PART B: OPEN DATA READINESS ASSESSMENT METHODOLOGY

This document contains version 3.0 of the "Open Data Readiness Assessment (ODRA) Methodology" prepared by the World Bank's Open Government Data Working Group. This version incorporates feedback received and practical experience gained in applying earlier versions up to the end of December 2013, as well as additional User's Guide for the ODRA Methodology. This is Part B and includes the actual ODRA Methodology. A companion document (Part A) includes the Users' Guide.

The purpose of this methodological tool is to assist in planning what actions a government authority could consider in order to establish an Open Data program, at either the national level or in a sub-national government, or individual public agency, based on a rapid diagnostic of eight dimensions considered essential for the success of an Open Data program.

The ODRA tool is part of the "Open Data Toolkit" published at data.worldbank.org/ogd and made freely available for others to adapt and use. Users can access the ODRA tool and its unofficial translations in French and Russian online at the following link http://data.worldbank.org/about/open-government-data-toolkit/readiness-assessment-tool. A recorded training session on the methodology can be accessed at the same link.

The World Bank will continue to define and refine this Open Data Readiness Assessment tool, and it invites comments on this version by email to opengovdata@worldbank.org.

Assessments conducted using this version should explicit state that they are using "Version 3.0".

Contents

Glossary

Archiving	The storing of records, documents, or other materials of historical interest (or a collection of them) in a defined place or repository.
Data Management	The development, execution and supervision of plans, policies, programs and practices that control, protect, deliver and enhance the value of data and information assets.
Infomediary	A person or entity that helps make data/information more easily understandable to a broader audience such as the general public. For example, the media are important infomediaries for sharing information with the public in a more understandable way.
Metadata	Metadata is "data about data" – meaning data that describes basic aspects of a dataset, for example when the dataset was created, which agency is responsible for the dataset, the format of the data, etc.
Open Data	Data in machine-readable format that is publicly available under an "open" license that ensures it can be freely used/reused/redistributed by anyone for any legal purpose.
Open Data Ecosystem	An approach to Open Data that focuses not only on data but on the larger environment for Open Data use—its "ecosystem"—including other key dimensions like leadership, policy/legal framework, institutions, infrastructure and the state of user communities (like developers, universities, private sector).
Open Data Portal	A platform (usually accessed as a website) that at a minimum acts as a catalogue providing a single point of access for the public to search and access Open Data available from a government, agency or organization.
Open Data Program	A set of actions designed to introduce and manage Open Data by a government, agency, organization or company. The Assessment focuses on Open Data Programs developed by governments or individual public sector agencies.
Open Government	A philosophy or principles for government that focus on changing how government works to make it more transparent, accountable, participatory (with greater citizen engagement) and collaborative.
Open Government Partnership	A global partnership of governments dedicated to implementing domestic reforms that make government more open, accountable, and responsive to citizens. Launched in 2011, the OGP now has over 60 member countries.
Open Standards	Technical standards that are publicly available, non-proprietary and can be implemented on a royalty-free basis. Often open standards are also developed in an "open" transparent process that enables a larger group of people to contribute to their development.
Sponsor	Government official requesting the Assessment. Usually leads the Government's counterpart team.

PART B: ODRA METHODOLOGY

1. **SENIOR LEADERSHIP**

<u>Importance</u>   Very High

<u>Context</u>: Open Data Programs require the implementation of change - often including legal, institutional, technological and cultural changes - and may affect stakeholders both inside and outside government. Focused, strong, sustained, political/senior leadership is therefore critical to helping a government overcome resistance and inertia of all kinds, to helping incentivize actors to make the necessary changes in a timely and effective manner and to achieving the desired objectives and benefits of an Open Data Program.

Evidence

+   A publicly announced political promise or policy position on Open Data or related topics (such as Open Government or FOI) by senior political figure with influence across the government as a whole.

-     Government reputation for tight "message control" and unwillingness to admit mistakes outside direct political control.

+   Commitments across the political spectrum on transparency and Open Government through the publication of data.

+   Head of Government/Cabinet endorsement of an Open Government Partnership National Action Plan with open data commitments.

+   Head of Government/Senior Minister proactively driving Open Government agenda across government, or visible champions exist for Open Data at political level (executive and/or legislative branch).

+   Specific, named person / body officially charged with overall responsibility for Open Data, with machinery of government in place to coordinate their leadership of open government/access to information across ministries.

Questions to ask

1.1 To what extent is there visible political leadership of Open Data/Open Government/Access to information? (Importance: Very High)

• How aware and supportive is the Prime Minister or President?

- Which Minister (if not the Prime Minister or President himself or herself) would be able to lead an Open Data Program? How aware and supportive is he or she?
- Which Minister is responsible for "right to information" issues? Is he or she supportive of Open Government in a proactive way?
- Which identified champions for Open Data exist at the political level?

1.2 To what extent is there an established political leadership and governance model for policy and implementation of programs across multiple institutions or across government as a whole? (Importance: High)

- What is the leadership and governance model for programs across government as a whole?
- To what extent are such programs run on a central top-down basis, and to what extent is discretion left to individual agencies or local authorities?

1.3 What existing political activities or plans are relevant to Open Data? (Importance: Medium)

- What socialization about Open Data has been done at political level? What awareness-raising events/activities about Open Data for agencies or the general public have taken place, and what political or senior leadership involvement was there in these?
- What activities or programs does the government have which relate to Open Government, such as transparency initiatives, statistical reform programs or a Right To Information Act? What have the results been? Have they been supported or resisted by politicians?
- What Open Data activities exist at lower levels of government (for instance city or regional level)? How are the programs there, and the politicians leading them, perceived at a national level?

1.4 How does the wider political context of the country help or hinder Open Data? (Importance: High)

- To what extent do current political priorities support the different potential drivers of Open Data: transparency and accountability; economic growth; inclusion and empowerment; improving public services; and government efficiency?
- Which individual Parliamentarians or legislative committees could provide supportive leadership for Open Government programs linked to one or more of these drivers?
- Where is the country in the political cycle? What scope is there for sustained momentum to release data before the next elections?
- To what extent are there wider political concerns or sentiment in favor of "open"?
- Which political priorities could be significantly assisted by Open Data?

1.5 What is the country's position in relation to the Open Government Partnership?

- If it has joined the Open Government Partnership, what commitments have been made in its National Action Plan, including commitments to Open Data?
- How is the country's involvement in the Open Government Partnership led?
- How are civil society engaged in the planning and monitoring of the country's National Action Plan?

Assessment

Rating of leadership readiness focuses on three core issues: (i) whether or not top leaders have expressed publicly visible support for Open Data; (ii) support for Open Data among key data-owning agencies; and (iii) whether or not the broader political context and top national priorities/plans help or hinder Open Data.

A GREEN rating for Leadership always requires evidence of (i) together with clear evidence for at least one other issue. The rating would typically be justified by findings such as:

- Visible, official support for Open Data at the very top levels of government (President, Prime Minister, Cabinet).
- Visible support among leadership of key Ministries and Agencies (at least 3-4 of them) with commitments to support Open Data.
- Political context and highest national priorities/plans directly align with introduction of Open Data.

A YELLOW rating for Leadership can be based on a favorable political environment (stated priorities or goals of a government that align with doing Open Data) even if top-level leaders have not yet committed to Open Data. It should be supported by leadership of several data-owning agencies expressing clear support for Open Data (e.g., during meetings with the assessment team). The rating would typically be justified by findings such as:

- Support for Open Data from leadership of a few (at least 2-3) key, data-owning Ministries or Agencies.
- There appears to be no strong linkage of Open Data to an existing, major national plan or initiative, though political context/priorities do not seem at odds with Open Data.
- There is evidence of a few occasions of leadership in implementing cross-government initiatives that are politically difficult or resisted by the bureaucracy.

A RED rating on Leadership is merited when support for Open Data has not been expressed beyond the Agency sponsoring the Assessment. A Red rating is also justified if the current political environment may pose real obstacles to Open Data, or if the top national priorities do not align with Open Data. The rating would typically be justified by findings such as:

- No visible leadership on Open Data (or related issues such as Transparency, Open Government), including among key data-owning agencies.
- Political context / priorities / timetable does not favor Open Data.
- The major national initiatives that are priorities of the government do not appear to offer any connection to Open Data.
- The leadership of the government or many data-owning agencies voiced strong reluctance or opposition to the principles of Open Data.

2. POLICY/LEGAL FRAMEWORK

<u>Importance</u>   High

<u>Context</u>: The long-term success and sustainability of an Open Data Program is greatly impacted by the policy and legal framework that exists. Open Data requires that a range of policy and legal issues be addressed – for example, with respect to the licensing of data reuse. It is important to identify at an early stage the existing policies, laws and regulations with respect to a core set of issues, and to identify actual or perceived obstacles in order that policy or legal change can be initiated early if essential. **It is highly desirable that a suitably qualified and experienced local government information lawyer** or a competent local lawyer on its behalf **advises the Assessment directly.**

If no comprehensive legal assessment is conducted prior to the start of an Assessment, it may be necessary that competent legal counsel conduct a follow-up study of relevant legal issues. In order to identify gaps with respect to best practice standards, it is possible that the government may need the assistance from "international" experts as well.

Evidence

+   Existing Freedom of Information/Right to Information/Access to Information Law, and a network of FOI representatives across government (e.g., one per agency) to manage implementation of the law.

+   Government has a track record of releasing information requested using the FOI mechanisms, including important (newsworthy) information.

+   A Privacy Law exists and the government/agencies have robust safeguards to guard against release of the private information of individuals.

+   Key data-owning agencies such the National Statistics Office have established policies for anonymizing personal information prior to publication.

-    Government websites and current downloadable data available from agencies have restrictive terms and conditions of use.

-    Several agencies have exclusive arrangements with companies for access and reuse of government data.

Questions to Ask

2.1 What is the legal and policy framework for the protection of personal privacy? (Importance: Very High)

- What official policies, laws or regulations exist with respect to protection of privacy?

- What formal processes, mechanisms and safeguards exist to enforce privacy protections? Who is responsible for them?
- What is the experience to date in implementing privacy policies and laws? What evidence exists to show the effective use of mechanisms and safeguards to protect privacy?
- What is the record of the government on personal privacy?
- What official policies, laws or rules require the anonymization of data prior to publication?

2.2 What rights of access to information exist? (Importance: Very High)

- What official policies, laws or regulations exist with respect to access to information?
- What mechanisms can citizens use for access to government-held information? Who is responsible for the process (e.g., a centralized entity or individual agencies)?
- What is the experience to date in implementation of the access to information or FOI? How much information is released in response to requests using these mechanisms?

2.3 What is the legal and policy framework for data security, data archiving and digital preservation? (Importance: High)

- What official policies, laws or regulations address data security, data archiving and digital preservation?
- Which agency is responsible for policy on data security?
- Which agency is responsible for policy on data archiving and digital preservation?
- What formal procedures or mechanisms are in place to address data security?
- What is the government's experience to date with data security?

2.4 What is the policy on the ownership and licensing of government data? (Importance: Very High)

- Who "owns" government data in a legal/copyright sense - is it government as a whole or individual ministries?
- How does the government (or any agency or local authority) license or permit the release/use of its data?
- Who is able to set/agree terms and conditions (eg a license) for the use of information?
- What policies, laws or regulations govern the use of government data?
- What policies, laws or regulations govern the commercial use of government data?
- What policies or regulations address the ownership of data that is generated by third parties under a government contract or procurement?
- To what extent have recognized Open Licenses (such as Creative Commons By Attribution) been transposed into local form? How could the imported forms be effective under the local legal code?

2.5 To what extent is government data sold by agencies? (Importance: High)

- What is the official policy, law or regulation about charging for government information?
- Which agency is responsible for setting and enforcing this policy?
- Which agencies officially sell their data? To what extent are any such agencies dependent on revenues from sale of data for their annual budgets?
- What is the experience (or reality) with respect to agencies unofficially selling their data?
- What data is sold which includes anonymized personal information?
- What data is sold which includes non-anonymized personal information, and if so on what basis is this done?

2.6 What other policies/laws exist that may have significant impact on Open Data? (Importance: High)

- What is the official policy, law or regulation on secrecy of official information? Who is responsible for its enforcement? How and to what extent is it enforced?
- Who has authority to authorize the release of data (and override secrecy obligations)?
- What is the official policy, law or regulation on Official/National Statistics? What provisions does it have for release and use of statistical information?
- What exclusive arrangements does the government have with any companies with respect to any datasets?
- What laws exist about respecting confidentiality or third party rights in non-personal government data (e.g. company registers, business data underlying official statistics)?
- What laws exist about data archiving and digital preservation?

Assessment

Rating of policy/legal readiness focuses on six issues: (i) existence and effectiveness of an access to information law; (ii) privacy protections; (iii) systems security and archiving/preservation; (iv) use of anonymization; (v) ownership and licensing of government data; and (vi) the sale for data.

A GREEN rating of the Policy/Legal dimension requires evidence of (i) and (ii) together with at least one other positive factor such as clarity about ownership of government-held data, liberal terms and conditions for use of government information or a policy that government data should be freely available. The rating would typically be justified by findings such as:

- A Freedom of Information (or equivalent) law that has been enacted and mechanisms for implementation and enforcement that are operational.
- Existence of a privacy policy/law and effective protection of individual confidential information.
- Database, network and systems protection and security are addressed in laws/regulations/policies and working processes exist for managing these issues.

- Published government information treated as in the public domain or at least available with no restrictive conditions on its use.
- An Intellectual Property Rights regime is in place to ensure the continuing openness of data sets
- Clarity that government-held data is legally owned by the government on behalf of its citizens.
- No secrecy law prevents implementation of an Open Data Program.

A YELLOW rating for Policy/Legal can be based on a combination of factors, but will likely include at least the existence of a law on access to information (or its equivalent) and privacy protections reflected in legal instruments, even if their enforcement has a mixed record. A Yellow rating is also appropriate for such situations as where a few agencies officially sell data at prices that are no more than the costs of distribution. The rating would typically be justified by findings such as:

- A version of an access to information law exists giving citizens a right to information held by government, but more in principle than in practice.
- Right to privacy and protections are recognized in the Constitution, laws or other binding instruments in principle but in practice implementation is inconsistent and not widely enforced.
- No policies/regulations prevent agencies from providing important data on request, but in practice high value data seems to be rarely released when requested.
- The issue of database, network and systems protection and security are addressed in laws/regulations, but there are questions about the robustness of their implementation.

A RED rating on Policy/Legal is merited when there is no access to information law or privacy protections, where the sale of data is common and where standard techniques of anonymization are not used. The rating would typically be justified by findings such as:

- There is no cross-government policy preventing the sale of government-held data or ensuring consistent policies on charging for data based on the marginal costs of distribution.
- Government has and actively applies an official secrets law to prevent or deter the release of information.
- Most agencies only grant use to their data/information on restrictive terms and conditions.
- There is no legal framework for protection of intellectual property rights.

3. INSTITUTIONAL STRUCTURES, RESPONSIBILITIES AND CAPABILITIES WITHIN GOVERNMENT

Importance   High

Context: As well as political and senior leadership, middle management level skills and leadership are important to success: creating an Open Data Program requires agencies to manage their data assets with a transparent, organized process for data gathering, security, quality control and release. To effectively carry out these responsibilities, agencies need to have (or develop) clear business processes for data management as well as staff with adequate ICT skills and technical understanding of data (e.g., formats, metadata, APIs, databases). Engagement among agencies and at all levels of government to set common standards and remove impediments to data interoperability and exchange is also vital, and requires mechanisms for inter-agency collaboration.

In addition to handling the "supply side" of creating an Open Data Program, agencies need the structures and capabilities to engage with communities that reuse Open Data — including developers, companies, non-governmental organizations, other agencies and individual citizens.

Evidence

+   Designation of one entity with sufficient political weight to coordinate an Open Data Program across government and ensure that Open Data policies are implemented.

+   Government is supportive of innovative programs and officials, which might be evidenced by the existence of a more agile group within (or across) government that can experiment with innovative demonstration projects or recruitment of outside, non-government expertise to fill government positions.

+   The idea of Open Data has been introduced or socialized among at least some government agencies.

+   Existence of Open Data managers, CIOs, CTOs or permanent staff designated to play an equivalent role among key stakeholder agencies.

+   Existence of a whole-of-government program/project on Open Government.

+   A regular process for performance management exists, either on whole-of-government basis or by individual agencies, to measure quality of service delivery or agency performance.

+   A formal training program for civil servants exists that addresses ICT and other issues.

+   There is one agency or department responsible for ICT or information systems across government.

\+ Existence of informal networking mechanisms or events for interaction among civil servants (for example, on technical issues or skill-building).

- Most agencies have no CIO, CTO or regular position in charge of data management.

- No existing inter-agency body to coordinate or standardize with respect to ICT issues (such as technical issues).

Questions to ask

3.1 Which agency or agencies have relevant capabilities, mandates, project management experience and technical skills to be a suitable lead institution in the planning and implementation of an Open Data Program? (Importance: Very High)

- For each of the potential agencies, to what extent does the agency have sufficient political authority or support to lead the design and implementation of an Open Data Program across government as a whole?
- For each of the potential agencies, what experience has the agency in managing ICT projects across government as a whole?
- What consideration or action has there been about how to socialize and introduce Open Data with agencies and civil servants?
- What other key stakeholders for Open Data are there within government?

3.2 Which any agencies have a CIO, CTO or permanent official positions dedicated to data management? (Importance: Medium High)

- What power do they wield in reality?
- How long have they been in place?

3.3 What inter-agency mechanisms coordinate ICT issues (such as for technical matters)? (Importance: Medium High)

- Which agency or department is responsible for ICT or information systems across government?
- What technical matters are coordinated?
- Which agencies actively participate in such coordinating mechanisms?

3.4 What process is currently used to measure agency performance or quality of service delivery? (Importance: Medium)

- How is performance management done - by individual agencies or on a government-wide basis?
- What performance management is done of ICT and of service delivery?

3.5 Which agency or ministry is primarily responsible for data or statistics? (Importance: Medium)

- What do they already provide as Open Data?
- What systematic processes exist for collecting, cleaning and managing data?
- What data is publicly available? To what extent is it downloadable in reusable form?

3.6 Which agencies or ministries appear most concerned about the release of data, and what is the basis of their concern? How can they be handled procedurally, and how can their concerns be addressed? (Importance: High)

3.7 How strong is the government's overall ICT skill base among senior government leaders and civil servants? (Importance: High)

- To what extent are leaders "digitally literate"?
- To what extent do government officials receive training on ICT, data standards or data analytics?
- What assessment does the government make (e.g. through an ICT competency framework) to determine or track ICT skill levels among civil servants?
- What part do ICT skills play in deciding civil service grades and promotions?

3.8 What is the government's presence on the Web? (Importance: Medium)

- Which agencies have websites? What portals does the government manage? Which agencies that are more advanced in their Web presence or use of the Internet (e.g., use of social media)? Which agencies offer any e-Services or APIs? Mobile-enabled services?
- Which agencies measure the traffic their websites receive or use web analytics?
- How often do agencies update their websites? Who does this most frequently?

Assessment

Rating of institutional readiness focuses on three core issues: (i) expressed readiness of an agency with sufficient political weight and competency to lead on Open Data; (ii) track record of inter-agency mechanisms coordinating major ICT or Open Government initiatives; and (iii) existence and effectiveness of positions comparable to a CIO/CTO within agencies responsible for strategic ICT decisions and management.

A GREEN rating for the Institutional dimension always requires evidence of (i), together with clear evidence for at least one other issue. The rating would typically be justified by findings such as:

- Well established inter-agency coordination/mechanisms for ICT and Open Government initiatives and oversight.
- Existence of at least one agency/unit with demonstrated competency and political weight to be lead agency for Open Data Program.
- Important agencies already have positions for data manager, CIO/CTO function.
- Track record of regular performance management by government/agencies.

A YELLOW rating for the Institutional dimension will be associated with a government that has good options for an agency/entity to lead an Open Data Program or at least manage a portal, even if a final decision has not been taken yet. Yellow is also appropriate when a government does not have CIO type positions but at least some key agencies have IT departments with real technical capacity and track record for ICT coordination is mixed. The rating would typically be justified by findings such as:

- There are identifiable options for agencies able to manage an Open Data portal, but no obvious choice that has both the political weight and technical competency to be an ideal candidate to lead an Open Data Program.
- Even if no CIO type positions, some key agencies have IT departments with real technical capacity.
- Major ICT or Open Government initiatives have or are being implemented and coordinated by inter-agency bodies, but evidence is mixed on the ability to manage and execute such initiatives.
- Some evidence of use of performance management by government/agencies.

A RED rating for the Institutional dimension is merited when there is no agency well positioned (in terms of political weight and technical skills) and ready to manage an Open Data Program. Red is also supported when there is no track record for coordinating or managing ICT issues across government. The rating would typically be justified by findings such as:

- There is no agency well positioned (in terms of political weight and technical skills) and ready to manage an Open Data Program.
- There is no track record of managing whole-of-government ICT initiatives.
- Track record of inter-agency coordination is weak.
- Government and its agencies do not have an active web presence.

4. GOVERNMENT DATA MANAGEMENT POLICIES, PROCEDURES AND DATA AVAILABILITY

<u>Importance</u>   High

<u>Context</u>: Open Data programs can build on established digital data sources and information management procedures within government where they already exist. Where data is only available in paper form it will be hard to release as Open Data and in reusable format quickly and cheaply. Conversely, good existing information management practices within government can make it much easier to find data and associated metadata and documentation, identify business ownership, assess what needs to be done to release it as Open Data and put processes in place that make the release of data a sustainable, business-as-usual, downstream process as part of day-to-day information management.

On availability of key datasets, the Assessment should consider whether key datasets are available and what would need to be done in order to release them as Open Data. Which datasets are key will depend on the particular country circumstances Datasets which support wider political or national priorities will be of particular importance because of their utility in supporting wider change. However, experience from existing Open Data programs has shown that certain types of datasets are usually prominent among those that support typical Open Data objectives such as economic growth, improving public services and increasing Open Government and transparency. Table 1 shows these datasets, derived from previous versions of the Open Data Readiness Assessment Tool (itself drawing on World Bank experience), from the G8 Open Data Charter (June 2013) and from the Open Knowledge Foundation Open Data Index (2013 edition). Other datasets identified as important in local circumstances in previous Open Data Readiness Assessments include such data related to water points, agriculture, natural resources/extractives, disaster preparedness and management, and housing maintenance.

The identification of the potential key datasets for the Assessment should start before the ODRA mission, during the preparatory phase. Factual information about each dataset should be requested during the fieldwork preparation phase as indicated in points 17 and 18 of Annex A to the ODRA User's Manual.

Evidence

+   Complete, up to date and detailed inventory of data holdings.

+   Coherent information management policies and standards, consistently enforced across government.

+   Process for digitization of records which conforms to international standards to ensure access and use of the data.

-    Most government-held data is in paper format.

-    Agencies evidence little awareness of their inventory of data assets.

- There is no governance process for information and data security

- Any policy on data archiving and digital preservation is not being applied.

- There are no common data standards (for instance the standards in a government interoperability framework) for the government as a whole.

- Procurement laws/regulations do not ensure that government retains ownership of information generated or held by contractors, PPPs or outsourced suppliers.

- Due to decentralization, data on many vital issues is inaccessible to the public or even the national government, including data on schools, healthcare spending, crime, mining, energy, weather and statistics disaggregated at state/local levels.

Questions to Ask

4.1 What are the policies and practices on the management of government information? (Importance: High)

- What are the governance processes for information and data security?
- What policy factors enable or obstruct the release of the data as Open Data?
- What policies or standards exist for data quality, including provenance, accuracy, timeliness and completeness?
- What policies/laws exist on use of languages? Do all government publications and data have to be in multiple languages?
- What benefits would follow from the release of the data as Open Data? How do these relate to the objectives of the Assessment?

4.2 To what extent does the government have a coherent view of its data holdings? (Importance: Medium)

- What inventories of data exist, both at whole-of-government level and by each agency responsible for data (such as the National Statistics Office)? What standards for these apply across government as a whole?
- How complete, up to date and detailed are the inventory(s)?
- What are the metadata standards, and to what extent are data holdings described by complete, accurate and detailed metadata records in practice?
- To what extent are there established "core common reference datasets" which are used across government (e.g. organization codes, address register)

4.3 How and where is government data held? (Importance: High)

- How much current data is in digital and reuse forms (rather than paper, microfilm, image etc. forms)? What about legacy data (including both historical records and past transactions, e.g., cadastral records)?
- To what technological formats and standards is government data held? Are they open or proprietary formats? What government interoperability framework exists, and how is it actively used by agencies to support the development of integrated data assets and information exchange?
- What technical factors enable or obstruct the release of the data as Open Data?
- If public service information is held by contractors, PPPs or outsourced suppliers, who has ownership of it and does the agency responsible have rights to access, use and distribute it freely?
- How is data archived and digitally preserved once it has ceased to be used operationally? What are the standards, policies, responsibilities and procedures for data archiving and digital preservation? To what extent does they conform to international standards and best practice?

4.4 What is the extent of intra- and inter-government actual demand and latent demand for data? (Importance: High)

- How and to what extent is data shared between agencies at the same tier of government?
- How and to what extent is data shared between different tiers of government?
- How easy or difficult do public agencies find it to obtain core common reference data from other parts of government?
- What taxonomy and/or classifiers are used within government? Which agencies use the same classifiers when exchanging data?
- How easy or difficult do public agencies find it to obtain operational and statistical data from other parts of government?
- What data is bought from private sector providers, and at what cost?

4.5 What data is already made available outside government - either free or for a fee - and on what conditions? (Importance: High)

- What datasets are available? In what format, and does the format allow re-use of the data?
- How is information available - in static files, or through APIs, or both?
- What income (if any) is generated? What are the costs of administrating any charges?
- What conditions are imposed? For what reason?
- To what extent is data on government websites downloadable or scrapable?

4.6 What practical experience does the government have in anonymizing personal data? (Importance: High)

- Which agencies (such as the NSO) anonymize data as a standard practice in their work?
- What standards are applied for anonymization of data?
- What experience has there been with "de-anonymization" – that is the re-identification of people using a combination of anonymized data together with other data sources?

4.7 Which agencies with established capabilities in data management (e.g. the NSO) could give leadership to a wider program? Useful existing capabilities would include: (Importance: Medium)

- data collection, curation, management and publication
- use of well documented, standard work flow for data management
- data analytics
- privacy safeguarding and anonymization

Assessment

Rating of readiness for Government Data Management focuses on three core issues: (i) how and where data is held by government; (ii) the visibility of agencies into their data holdings; and (iii) the existence of key data-owning agencies with demonstrable capabilities in data management.

A GREEN rating for Government Data Management always requires evidence of large amounts of high-value, digital data together with clear evidence for at least one other issue. The rating would typically be justified by findings such as:

- Large amounts of high-value data already held in digital format.
- The data already exists in machine-readable form suitable for publication.
- The data is held in a database from which an extraction can easily be performed.
- Notable amount of machine-readable data already published online by at least a few (1-2) agencies.
- The data is available in printed publications that are priced at no more than the cost of printing and distribution, and the printed form is compiled from a machine-readable form such as a spreadsheet.
- Several key agencies (statistics and others) have demonstrable capabilities in data management.
- Agencies generally have good visibility into their data holdings.
- As a general rule agencies do not charge for data.
- Strong record of data exchange among agencies, not only by "manual" request.
- The data has been released in response to requests under the Freedom of Information law.

- There already exists an explicit political commitment to release the data to the public (for example, as part of a government's Action Plan for the Open Government Partnership or another government initiative).

A YELLOW rating is supported when multiple agencies have a good understanding of their data assets and data management capabilities, even if no formal inventories of data assets exist. Yellow is also appropriate when some key agencies have Management Information Systems holding high-value, machine-readable data, and there is evidence that agencies provide high-value data online or at least on request. The rating would typically be justified by findings such as:

- Few or no agency inventories of data assets, but certain officials have a fair understanding of their agency's data assets.
- Notable number of key agencies have Management Information Systems (MIS) that hold high-value, machine-readable data, though they may be siloed.
- Government has an agency or body responsible for statistics that has real capabilities in data and data management.
- Record is mixed on agencies keeping their data updated in a timely manner.
- There are some key agencies that do provide high-value data on request or upon registration online.
- A number of agencies have official policies and practices on charging for access to data.
- The data is currently available at a cost, and the total income from the data is not material in terms of the budget of the agency concerned.
- The data would need to anonymized but this could be done in a straightforward manner.
- The release of the data would require the consent of multiple agencies or levels of government.
- More suitable data will become available as part of a new or replacement ICT system currently being implemented.
- The data is held in a proprietary ICT system for which a special extract program would need to be developed by the supplier.
- The data is regularly requested by civil society.
- The release of the data would be of significant benefit to the objectives of the Open Data Program.

A RED rating is merited when a government provides little data online and evidence of agencies selling or charging for data. The rating would typically be justified by findings such as:

- Relatively little data is published online.
- Evidence that data is often sold by agencies unofficially.
- Strong, prevailing culture among agencies that government-held data is not a public good.

- No reliable anonymization practices used by agencies.
- The data is not held in digital form, exists solely in paper format and there are no other plans (or budget) to digitize it.
- The data is subject to specific confidentiality legislation which would need to be changed.
- The data is sensitive personal data which could not easily be anonymized.
- The collection and maintenance of the data is largely or <u>wholly</u> financed by selling data.
- The data is supplied under an undertaking of confidentiality.
- The data does not belong to the government.
- The data is the subject of an existing (contractual) exclusive arrangement that may be difficult legally to revise.

Table 1: KEY TYPES OF DATASETS FROM PREVIOUS EXPERIENCE

	Assessment Framework version 2 (2013)	G8 Open Data Charter 2013	Open Data Index 2013
1	Budget data (both at Ministry of Finance and individual agency level)	local budget, national budget	National government budget at a high level (e.g. spending by sector, department etc).
2	Disaggregated public expenditure and grant data (e.g. which school got what money, when)	Transaction-level public expenditure	Records of actual (past) national government spending at a detailed transactional level; at the level of month to month government expenditure on specific items
3	Statistical data (from the National Statistics Office or individual departments publishing recognized national statistics)	National Statistics, infrastructure, wealth, skills	Key national statistics such as demographic and economic indicators (GDP, unemployment, population, etc).
4	Census data	Census	
5	Parliamentary data including records of proceedings, draft laws under debate and enacted version of legislation	Government Accountability and Democracy: Government contact points, election results, legislation and statutes, salaries (pay scales), hospitality/gifts	Results by constituency / district for all major national electoral contests. All national laws and statutes to be available online
6	Procurement data (who was awarded what) and contract data (the documents and details of the deal)	Contracts let, calls for tender, future tenders	
7	Data on public facilities including schools, hospitals, police stations, public toilets, libraries, government offices etc. - location and services available		

	Assessment Framework version 2 (2013)	**G8 Open Data Charter 2013**	**Open Data Index 2013**
8	Public service delivery and performance data at the level of individual school, hospital/clinic etc.	List of schools; performance of schools, digital skills Health Prescription data, health performance data Housing, health insurance and unemployment benefits	
9	Transport data including roads and public transport	Public transport timetables, access points broadband penetration	Timetables of major government operated (or commissioned) national-level public transport services (specifically bus and train).
10	Crime data to the level of individual crimes and their locations	Crime statistics, safety	
11	Reports of inspections and official decisions and rulings in reusable form (e.g. public health inspections of food outlets)		
12	Official registers - company, charities, cadastral/land ownership etc.	Company/business register	List of registered (limited liability) companies including name, unique identifier and additional information such as address, registered activities.
13	Geospatial information - maps, address registers, points of interest.	Topography, postcodes, national maps, local maps	High level map at a scale of 1:250,000 or better (1cm = 2.5km). A database of postcodes/zipcodes and the corresponding geospatial locations in terms of a latitude and a longitude

	Assessment Framework version 2 (2013)	G8 Open Data Charter 2013	Open Data Index 2013
14	Weather data	Earth observation data, including meteorological/weather, agriculture, forestry, fishing, and hunting	
15	Construction data (permits, zoning)		
16	Real estate data (sales, listings, taxes, other property-specific data)		
17		Pollution levels, energy consumption	Aggregate data about the emission of air pollutants, especially those potentially harmful to human health
18		Global Development: Aid, food security, extractives, land	
19		Science and Research Genome data, research and educational activity, experiment results	

5. DEMAND FOR OPEN DATA

<u>Importance</u>   Very High

<u>Context</u>: The value of data is in its use. A strong demand-side "pull" of data is important not only in creating and maintaining pressure on government to release data but also in ensuring that the wider Open Data Ecosystem develops and that Open Data is turned into economically or socially valuable services for citizens. The "pull" can come from civil society, the private sector, international organizations, donors and individual citizens.

Evidence

+   Formal Government policy on social media and/or citizen engagement.

+   Examples of participatory consultative processes to inform policy decisions.

+   Examples of well-known civil society organizations using technology to empower citizens. There are civil society champions for Open Data.

+   Examples of individual businesses (or trade associations) seeking/using data.

-       Citizens do not digitally engage with government.

-       There are no local businesses in geospatial data and maps, in weather or in transport information.

-       It is difficult for public agencies to obtain operational and statistical data from other parts of government.

Questions to Ask

5.1 What is the level and nature of actual demand and latent demand for data from Civil Society, Development Partners and the media? (Importance: High)

- Who are the civil society champions for Open Data?
- Which NGOs are using government data in a systematic way in their work, reporting, etc.?
- Which Development Partners are using which government data in their work? What data do they want?
- To what extent is there a "social audit" movement with a possible demand for spending and budget data?
- What requests of data have been made by civil society/NGOs? How would they express these requests? How have they been invited to make requests for data?
- How advanced are the media in terms of "data journalism"?

- Which civil society organizations have a capacity to develop or manage software applications or innovative websites?

5.2 What are the level and nature of actual demand and latent demand for data from business/the private sector? (Importance: High)

- Which businesses use government data or deliver services which could benefit from access to it?
- What local businesses use geospatial data and maps, weather or transport information? What data do they consider the government should make available?
- What businesses, local or branches of international firms, exist to provide value-added services to business-to-business commerce such as credit rating, business directories, market intelligence? What government data would they like to see released?

5.3 How do public agencies listen to demands for data and respond? (Importance: Medium)

- What is the process for identifying and meeting demand for data, either outside government or inside?
- If there is an access to information law or freedom of information law, what types of information are most demanded under the law?
- What process exists for people to request information from public agencies / government? What information is most requested?
- How are government priorities for statistics decided, and on what evidence?
- How are government priorities for geospatial data decided, and on what evidence?

5.4 How do external stakeholders view public agencies' willingness to listen to demands for data and respond? (Importance: Medium)

- How do external stakeholders view the process for identifying and meeting demand for data from outside government?
- How responsive do external stakeholders consider the government is in responding to requests for information?
- How involved do external stakeholders consider they are in the setting of priorities for key national information infrastructure data such as statistics and geospatial reference data?

Assessment

Rating of readiness for Demand for Open Data focuses on three core issues: (i) evidence of data demand by civil society, private sector, research community and media and (ii) existence of agency mechanisms in place to intake and respond to requests for data.

A GREEN rating for Demand for Open Data can be supported by clear evidence of a combination of factors such as data demand by civil society, private sector, research community and media, effective mechanisms for data sharing among agencies and with people outside government, and a record of citizen engagement. The rating would typically be justified by findings such as:

- Clear evidence of data demand by civil society, private sector, researchers and media.
- Effective mechanisms for data requests by people outside government (e.g., civil society groups) where high-value data is released.
- Public agencies actively seek information on the demand for data from both current and potential users of data, and reflect that in planning their collection, maintenance and publication of data

A YELLOW rating is supported when there is some evidence of data demand from outside government and some agencies do have responsive channels for data requests and release. The rating would typically be justified by findings such as:

- Some evidence of expressed data demand by civil society, private sector and media.
- Evidence of usage of any mechanisms which some agencies have in place for civil society to request data, and evidence of some data release in response.
- Public agencies take some account of demand for data in planning their collection, maintenance and publication of data, but they do not actively seek information from current or potential data users.

A RED rating is merited when there is a poor track record in responding to data/information requests, agencies share little data with each other easily and civil society is very under-developed (or passive). The rating would typically be justified by findings such as:

- Evidence points to very little demand for government data by user communities (such as CSOs and private sector)
- A poor track record by the government in responding to the limited data/information requests that are made.
- Public agencies do not take account of information on the demand for data in planning their collection, maintenance and publication of data.

6. CIVIC ENGAGEMENT AND CAPABILITIES FOR OPEN DATA

<u>Importance</u>   High

<u>Context</u>: Experience among leading governments has demonstrated that Open Data initiatives are more sustainable and high-impact when Open Data efforts use an "ecosystem" approach – meaning governments invest not only in supplying data but also address the policy/legal framework, institutional readiness, capacity building (for government and infomediaries), citizen engagement, innovation financing and technology infrastructure. Governments need to play a multi-dimensional role in an Open Data ecosystem and create new types of partnerships with a wide range of stakeholders.

Evidence of Civic Engagement and Capabilities for Open Data

+   Agencies regularly engage citizens, businesses and other stakeholders to get feedback and input on their services, decisions or activities – either using ICT or in more traditional ways.

+   Agencies have a track record for engaging with developers in the creation of applications and e-Services. A track record engaging other reuser communities is also a plus.

+   There have been co-creation type events (e.g., hackathons, code sprints, apps challenges).

+   A critical mass of local developers exists, and as a community they are active on social media platforms or through in-person activities.

+   Early stage financing is available for entrepreneurs and start-ups.

+   There is already an Apps Economy (even if small) with firms developing applications and people using/purchasing/downloading apps.

+   There are technical schools and universities with computer science programs that produce a notable number of graduates per year with technical degrees.

-    Journalism is organized mainly around large media organizations, and there are few freelance/independent journalists and no independent journalism associations.

-    State-controlled media dominate the media industry.

Questions to ask

6.1 Which potential infomediaries (such as data journalists) are able to help translate Open Data into meaningful information for the public? What actions are needed to develop or enhance these parts of the Open Data Ecosystem (Importance: High)

- Which NGOs, journalists or media organizations actively use government data?

- How is journalism organized: mainly around large media organizations, or is there significant number of freelance/independent journalists?
- How is the media industry structured? How robust are print media, broadcast media, and online media? What is the role of state-owned or state-controlled media dominate?
- What independent journalism associations exist?

6.2 What activities has the government engaged in to promote reuse of government-held data (e.g., in developing apps or organizing co-creation events)? How could such promotion be developed or enhanced? (Importance: High)

- Have government / agencies engaged in any development of applications (Web, mobile)?
- Have any co-creation events been organized?
- Which non-government communities use government data?

6.3 What is the extent of engagement with government through social media and other digital channels? (Importance: Medium)

- How extensive is the use of social media by citizens? What are the main platforms?
- How do the government/individual agencies use social media or other forms of digital engagement? What policies exist for this, if any?
- To what extent have citizens digitally engaged with government? What are the main issues that generate engagement? How would citizens know if their input was considered?
- What level of citizen to citizen engagement is there on key political and social issues? Is this driven by data to any extent? How would the availability of government data improve this debate?

6.4 To what extent is there an existing Apps Economy? (Importance: Medium High)

- What culture of apps usage exists?
- What apps have been developed based on Open Data or other government data? Who has developed these?
- What companies sell services using government data?

6.5 To what extent is there an academic or research community which trains people with technical skills or has capabilities in data analysis? (Importance: Medium)

- Which technical schools or universities with computer science programs? How many graduates per year with technical degrees?
- Which universities offer advanced statistics programs?
- Which computer/web science academics connect with the government?
- What relevant networks of researchers or research centers exist?

- To what extent does the secondary school curriculum include computer science or ICT training?
- What programs address relevant technologies (e.g., web science, semantic web, big data technologies)?

Assessment

Rating of readiness for Citizen Engagement and Capabilities focuses on five main issues: (i) government record on citizen engagement; (ii) the capacity of technical universities; (iii) potential infomediaries such as data journalists; (iv) existence of an Apps Economy; and (v) government promotion of reuse of its data.

A GREEN rating can be supported by evidence of a combination of factors such as a strong record of citizen engagement, technical universities that produce advanced research and collaborate on ICT projects, a real and growing Apps Economy, and agencies with experience in co-creation. The rating would typically be justified by findings such as:

- Government has strong record of engaging with citizens and incorporating their input into policies or decisions.
- Data journalism exists to some degree.
- Universities produce significant number of technical graduates, have track record of ICT collaboration with private sector and advanced research in leading areas like analytics, Big Data, semantic Web, etc
- Apps Economy exists and is growing.
- There are multiple examples of government and civil society (or other non-government stakeholders) engaging in co-creation activities.

A YELLOW rating is appropriate when evidence indicates that tertiary education institutions produces a notable number of graduates with technical degrees/skills, an Apps Economy is emerging and there is some data journalism happening. The rating would typically be justified by findings such as:

- There is evidence of some data journalism among a few media organizations.
- There is a notable ICT sector, even if the Apps Economy is still young/small.
- Tertiary education system produces a notable number of graduates with technical degrees/skills.

A RED rating is merited when government has not promoted data reuse and practices little genuine citizen engagement, the technical education system is weak, and there a serious constraints to growth of ICT sector or an Apps Economy. The rating would typically be justified by findings such as:

- Government has no experience engaging with civil society or others in co-creation of apps development or promoting reuse of its data.

- Evidence points to little or no notable citizen participation in public affairs.
- Very under-developed (or passive) civil society.
- Government offers (or uses) few "digital" channels to engage citizens such as social media.
- There is no Apps Economy of any notable size, and the ICT sector is relatively small with serious constraints to its growth.
- Tertiary education system is weak and produces few graduates with adequate technical skills for the ICT market.

7. FUNDING AN OPEN DATA PROGRAM

Importance   Medium High

Context: Funding with respect to both the "supply side" and "demand side" of Open Data is important to ensure that the objectives of an Open Data Program are met.

Evidence

+   Resources from government and/or others (*e.g.*, donors or private sector) are available to fund an Open Data Program – including development and maintenance of an Open Data Portal - for the first few years.

+   Government is already thinking how to measure return on investment for the cost of an Open Data Program - either in financial terms (for example potential cost savings, value of new services, or economic impact).or in social terms.

+   Government has identified funding for the development of selected, high priority apps and e-Services that will leverage Open Data.

+   Government already has some established innovation funding mechanisms.

+   Government already invests in ICT training for its civil servants, and pool of tech skills in key agencies already exists to get data supplied to an Open Data portal.

-    Government has no history of funding efforts to make government data available or more widely usable.

-    Government currently makes no direct investments in innovation, SMEs or ICT industry development.

-    Government has never invested in development of any e-Services, applications or e-Government projects.

Questions to ask

7.1 How could resources be identified to fund an initial phase of an Open Data Program? Who would need to take what action to do so? (Importance: Very High)

- Which existing projects (government or donor financed) could make a contribution to funding an Open Data Program?
- Which donors or development partners have indicated an interest in Open Data or Open Government issues?
- What thought has been given to developing the business case for an Open Data Program?

- Who must be convinced to fund an Open Data Program? Which political leaders must support it?

7.2 What any resources exist or have any been identified to fund development of initial apps and e-Services that will use Open Data? (Importance: High)

- What funding for apps development does the government provide to agencies or others to use?

7.3 What funding is available to support the necessary ICT infrastructure and ensure enough staff have the skills needed to manage an Open Data Program? (Importance: Medium High)

- How could common infrastructure across agencies that can be leveraged?
- What already exists in terms of dedicated staff for data management, both for the overall Open Data Program and among key agencies?
- What funding and technical skills in key agencies exists to get data supplied to an Open Data Portal (including curation and cleaning of data)?
- What assessment has been made of vendor skills and what they might cost?

7.4 What funding mechanisms does the government have for innovation? (Importance: Medium High)

- What funds does the government have for development of applications or e-Services?
- What programs does the government have to support or promote entrepreneurship, start-ups or development of SMEs?
- What funding is available to build the capacity of civil society? What funding (e.g., from donors or non-government sources) is there for innovations to promote transparency and accountability?
- What public-private partnerships exist related to technology?

Assessment

Rating of readiness for Funding Open Data focuses on two key issues: (i) existence of resources and personnel for an Open Data Program; (ii) availability of government funding for necessary ICT infrastructure and training; and (iii) government's track record for investing in innovation.

A GREEN rating can be supported when a government has identified some initial resources and personnel for its Open Data Program, and also has a record of investing in innovation. The rating would typically be justified by findings such as:

- Resources already identified for the first phase of an Open Data Program, including apps development.

- Government has made and continues to make substantial investments in public ICT infrastructure and technical training of civil servants.
- Track record of public investment in innovation financing and promoting entrepreneurship.

A YELLOW rating is supported when a government is prepared to consider budgeting for Open Data even if funding is not yet committed, and it has some initial staff dedicated to preparing and managing an Open Data Program. Yellow also applies when a government, even if constrained with limited resources, does manage to make some investment in innovation. The rating would typically be justified by findings such as:

- A limited amount of resources (people and money) are available for initial work on an Open Data Program – and government shows readiness to consider budgeting for it.
- There is an initial staff indicated to manage an Open Data Program but budget not yet certain.
- Despite limited resources, government does invest in innovation financing.
- Adequate ICT infrastructure exists, though civil servants do not receive substantial technical training.

A RED rating is merited when a government to date made no indications of providing budget or a dedicated team to an Open Data Program, and has no record in meaningful investment in innovation or entrepreneurship. The rating would typically be justified by findings such as:

- Government makes no investments in innovation or entrepreneurism that might indicate a willingness to support innovative ICT initiatives.
- Government has shown no indications that any staff will be dedicated to managing an Open Data Program.

8. NATIONAL TECHNOLOGY AND SKILLS INFRASTRUCTURE

<u>Importance</u>   High

<u>Context</u>: In very practical ways, Open Data Programs normally rely for their success at least in part on the national technology infrastructure, in terms of technology and communications services and the ICT skills among officials, infomediaries and the general public.

Evidence

\+   Government already uses share ICT infrastructure and shared e-Services.

\+   Most agencies have a Web presence.

\+   Individual agencies offer e-Services, including mobile-enabled services.

\+   Internet penetration in the country/locality is robust (above 40%).

\-   Basic infrastructure needed for Open Data does not exist or is under-developed (little Internet access or freedom, connectivity is poor or prohibitively expensive).

\-   Broadband access is not affordable for a significant percentage of the population.

\-   The local ICT industry (including the software development industry) is not sizable in terms of employment, revenues or percentage of GDP.

Questions to ask

8.1 What is the local ICT "ecosystem"? Which technologies reach what proportion of citizens? (Importance: High)

- What use is made of "conventional" browser-based internet technologies? How widespread is this use?
- What use is made of "smartphone" mobile technologies? How widespread is this use?
- What use is made of other mobile technologies such as SMS? How widespread is this use?
- What is the extent of the "digital divide"?

8.2 What is the level and cost of internet access, both by broadband and by mobile technologies? (Importance: High)

- What is the Internet coverage (proportion of population where internet could be available)?
- What is the Internet penetration (proportion of population actually connected to the internet)?

- What is cost of high-speed Internet access? How costly is it relative to average incomes?
- What is the mobile coverage? Costs of mobile?
- Where does the country rank in major ICT indexes (such as ICT Development Index published by the ITU)?

8.3 How readily available is compute and store infrastructure? (Importance: Medium High)

- What is the availability of web-hosting services?
- What is the availability of virtual server services?
- What access is there to cloud computing services including processing and storage?

8.4 How strong are the IT industry, developer community and overall digital literacy? (Importance: High)

- What are the statistics on size of local ICT industry (e.g., in terms of employment, revenues or percentage of GDP)?
- To what extent do Ministries or agencies outsource IT functions or services to the private sector?
- What does the local software development/web design industry look like? How large is it? What organized communities of developers exist?
- What is the start-up scene? What incubators/accelerators are there for entrepreneurs or startups, any venture capital or early stage investment funds?
- What industry associations or groups for IT companies exist?
- What is overall level of Internet use skills?
- What is overall level of data skills among non-government organizations?
- What are education levels?

Assessment

Rating of readiness for Technology and Skills Infrastructure focuses on five issues: (i) overall ICT ecosystem and skills; (ii) access to high-speed Internet and mobile; (iii) maturity of government's ICT infrastructure and use of technology, especially use of shared infrastructure and services; (iv) ICT literacy among the population; and (v) strength of ICT industry, local developer community and overall digital literacy.

A GREEN rating is merited by a combination of factors such as a government with a generally strong technical skill base, notable Internet penetration that is affordable to a large segment of the population, government use of shared ICT infrastructure and the Web, a vibrant local developer community and digital literacy among a notable segment of the population. The rating would typically be justified by findings such as:

- High-speed Internet access and penetration are significant (around 50% penetration of high-speed access) and not only confined to urban residents.

- IT literacy is not only confined to citizens in cities.
- Strong ICT infrastructure, and Government has shared infrastructure related to data (MIS systems interface/interoperate).
- A vibrant start-up scene exists.

A YELLOW rating is applicable when Internet access is small but growing meaningfully, mobile penetration is significant, government has a notable number of information management systems even if shared infrastructure/services are limited, and the digital divide is a real problem but government is taking initiatives to address it. The rating would typically be justified by findings such as:

- Internet access (especially broadband) is growing and becoming more affordable.
- Mobile penetration is high and affordable for a large segment of population.
- Government has a notable number of information management systems, though many/most do not interoperate.
- Government has few shared services but has formal plans to introduce some.
- Digital literacy in the major cities is notable, though rural areas may suffer from a real digital divide. Government is taking actions to address digital divide.
- The developer community is small, but shows some genuine activity.

A RED rating is merited when Internet access is unavailable or unaffordable to most citizens and mobile remains unaffordable to large segments of the population. Red is also appropriate where technical skills inside government are generally weak, and digital literacy among citizens is generally low, even in urban areas. The rating would typically be justified by findings such as:

- Internet access is unavailable (or unaffordable) to most of the population.
- Government makes no use of shared ICT infrastructure and services, and its investment in ICT is relatively low.
- Evidence indicates that digital literacy among government leadership is weak.
- ICT skills in civil service are weak; few agencies has staff with strong ICT skills.
- No notable developer community exists.
- Digital literacy among the population is very low, even in the major cities.