
Open Data Policy

November 2014

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Definitions and Acronyms

“**Agency**” means Government Agency unless otherwise specified.

“**Anonymized data**” are data relating to specific individual where the identifiers have been removed to prevent identification of that individual.

“**Applicant**” is a person who makes a request for access to datasets under the Open Data initiative.

“**Copyright**” has the meaning given to it by the Law No. (7) (2002) Protection of Copyright and Neighboring Rights.

“**Data**” are facts, figures and statistics objectively measured according to a standard or scale such as frequency or volumes or occurrences.

“**Datasets**” refers to a collection of data presented in tabular or non-tabular form for the purposes of this Policy.

“**e-Gov. Steering Committee**” has been established to ensure successful implementation of Qatar’s national e-Government plans, provide strong leadership and ensure sustained commitment from all government agencies in the State of Qatar.

“**Government Agency**” refers to all ministries and public institutions directly reporting to ministries or Council of Ministers in the State of Qatar.

“**Government Data**” refers to data and information produced or commissioned by government agencies.

“(Open-Data) **Information Request**” means a request for government datasets and information under the open-data initiative, made by people (citizens, residents and communities) or businesses in the State of Qatar.

“**ictQATAR**” refers to Ministry of Information and Communications Technology of the State of Qatar, previously known as The Supreme Council of Information & Communication Technology.

“**Machine Processable**” means that Data is structured so that it can be manipulated and allow automated intake and processing through computer application.

“**Metadata**” means the data providing information about one or more aspects of the data or datasets.

“**Open Data**” refers to the concept that information and data should be made available for everyone to access, reuse, and redistribute without any restrictions. In addition, the datasets opened should be in a machine-processable format, free of charge and devoid of any Personal Information.

“**Open Data Assessment**” means the assessment process described in [Appendix 7](#) of this Policy.

“**Open Data Catalogue**” means a listing of Data reference in a standard format.

“**Open Data Official**” refers to IT official as designated by the IT Department Manager or delegate of the respective Agency, to perform tasks related to Open Data management and implementation.

“**Open License**” means that Data is legally open when it is either in the public domain and marked as such or licensed in a way that permits commercial and non-commercial use and reuse without restrictions.

“**Personal Information**” is:

A- Any information about an individual, either identified or reasonably identifiable through such information, or from combination of such information and other information;

B- Any information, including location data, which can be reasonably linked to a specific individual irrespective of whether identified through such information or from combination of such information and other information;

C- Any information that ictQATAR may from time to time classify as personal, as well, it may add or remove any specific types of data or information.

Also, according to Qatar’s Law No. 2 of 2011 on Official Statistics, confidential statistical data is any personal information related to individuals or establishments, and such data, including but not limited to: name, ID Number, address, housing, phone numbers, and other household information, that is collected in an economic or social survey, shall not be used for any purpose other than statistical purposes. All such data shall be confidential, and shall not be disclosed to other than those authorized to peruse them, except after obtaining the prior written approval from the concerned person.

“**Pseudonymized Data**” are data relating to specific individual where the identifiers have been replaced by artificial identifiers to prevent identification of that individual.

“**Raw Data**” (or primary data) is unprocessed computer data that has not been subjected to processing or any manipulation.

“**Record**” includes books, documents, maps, drawings, photographs, letters, vouchers, papers and any other thing on which information is recorded or stored by any means whether graphic, electronic, mechanical or otherwise.

“**Terms of Use**” refer to set of conditions that accompany the datasets or information released. It places certain obligations on the user or recipient which he or she must fulfill if it is intended to use or re-use the data for any purpose, and certain rights of the data-providers.

Typically, Open Data terms of use set the user or recipient free to copy, distribute, adapt, display or include the data in other products for commercial and noncommercial purposes at no cost subject to certain limitations such as that the user must include attribution for the data; or that the data-provider would not be liable for any loss or damage of any sort incurred by the user or recipient in connection with use of the datasets; or data-provider’s right to modify or discontinue datasets, etc.

“**Voluntary Release**” means the release of government information by Government Agencies to public on a routine and voluntary basis, i.e. not in response to Information Requests.

1 **Legal Mandate**

Article 14 of Decree Law No. 16 of 2014 setting the mandate of Ministry of Information and Communications Technology (hereinafter referred to as “ictQATAR”) provides that ictQATAR has the authority to supervise, regulate and develop the sectors of Information and Communications Technology (hereinafter “ICT”) in the State of Qatar in a manner consistent with the requirements of national development goals, with the objectives to create an environment suitable for fair competition, support the development and stimulate investment in these sectors; to secure and raise efficiency of information and technological infrastructure; to implement and supervise digital government programs; and to promote community awareness of the importance of ICT to improve individual’s life and community and build knowledge-based society and digital economy.

Article 12 (9) of Decree Law No. 27 of 2014 setting the organization structure of the ictQATAR provides it with the authority to develop the national e-Government strategy and draft legislations, policies and standards to enable the electronic transformation of government agencies in the State of Qatar. The national Digital Government 2020 strategy identifies promotion of open government as one of the key strategic objectives and recognizes Open Data, e-Participation and related policies as key initiatives. This Open Data policy has been developed based on this mandate.

This Policy Document has been prepared taking into consideration current applicable laws of the State of Qatar. In the event that a conflict arises between this document and the laws of Qatar, the latter, shall take precedence. Any such term shall, to that extent be omitted from this Policy Document, and the rest of the document shall stand without affecting the remaining provisions. Amendments in that case shall then be required to ensure compliance with the relevant applicable laws of the State of Qatar.

2 Introduction

Information collected by or for the government is a national resource which should be managed for public purposes. Such information should be freely available for anyone to use unless there are compelling privacy, confidentiality or security considerations by the government. As part of government transparency aimed at strengthening citizen trust and engagement, countries around the world face unprecedented pressure to share government information. This has made governments embrace Open Data initiatives and make them an integral part of their respective Open Government and/or national e-Government programs.

Opening up government data and information is a key foundation to creating a knowledge based economy and society. Releasing previously 'locked-up' government-held datasets and providing raw data to their citizens, will allow them to transform data and information into tools and applications that help individuals and communities; and to promote partnerships with government to create innovative solutions.

There has been significant development internationally as well as in the Gulf region in the area of Open Data. [Appendix 1](#) lists Open Data webpages of various governments across the globe, going through which will reflect progress made internationally in the area of Open Data.

While Qatar does not have any Open Data initiative, some good information and statistical data are being published on some government websites. It is therefore opportune time for us to bring the release of such data and information based on internationally adopted Open Data principles as listed in [Appendix 2](#). Also, there is a need to raise the extent of data openness as measured against the 5-star Linked Open Data Model ([Appendix 3](#)) developed by Sir Tim Berners-Lee, inventor of the World Wide Web.

This presents us with an opportunity to initiate implementation of Open Data in Qatar in the right way the first time, having learnt from challenges and success cases of other countries.

In order to realize Qatar National Vision 2030 in the areas of social progress, human development, a sound and diversified economy and a sustainable environment, the Open Data policy provided in this document will assist the State of Qatar to attain its national development goals¹ of efficient and transparent delivery of public services, and building a knowledge-based society by creating an open, transparent culture where knowledge bases are current and easily accessible.

¹ Qatar National Development Strategy, 2011-2016 and the Digital Government 2020 Strategy

3 Scope and Application

Open Data supports the Qatar National Development Strategy 2011-2016 and the Digital Government 2020 Strategy's call for Transparency, Efficiency and Participation of Qatar's people. The government shall set the example in Open Data by ensuring all Government Agencies will put in place measures to release information and data. In this respect, ictQATAR will take the lead to put in place an Open Data Policy for all Government Agencies.

The Open Data Policy will institute specific actions to ensure all of our Government Agencies will take steps to expand public access to government data by making it available online unless restricted by law, policy, regulations or contract.

The Open Data Policy applies to information and data in the custody or under the control of all Government Agencies in the State of Qatar.

4 Policy Provisions

Agencies shall share non-personal data (subject to privacy, confidentiality, security, trade secret, contractual, or other valid restrictions) with the general public that is identified under the Policy on Open Data.

All Government Agencies in the State of Qatar are required to take the following steps:

4.1 Open Data Administration

- i. Each Agency shall assign responsibility to a senior officer of sufficient authority to oversee the administration and implementation of Open Data, including but not limited to putting in place the following internal processes to:
 - a. manage the overall administration of the Agency's Open Data plan;
 - b. conduct review and identify datasets for release (refer [Appendix 4](#) for dataset examples) and maintaining the Open Data inventory/catalogue;
 - c. conduct Open Data assessments to determine if datasets can be released;
 - d. ensure data and information are released on a timely basis;
 - e. ensure follow-up and respond to public inquiries/requests related to Open Data.

In the absence of an assigned officer, the IT Department Manager or delegate in the Government Agency shall assume above tasks and responsibilities as outlined in [Appendix 5](#) (Roles and Responsibilities) in the interim.

4.2 Establish Open Data Plan

- i. All Agencies shall take immediate steps to develop their Agency Open Data plan and to publish it on their Open Data webpage. The online statement shall include "Terms of Use" statement for the public to re-use the data and at no fees.
- ii. The plan should describe how the Agency will seek to improve transparency and integrate public participation and collaborations in its activities. The plan should also include its goals on how and what are the datasets that it will/plan to release to the public with specific time schedule.

- iii. Each Agency shall create an Open Data webpage and shall maintain and update it in a timely fashion. This webpage shall be linked to the national Open Data portal, if and when established in future.

4.3 *Online Publishing of Open Data*

- i. Subject to any valid restrictions, Agencies shall publish their data and information online in an open format that can be retrieved, downloaded, indexed and searched.
- ii. Data must be free of any personal information that may directly or indirectly identify an individual. Data should be Anonymized or Pseudonymized before being published.
- iii. In making a determination if the data is free from law, policy, regulation or national security concerns, or because the data are subject to privacy, confidentiality, security, trade secret, contractual, or other valid restrictions to release, Agencies must conduct an Open Data assessment. [Appendix 6](#) of this document (Open Data Assessment Guidelines) should be referred as a guideline for conducting the assessment.
- iv. Agencies may also develop criteria at their discretion for prioritizing the opening of data assets, accounting for a range of factors, such as the volume and quality of datasets, user demand, internal management priorities, and Agency mission relevance, usefulness to the public, etc.
- v. Agencies shall also create and publish metadata for the datasets to enable effective searching by the public on the internet.
- vi. Agencies must state clearly on its Open Data webpage what data are open and that the data can be used, adapted and distributed. Where applicable, the Terms of Use for the datasets should also be stated clearly.

4.4 *Availability of Data in Open Format*

- i. All datasets published online under the Open Data initiative shall be in open format. Open format is one that is platform independent, machine-processable, and made available to the public without restrictions for re-use. Please refer [Appendix 7](#) for different data format options available.
- ii. The datasets should be published in raw and as granular as possible, subject to valid restrictions on privacy, confidentiality, security or other restrictions.

Access, use, adaptation and distribution of the Open Data should be permitted at no fee to the public.

- iii. In their collection, storage and release of data, Agencies shall also ensure they develop an Open Data Catalogue and builds their data repository and systems in a way that maximizes interoperability and accessibility. This will also promote the sharing of data across Agencies to facilitate collaboration and increase efficiencies.

4.5 *Public Feedback/Requests*

- i. All Agencies shall implement an on-line forum on their Open Data webpages to solicit feedback from the public (people and businesses) and to encourage public discussions on Open Data.
- ii. The Open Data webpage shall also allow the public to submit Information Requests online.
- iii. Agencies shall respond to all feedbacks, suggestions and Information Requests received on a timely basis and within a period not exceeding 15 (fifteen) days of receipt of the request. This does not include the time needed to prepare the information or data requested. However, their response shall include whether they shall be able to provide the information and the time required to provide such information. Agencies shall use the online mode available on their Open Data webpages in publishing their responses.
- iv. If Agencies decide to not release datasets or information requested in Information Request based on the results of Open Data Assessment, they shall provide response to the applicant with due justifications within the timeframe stipulated in 4.5 (iii).
- v. Agencies shall perform Open Data Assessment of datasets or information requested in Information Requests, for making decisions as to releasing such datasets or information.
- vi. Agencies may charge a reasonable fee from the users to release data (not applicable on voluntary release per 4.6) against requests noting that such data may not be classified as Open Data or may require additional efforts not already planned or budgeted. Agencies shall establish and publish a data-request fee framework that shall apply in case of such requests.

4.6 *Voluntary Release of Information*

- i. Government Agencies should consider making information that they determine to be of interest or useful to the public, available to them on a routine basis (i.e., without an Information Request) unless its release is limited by law, contract, or policy. In principle, all non-personal Data shall be considered for publishing and then the assessment shall be applied to determine its eligibility for publishing as Open Data.
- ii. Where an Agency decides to make information available to the public on a routine basis, it should do so in a manner that makes the information available to a wide range of users with no requirement for registration, and in a non-proprietary, non-exclusive format.
- iii. Before information is designated for Voluntary Release, it must be assessed by the Agency for privacy, security, and copyright implications and other risk factors. [Appendix 6](#) of this Policy document may be referred for assessment guidelines.
- iv. Where an Agency determines if any datasets should not be made publicly available, such reasons shall be documented and measures should be in place to secure and protect them.
- v. All voluntarily released data shall be free of any cost to the users subject to the terms of use associated with them.
- vi. Individuals must not be required to register or identify themselves in order to access, use, adapt or distribute the voluntarily released data.

4.7 *Additional Requirements*

- i. Ministry of Information and Communications Technology may issue procedures, guidelines, best practices and policy updates from time to time to support the Open Data Policy. Agencies shall be expected to adopt and comply with the same.
- ii. Agencies shall implement requirements of this Policy in their Agencies, and make every effort to achieve initial targets as set out in [Appendix 8](#) of this document and targets as may be provided in future by Ministry of Information and Communications Technology (ictQATAR) to ensure effective adoption of Open Data in the State of Qatar.

4.8 *Implementation Progress & Review*

- i. Ministry of Information and Communications Technology (ictQATAR) as custodian of the overall Open Data Policy will monitor Agencies' implementation of Open Data initiatives. A compliance checklist as broadly outlined in [Appendix 9](#) shall be used in monitoring implementation.
- ii. Agencies shall perform a self-assessment based on the compliance checklist or other parameters as may be circulated by ictQATAR at the time of assessment request, and submit report with ictQATAR. Agencies shall submit any additional information or report as may be requested by ictQATAR to assess progress of Open Data implementation.
- iii. Agencies shall undertake their utmost efforts to disclose information to the public, make such disclosure useful, and identify new opportunities for collaboration.

5 Annexes

Appendix 1: Government Open Data Websites

Appendix 2: Principles of Open Data

Appendix 3: 5-Star Linked Open Data Model

Appendix 4: Key Datasets as Identified by G8 Open Data Charter, 2013

Appendix 5: Roles and Responsibilities

Appendix 6: Open Data Assessment Guidelines

Appendix 7: Data and File Formats

Appendix 8: Key Policy Targets

Appendix 9: Policy Compliance Checklist

Appendix 1: Government Open Data Websites

Several national governments have created websites to distribute a portion of the data they collect. Prominent examples of such websites are listed below:

- datospublicos.gov.ar - Argentine government open-data website. Launched in August 2013.
- bahia blanca.opendata.junior.com - Bahía Blanca municipal open-data website. Launched in Oct 2012.
- dados.gov.br - Brazilian government open-data website. Launched in December 2011.
- dados.gov.pt - Portuguese government open-data website.
- data.belgium.be - Belgian government open-data website. Still in beta, but usable.
- data.gc.ca - Canadian government open-data website. Launched in March 2011.
- data.gouv.fr - French government open-data website. Launched in December 2011.
- data.gov - U.S. government open-data website. Launched in May 2009.
- data.gov.au - Australian government open-data website. Launched in March 2011.
- data.gov.in - India government open-data website. Launched in 2012.
- data.gov.it - Italian government open-data website. Launched in October 2011.
- data.gov.ma - Moroccan government open-data website. Launched in April 2011.
- data.gov.uk - U.K. government open-data website. Launched in September 2009.
- data.govt.nz - New Zealand government initiative to publish Government Data under Creative Commons licenses, defined further at [NZ GOAL](http://nzgoal.govt.nz). Launched in Nov 2009.
- data.gv.at - Austrian government open-data website.
- data.norge.no - Norwegian government open-data website. Launched in April 2010.
- data.overheid.nl - Dutch government open-data website. Launched in Oct 2011.
- date.gov.md - Moldavian government open-data website.
- daten-deutschland.de - German government open-data website. Launched in February 2013.
- datos.gob.cl - Chilean government open-data website. Launched in Sept 2011.
- datos.gob.es - Spanish government open-data website. Launched in October 2011.
- datos.gub.uy - Uruguayan government open-data website. Launched in November 2011.
- datosabiertos.gov.go.cr - Costa Rican government open-data website. Launched in Oct 2012.

- geodata.gov.gr - Greece's open government geospatial data Launched 21 July 2010, as a state initiative.
- [Ghana Open Data Initiative](#) - Ghana government open-data website, [GODI](#). Launched in February 2012.
- govdata.de - German government open-data website. Launched in February 2013.
- lima.datosabiertos.pe - Metropolitan Municipality of Lima open-data website.
- opendata.ee - Estonian government open-data website.
- open-data.europa.eu - European Commission Data Portal.
- opendata.go.ke - Kenyan government open-data website. Launched in Jul 2011.
- opengovdata.ru - OpenGovData Russia Catalog. Launched in 2010, private initiative.
- большоеправительство.рф - Russian Open Government Portal
- paloalto.opendata.junior.com - City of Palo Alto municipal open-data website. Launched in Aug 2012.
- cityscale.com.ua - Ukrainian non-government open-data source and visualization.
- rotterdamopendata.nl - Rotterdam municipal open-data website, launched August 2012.
- satupemerintah.net - Indonesian government open-data website.
- http://www.egypt.gov.eg/english/general/Open_Gov_Data_Initiative.aspx - Egyptian government Open Data initiative.

Additionally, other levels of government have established Open Data websites. For e.g. [Data.gov](#) lists the sites of a total of 31 US states, 13 cities, and > 150 Agencies and sub-Agencies providing Open Data.

The United Nations also has an Open Data website that publishes statistical data from Member States and UN Agencies - <http://data.un.org/>.

Appendix 2: Principles of Open Data

To meet the minimal criteria of 'Open Data' data must be:

- Accessible on the Internet;
- In a machine-processable format;
- Openly licensed, allowing for its reuse (including commercial reuse); and
- Free of charge and without any other restrictions for its reuse.

Government Agencies should strive to go beyond the minimum and use the Open Government Data Principles, as established in the '[Ten principles for opening up government information](#)' (Sunlight Foundation) as recommended by the United Nations:

1. Completeness

Datasets released by the government should be as complete as possible, reflecting the entirety of what is recorded about a particular subject. All raw information from a dataset should be released to the public, except to the extent necessary to comply with applicable laws regarding the release of personally identifiable information. Metadata that defines and explains the raw data should be included as well, along with formulas and explanations for how derived data was calculated. Doing so will permit users to understand the scope of information available and examine each data item at the greatest possible level of detail.

2. Primacy

Datasets released by the government should be primary source data. This includes the original information collected by the government, details on how the data was collected and the original source documents recording the collection of the data. Public dissemination will allow users to verify that information was collected properly and recorded accurately.

3. Timeliness

Datasets released by the government should be available to the public in a timely fashion. Whenever feasible, information collected by the government should be released as quickly as it is gathered and collected. Priority should be given to data whose utility is time sensitive. Real-time information updates would maximize the utility the public can obtain from this information.

4. Ease of Physical and Electronic Access

Datasets released by the government should be as accessible as possible, with accessibility defined as the ease with which information can be obtained, whether through physical or electronic means.

Barriers to physical access include requirements to visit a particular office in person or requirements to comply with particular procedures (such as completing forms or submitting Information Requests). Barriers to automated electronic access include making data accessible only via submitted forms or systems that require browser-oriented technologies (e.g., Flash, Javascript, cookies or Java applets). By contrast, providing an interface for users to download all of the information stored in a database at once (known as "bulk" access) and the means to make specific calls for data through an Application Programming Interface (API) make data much more readily accessible. (An aspect of this is "findability," which is the ability to easily locate and download content.)

5. Machine readability

Machines can handle certain kinds of inputs much better than others. For example, handwritten notes on paper are very difficult for machines to process. Scanning text via Optical Character Recognition (OCR) results in many matching and formatting errors. Information shared in the widely-used PDF format, for example, is very difficult for machines to parse. Thus, information should be stored in widely-used file formats that easily lend themselves to machine processing. (When other factors necessitate the use of difficult-to-parse formats, data should also be available in machine-friendly formats.) These files should be accompanied by documentation related to the format and how to use it in relation to the data.

6. Non-discrimination

"Non-discrimination" refers to who can access data and how they must do so. Barriers to use of data can include registration or membership requirements. Another barrier is the uses of "walled garden," which is when only some applications are allowed access to data. At its broadest, non-discriminatory access to data means that any person can access the data at any time without having to identify him/herself or provide any justification for doing so.

7. Use of Commonly Owned Standards

Commonly owned (or "open") standards refers to who owns the format in which data is stored. For example, if only one company manufactures the program that can read a file where data is stored, access to that information is dependent upon use of the company's processing program. Sometimes that program is unavailable to the public at any cost, or is available, but for a fee. For example, Microsoft Excel is a fairly commonly-used spreadsheet program which costs money to use. Freely available alternative formats often exist by which stored data can be accessed without the need for a software license. Removing this cost makes the data available to a wider pool of potential users.

8. Licensing

The imposition of "Terms of Service," attribution requirements, restrictions on dissemination and so on acts as barriers to public use of data. Maximal openness includes clearly labeling public information as a work of the government and available without restrictions on use as part of the public domain.

9. Permanence

The capability of finding information over time is referred to as permanence. Information released by the government online should be sticky: It should be available online in archives in perpetuity. Often times, information is updated, changed or removed without any indication that an alteration has been made. Or, it is made available as a stream of data, but not archived anywhere. For best use by the public, information made available online should remain online, with appropriate version-tracking and archiving over time.

10. Usage Costs

One of the greatest barriers to access to ostensibly publicly-available information is the cost imposed on the public for access - even when the cost is *de minimus*. Governments use a number of bases for charging the public for access to their own documents: the costs of creating the information; a cost-recovery basis (cost to produce the information divided by the expected number of purchasers); the cost to retrieve information; a per-page or per-inquiry cost; processing cost; the cost of duplication etc.

Most government information is collected for governmental purposes, and the existence of user fees has little to no effect on whether the government gathers the data in the first place. Imposing fees for access skews the pool of who is willing (or able) to access information. It also may preclude transformative uses of the data that in turn generates business growth and tax revenues.

Appendix 3: 5-Star Linked Open Data Model

The **5-star Linked Open Data Model** by Sir Tim Berners-Lee (inventor of the World Wide Web) puts forward five levels of data openness, which are cumulative, in that the 2-stars encompasses what is required at the 1-star level, and so on:

*	Data is available on the web with an open license	Example: View http://5stardata.info/gtd-1.pdf
**	Data is available in machine-processable, structured form (e.g. excel format instead of an image scan of a table)	Example: View http://5stardata.info/gtd-2.xls
***	Non-proprietary formats are used (e.g. CSV, XML)	Example: View http://5stardata.info/gtd-3.csv
****	Use URLs and open standards to describe data (e.g. RDF, SPARQL), so people can point at your data	Example: View http://5stardata.info/gtd-4.html
*****	Data is linked to data from other sources or other datasets to provide context	Example: View http://5stardata.info/gtd-5.html

Note that not all data needs to meet 5 star schema requirements described above. Government Agencies can create value by just publishing data straight away with an open license. While publishing data in machine readable formats is desirable, government officials should not forget that the refinement of data to generate machine readable data can also be done by third parties.

Appendix 4: Key Datasets as Identified by G8 Open Data Charter, 2013

G8 recognizes the following as areas of high value, both for improving governance and encouraging innovative re-use of data:

Data Category (alphabetical order)	Example datasets
Companies	Company/business register
Crime and Justice	Crime statistics, safety
Earth observation	Meteorological/weather, agriculture, forestry, fishing, and hunting
Education	List of schools; performance of schools, digital skills
Energy and Environment	Pollution levels, energy consumption
Finance and contracts	Transaction spend, contracts let, call for tender, future tenders, local budget, national budget (planned and spent)
Geospatial	Topography, postcodes, national maps, local maps
Global Development	Aid, food security, extractives, land
Government Accountability and Democracy	Government contact points, election results, legislation and statutes, salaries (pay scales), hospitality/gifts
Health	Prescription data, performance data
Science and Research	Genome data, research and educational activity, experiment results
Statistics	National Statistics, Census, infrastructure, wealth, skills
Social mobility and welfare	Housing, health insurance and unemployment benefits
Transport and Infrastructure	Public transport timetables, access points broadband penetration

The above is not an exhaustive list and is only provided for reference purposes. Value and importance of data vary from context to context. Government Agencies should prioritize opening up of their datasets per their discretion.

Appendix 5: Roles and Responsibilities

The roles and responsibilities section assigns responsibility for the policy requirements set out in [Section 4](#) (Policy Provisions).

- i. Senior officer assigned by the Government Agencies with overall responsibility of Data Management shall also own and perform the following functions related to Open Data at a minimum:
 - lead their Agencies in enhancing government transparency and accountability through the increased release of government information and data;
 - ensure that policy requirements and targets as set out in this document are implemented and achieved in their Agencies;
 - prepare and execute Open Data plan in accordance with the policy targets as set out in [Appendix 8](#) of this document;
 - report progress against the Open Data plan to senior management of their respective Agencies on a periodic basis, and ictQATAR and e-Gov. Steering Committee as may be requested;
 - adhere to and report compliance on policies, guidelines and instructions issued on Open Data from time to time by Ministry of Information and Communications Technology.

- ii. Ministry of Information and Communications Technology has the responsibility to:
 - amend and update the Open Data policy from time to time to ensure currency of the policy and to address new or emerging needs and best practices;
 - issue supplemental guidelines on categories of Open Data that should be made publicly available and listed in the Open Data Catalogue;
 - issue procedures, guidelines and best practices to support the Open Data Policy;
 - recommend types of Data that may or should be made available as Open Data through the Open Data Catalogue;
 - provide instructions or advise any action that Government Agencies should undertake to support effective implementation of this Policy; and

- monitor progress of implementation of this policy at Government Agencies.
- iii. Legal Departments/ Counsels in the Government Agencies have the responsibility to:
- provide legal advice to their respective Agencies regarding confidentiality and copyright matters; and
 - provide advice to their respective Agencies regarding legal or contractual matters.

Appendix 6: Open Data Assessment Guidelines

The attached Open Data Assessment should be completed by the Agencies to ensure that there are no legal, policy, or contractual restrictions to making the Data publicly available as Open Data. The attached form and checklist must be completed by the Open Data official and approved by the IT Department Manager or delegate in the Government Agency before listing Open Data in the Open Data Catalogue.

A copy of the approved Open Data Assessment checklist must be kept in record for any future reference or audits.

Generally speaking, the majority of non-personal Data can be considered for listing in the Open Data Catalogue. An assessment will assist the Agency in objectively evaluating various considerations associated with opening up of government data. Government Agencies may add parameters to the assessment checklist as they may deem fit.

Open Data Assessment Checklist	Yes	No
Privacy		
Is the Data free of information that may directly or indirectly identify an individual?		
Copyright Agencies may contact their legal departments or counsels to assist in this assessment.		
Do the materials include only content created and owned by the Government of Qatar (i.e., is it ensured that there is no third party content included in the materials)?		
Has it been ensured that there is no exclusive license for another party to use or access the materials?		
Legal, Contractual or Policy Constraints Agencies may contact their legal departments or counsels to assist in this assessment.		
Is the public release and use of the Data permitted under law, contract or policy including any data privacy laws if applicable? (For example, Qatar’s Law No. 2 of 2011 on Official Statistics)		
If there are legal, contractual or policy restrictions or limitations to the public release or use of the Data, have they been addressed?		
Security Controls		
Is the public release and use of the Data compliant with the National Information Assurance (NIA) Policy requirements?		
Has the information security officer or designate in the Agency been contacted to ensure that all necessary security controls have been implemented?		
Pricing Frameworks		
Is the Data available to the public without collecting a fee?		
Data Source		
Does the Agency have primary responsibility for the Data?		
Is the Data complete (i.e., a subset of the Data has not been excluded)?		
Can the Data be provided in a machine-processable format (e.g., CSV)?		

If the answers to these questions are “Yes”, the Data can be included in the Open Data Catalogue. Any “No” responses indicate that the Data is either not eligible for inclusion in the Open Data Catalogue or potential barriers must be addressed before the Data can be included, in which case exceptions may require specific approvals.

Appendix 7: Data and File Formats

Machine-readable formats

In the context of data release, machine-readable means making any underlying data used in publications accessible for use by a computer-based process, not requiring human interpretation. At one level, all information and data available on computer-based devices are machine-readable. Word document files are machine-readable in the sense that Word and other compatible programs are able to interpret the data and present it as text on a screen. Similarly HTML is a standard that indicates how to display Web pages in a browser. But these need human interpretation to make sense of them. The key aspect for release of underlying data is that it can be extracted from any particular format and reused and repurposed by a computer program without human interpretation.

Open and closed file formats

The formats in which information is published – in other words, the digital base in which the information is stored - can either be ‘open’ or ‘closed’. An open format is one where the specifications for the software are available to anyone, free of charge, so that anyone can use these specifications in their own software without any limitations on reuse imposed by intellectual property rights.

If a file format is ‘closed’, this may be either because the file format is proprietary and the technical specifications are not publicly available, or because the file format is proprietary and even though the specification has been made public, reuse is limited. If information is released in a closed file format, this can cause significant obstacles to reusing the information encoded in it, forcing those who wish to use the information to buy the necessary software.

The benefit of open file formats is that they permit developers to produce multiple software packages and services using these formats. This then minimizes the obstacles to reusing the information they contain.

Using proprietary file formats for which the specification is not publicly available can create dependence on third-party software or file format license holders. In worst-case scenarios, this can mean that information can only be read using certain software packages, which can be prohibitively expensive, or which may become obsolete. The preference from the Open Government Data perspective therefore is that information be released in open file formats that are machine-readable:

- **Plain text** - Plain text documents (.txt) are very easy for computers to read. They generally exclude structural metadata from inside the document, however, meaning that developers

will need to create a parser that can interpret each document as it appears. Some problems can be caused by switching plain text files between operating systems. MS Windows, Mac OS X and other Unix variants have their own way of telling the computer that they have reached the end of the line.

- **Text document** - Classic documents in formats like Word, ODF, OOXML, or PDF may be sufficient to show certain kinds of data - for example, relatively stable mailing lists or equivalent. It may be cheap to exhibit in, as often it is the format the data is born in. The format gives no support to keep the structure consistent, which often means that it is difficult to enter data by automated means. In this case, templates should be used as the basis of documents that will display data for reuse, so it is at least possible to pull information out of documents. It can also support the further use of data to use typography markup as much as possible so that it becomes easier for a machine to distinguish headings (any type specified) from the content and so on. Generally it is recommended not to exhibit in word processing format, if data exists in a different format.
- **Comma separated files (CSV)** - CSV files can be a very useful format because it is compact and thus suitable to transfer large sets of data with the same structure. However, the format is so spartan that data are often useless without documentation since it can be almost impossible to guess the significance of the different columns. It is, therefore, particularly important for the comma-separated formats that documentation of the individual fields are accurate. Furthermore it is essential that the structure of the file is respected, as a single omission of a field may disturb the reading of all remaining data in the file without any real opportunity to rectify it, because it cannot be determined how the remaining data should be interpreted.
- **Spreadsheets** - Many authorities have information left in the spreadsheet, for example Microsoft Excel. This data can often be used immediately with the correct descriptions of what the different columns mean. However, in some cases there can be macros and formulas in spreadsheets, which may be somewhat more cumbersome to handle. It is, therefore, advisable to document such calculations next to the spreadsheet, since it is generally more accessible for users to read.
- **HTML** - Nowadays much data is available in HTML format on various sites. This may well be sufficient if the data is very stable and limited in scope. In some cases, it could be preferable to have data in a form easier to download and manipulate, but as it is cheap and easy to refer to a page on a website, it might be a good starting point in the display of data. Typically, it would be most appropriate to use tables in HTML documents to hold data, and then it is important that the various data fields are displayed and are given IDs which make it easy to find and manipulate data. Yahoo has developed a tool (<http://developer.yahoo.com/yql/>) that can extract structured information from a website, and such tools can do much more with the data if it is carefully tagged.

- **JSON** - JSON is a simple file format that is very easy for any programming language to read. Its simplicity means that it is generally easier for computers to process than others, such as XML.
- **XML** - XML is a widely used format for data exchange because it gives good opportunities to keep the structure in the data and the way files are built on, and allows developers to write parts of the documentation in with the data without interfering with the reading of them.
- **RDF** - A W3C-recommended format called RDF makes it possible to represent data in a form that makes it easier to combine data from multiple sources. RDF data can be stored in XML and JSON, among other serializations. RDF encourages the use of URLs as identifiers, which provides a convenient way to directly interconnect existing open data initiatives on the Web. RDF is still not widespread, but it has been a trend among Open Government initiatives, including the British and Spanish Government Linked Open Data projects. The inventor of the Web, Tim Berners-Lee, has recently proposed a five-star scheme that includes linked RDF data as a goal to be sought for open data initiatives (refer [Appendix 3](#)).
- **Scanned image** - Probably the least suitable form for most data, but both TIFF and JPEG-2000 can at least mark them with documentation of what is in the picture - right up to mark up an image of a document with full text content of the document. It may be relevant to their displaying data as images whose data are not born electronically - an obvious example is the old historical records and other archival material - and a picture is better than nothing.
- **Proprietary formats** - Some dedicated systems, etc. have their own data formats that they can save or export data in. It can sometimes be enough to expose data in such a format - especially if it is expected that further use would be in a similar system as that which they come from. Where further information on these proprietary formats can be found should always be indicated, for example by providing a link to the supplier's website. Generally it is recommended to display data in non-proprietary formats where feasible.

Appendix 8: Key Policy Targets

	Task	Target duration from the date of publishing this Policy	Responsibility
1	Designate senior Official with sufficient authority to assume the Open Data responsibilities	3 months	Senior Management of Government Agencies
2	Develop Agency's Open Data plan	5 months	Senior officer assigned by the Government Agencies
3	<ul style="list-style-type: none"> i. Create a webpage dedicated to Open Data in the Agency's websites in both Arabic and English languages ii. Publish Agency's Open Data plan on the Agency's Open Data webpage with provision for public feedback/requests iii. Identify and publish at least 3 datasets on the Open Data webpage in accordance with the terms of this Policy iv. Categorize, list and provide index for all datasets in form of Open Data Catalogue 	12 months	Senior officer assigned by the Government Agencies
4	First Open Data implementation review	12 months	ictQATAR
5	Identify and publish additional 3 datasets	18 months	Senior officer assigned by the Government Agencies

Appendix 9: Policy Compliance Checklist

Progress of implementation of this Policy at the Government Agencies shall be measured against the following broad checklist on an annual basis by the Ministry of Information and Communications Technology (ictQATAR):

Open Data Compliance Checklist	Yes	No
1. Has the Agency created an Open Data plan?		
2. Has the Agency assigned Open Data responsibilities to a senior officer in the Agency?		
3. Has the Agency created an Open Data webpage on their website?		
4. Is the Agency publishing information on the Open Data webpage in both Arabic and English languages?		
5. Has the Agency published their Open Data plan and related information on their Open Data webpage?		
6. Has the Agency published at least 3 datasets on their Open Data webpage in the assessment year?		
7. Does the Agency maintain Open Data Catalogue?		
8. Does the Agency maintain and update Open Data on its webpage on a routine basis?		
9. Does the Agency perform Open Data assessment and publish only qualifying information or data on their webpage?		
10. Does the Agency's Open Data webpage allow public to provide feedback and request for information?		
11. Does the officer assigned the Open Data responsibilities provide response to public query on a timely basis?		
12. Does the officer assigned the Open Data responsibilities provide progress report on Open Data plan to management on a periodic basis		
13. Does the management review the monthly progress and take remedial action to support effective implementation of this Policy and Agency's Open Data plan?		
14. Does the Agency update its Open Data plan to include additional set of tasks and new datasets for opening up, on an annual basis?		

ictQATAR reserves the right to update or modify the above compliance checklist as it deems fit for monitoring progress of implementation of Open Data policy. ictQATAR may request the Agencies to perform a self-assessment and provide responses within 15 working days of such request. ictQATAR may request for further information or details during evaluation of Agencies' self-assessment reports.

6 References

- Communication on Open Data from the European Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions; Brussels 2011
- European Journal of ePractice
- G8 Open Data charter
- Harvard Business Review
- Guidelines on Open Government Data for Citizen Engagement, DESA, DPADM, United Nations, 2013
- Integrated e-Government White Paper – June 2009, Supreme Council of Information and Communication Technology, Qatar
- Local law in New York, United States of America, regarding publishing Open Data
- Open Data government websites of various countries as listed in [Appendix 1](#) of this document, including that of the US, the UK, Singapore, UAE, Saudi Arabia, Bahrain and Oman
- Open Data handbook documentation, Open Knowledge Foundation
- Open Data policies, documentations, memoranda and action plan of Government of the United States of America
- Open Data policy consultation draft of New South Wales Government, Australia
- Open Data public consultation document 2011, Government of the United Kingdom
- Open Data references, Government of Singapore
- Open Data White Paper 2012, Government of the United Kingdom
- Open Information and Open Data Policy, British Columbia, Canada
- Qatar National Development Strategy 2011-2016
- Ten Principles for Opening up Government Information, Sunlight Foundation
- United Nations resolution, researches and guidelines on Freedom of Information and Open Data
- Wikipedia
- World Wide Web Foundation's references on Open Data