| **Principle 5: Well-managed**<br><br>Data and information held and owned by government:<br><br>• effectively belong to the New Zealand public<br><br>• are a core strategic asset held by government as a steward on behalf of the public; and<br><br>• should only be collected or generated for specified public policy, operational business, or legislative purposes.<br><br>Agencies are stewards of government-held data and information and must provide and require good practices which manage the data and information over their life-cycle, including catering for technological obsolescence and long-term preservation and access. Good practices also include collaborating with other agencies and the public, facilitating access, strengthening awareness, and supporting international cooperation.<br><br>Agency custodians must implement these practices on a day-to-day basis. | 'Information held by Australian Government agencies is a valuable national resource.' *(Principle 1: Open access to information – a default position)*<br><br>'Effective information management requires agencies to: … preserve information for an appropriate period of time based on sound archival practices.' *(Principle 4: Effective information asset management)*<br><br>'Australian Government policy requires agencies to engage the community online in policy design and service delivery.' *(Principle 2: Engaging the community)* | 'The Advance Release Calendar (http://www.singstat.gov.sg/stats/arc.html), which covers key Singapore economic indicators, keeps the data users informed of the release dates of these indicators. Key statistical indicators released by the Singapore Department of Statistics (DOS) such as the Consumer Price Index and Retail Sales and Catering Trade Indices are also released according to scheduled release dates and times.' *(Principle 3: Transparency)* | 'Public bodies shall maintain and publish inventories of their data holdings – accurate and up-to-date records of data collected and held, including their format, accuracy and availability.' *(Draft Principle 11)* | 'Data.gov is structured to ensure that Federal program executives and data stewards retain responsibility for ensuring information quality, providing context and meaning for data, protecting privacy, and assuring information security. Agencies are also responsible for establishing effective data and information management, dissemination, and sharing policies, processes, and activities consistent with Federal polices and guidelines.' *(Principle 5: Program Responsibility)*<br><br>'Data.gov continually implements, enhances, and propagates best practices for data and information management, sharing, and dissemination across agencies, with our international, state, local, and tribal partners.' *(Principle 7: Embrace Scale and Drive Best Practices)* |

| New Zealand | Example of best practice: Australia | Example of best practice: Singapore | Example of best practice: United Kingdom | Example of best practice: United States |
|---|---|---|---|---|
| **Principle 6: Reasonably priced**<br><br>Use and re-use of government held data and information is expected to be free. Charging for access is discouraged.<br><br>Pricing to cover the costs of dissemination is only appropriate where it can be clearly demonstrated that this pricing will not act as a barrier to the use or re-use of the data. If a charge is applied for access to data, it should be transparent, consistent, reasonable and the same cost to all requestors. | 'The FOI Act requires agencies to facilitate public access to information at the lowest reasonable cost. This Principle applies when information is provided upon request or is published by an agency. Other Acts also authorise charges for specific documents or information access. Agencies can reduce the cost of public access by publishing information online, especially information that is routinely sought by the public. Charges that may be imposed by an agency for providing access should be clearly explained in an agency policy that is published and regularly reviewed.' *(Principle 7: Appropriate charging for access)* | | | |

| New Zealand | Example of best practice: Australia | Example of best practice: Singapore | Example of best practice: United Kingdom | Example of best practice: United States |
|---|---|---|---|---|
| **Principle 7: Reusable**<br><br>Data and information released can be discovered, shared, used and re-used over time and through technology change. Copyright works are licensed for re-use and open access to and re-use of non-copyright materials is enabled, in accordance with the New Zealand Government Open Access and Licensing framework.<br><br>Data and information are released:<br><br>• at source, with the highest possible level of granularity<br><br>• in re-usable, machine-readable format with appropriate metadata; and<br><br>• in aggregate or modified forms if they cannot be released in their original state.<br><br>Data and information released in proprietary formats are also released in open, non-proprietary formats.<br><br>Digital rights technologies are not imposed on materials made available for re-use. | 'The economic and social value of public sector information is enhanced when it is made available for reuse on open licensing terms. The *Guidelines on Licensing Public Sector Information for Australian Government Agencies* require agencies to decide licensing conditions when publishing information online. The default condition should be the Creative Commons BY standard, as recommended in the *Intellectual Property Principles for Australian Government Agencies*, that apply to agencies subject to the *Financial and Management Accountability Act 1997*. Additional guidance on selecting an appropriate licence is given in the *Australian Government Open Access and Licensing Framework* (AUSGOAL).'<br>*(Principle 6: Clear reuse rights)* | | 'Public data will be published in reusable, machine-readable form – publication alone is only part of transparency – the data needs to be reusable, and to make it reusable it needs to be machine-readable.' *(Draft Principle 2)*<br><br>'Public data will be released under the same open licence which enables free reuse, including commercial reuse – all data should be under the same easy to understand licence. Data released under the Freedom of Information Act or the new Right to Data should be automatically released under that licence.' *(Draft Principle 3)*<br><br>'Public data will be published using open standards, and following relevant recommendations of the World Wide Web Consortium. Open, standardised formats are essential. However to increase reusability and the ability to compare data it also means openness and standardisation of the content as well as the format.' *(Draft Principle 5)*<br><br>'Public data underlying the Government's own websites will be published in reusable form for others to use – anything published on Government websites should be available as data for others to reuse. Public bodies should not require people to come to their websites to obtain information.' *(Draft Principle 6)* | 'The site promotes and facilitates the disaggregation of data from Federal reports, tools, or visualizations, thereby enabling users to directly analyse the underlying information. Agencies should report data at the lowest analytical unit possible; summaries should be avoided. Data catalogues and tools may additionally combine and display data within a meaningful context.' *(Principle 3: Disaggregation of Data)* |

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