THE WORLD BANK

OPEN GOVERNMENT DATA WORKING GROUP

Below is a REVISED draft "Open Data Readiness Assessment Tool" prepared by the World Bank's Open Government Data Working Group that incorporates the feedback received by January 7, 2013. The purpose of this tool is to assist in diagnosing what actions a government could consider in order to establish an Open Data initiative.

It will be added to the "Open Data Toolkit" published at data.worldbank.org/ogd and made freely available for others to adapt and use.

We invite comments on this draft either in-line in the Google Document or via email to opengovdata@worldbank.org.

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GUIDANCE FOR USING THE READINESS ASSESSMENT FRAMEWORK

Introduction

The Framework has been designed in the first instance to assist the World Bank and its clients to prioritize actions to initiate an Open Data initiative and where intervention can be most effectively applied. We also hope, however, that it will serve as a useful tool for others to use, or to inspire the development of more targeted assessments or processes that closely link to local needs.

The Readiness Assessment Framework has been designed to support an economical and action-orientated assessment of the readiness of a national, regional or municipal government - or even an individual agency - to evaluate, design and implement an Open Data initiative. (For brevity, the language is sometimes in terms of national governments, but it is easily adapted.) For the Bank, this will often be a more rapid assessment; others may invest greater time to conduct a fuller assessment. It is hoped that the tool will be useful for both approaches.

For the World Bank, an Open Data initiative is not simply the design and launch of an Open Data portal, but more the evolution of a dynamic Open Data ecosystem rich in both the supply and reuse of Open Data that fuels innovations by many types of stakeholders.

The assessment is designed to address both the supply and demand side of Open Data. However, it may be advisable for a government to use this tool alongside other tools that focus more deeply on specific areas of interest (*e.g.*, civil society demand for Open Data or technical capacity of the public sector).

While the questions listed in this tool could be used in other contexts (for instance, as part of an assessment of relative performance in open data or adapted for use in an Open Government assessment) they are focused on the most important elements that apply at the earliest stages of an Open Data initiative. They are not designed to cover all the elements that would be important at later stages.

Different dimensions of the framework have different importance in that framework - for instance a strong assessment of leadership will be valuable in driving key strategic action to improve policy or capability.

It is helpful for users of this tool to understand that Open Data and Open Government are related, but not the same thing. Open Data can be a key component of a larger Open Government initiative. By enabling the public release and free reuse of government data in machine-readable formats, Open Data can help make participation, collaboration and transparency—which define Open Government—more effective. For this reason, certain questions in this tool explore issues related to the broader area of Open Government.

Use of this tool is intended to provide helpful good practice guidance, but is not a “one size fits all” prescription for Open Data. The output of any diagnostic, even following the guidance in this tool, must be carefully and critically considered in the context of the particular

circumstances in which it has been made. This is a diagnostic tool. Results of using the tool will not guarantee a successful Open Data program. The purpose of the tool is to provide a basis for a robust and consultative dialogue among open government data stakeholders. In that sense, use of this tool is the beginning of a process and not the end or result of a process. This tool is also a 'living' document and will be subject to continuous updating and revision based on experiences from actual practice and further input from experts.

In addition, nothing in this tool takes away the need to protect private, personal data. By definition, Open Data requires privacy protections. Similarly, nothing in this tool takes away from the value and need for an effective freedom of information regime for citizens to use.

Sample Timetable

For the World Bank and its clients, the Readiness Assessment is intended to be performed rapidly and economically. Others may adjust the timetable to align with their specific needs and objectives.

In all cases, it is recommended that the assessment is conducted to a "time-boxed" schedule which experience shows helps focus attention on key strategic issues and to concentrate on work with key stakeholders. A sample timetable would be as follows:

Week	Activity
-4 to -1	Discuss with client, with World Bank Country Office and other stakeholders details of the modalities of the Readiness Assessment
0	Formally agree on a written memorandum on the conduct of the Readiness Assessment including:
1	Team agree on target list of interviewees mapped to each dimension of the Assessment and requests for evidence and information to be issued to each, and client team member issues requests
2-4	Collation and checking of information received. Desk study and follow-up requests for information
3	Agree schedule of interviews for fieldwork week. Client team member makes appointments and issues briefing/background information to interviewees.
4	Client team member provides logistics pack for consultants
5	Fieldwork week Day 1, am: team meeting; interview with sponsor; may also include a briefing for interviewees as a group Day 5, pm: initial debrief of emerging findings to sponsor
6	Client team member makes follow-up requests for information, chases information provided during interview
7	Drafting of assessment report
8	Review of draft assessment report by WB and client sponsor
8, day 5	Finalization of Readiness Assessment Report

Figure 2 offers a simplified, visual representation of the Open Data readiness assessment process described above.

Figure 2 – Readiness Assessment Phases

During the Preparatory Info Collection phase noted above, an initial list of questions and information requests will be provided by the World Bank team to the client for circulation among interviewees and key stakeholders. The intention is to have the 4-week period for use by recipients to provide initial information and answers to these questions to the extent they can.

Note: It is imperative that the assessment team include someone with direct experience with Open Data initiatives as well as someone able to address legal/policy and technical issues related to Open Data. In our experience working in countries without existing Open Data initiatives, one or more of these roles is best filled by an external consultant. That Consultant need not be full-time during this process. It is likely, however, that the client team member should have the assessment as their prime responsibility for this period and should be available full-time at critical points.

Evidence

The Assessment framework suggests some hard evidence - existing documents or facts - which are relevant to the theme, though these are intended to be illustrative and not exhaustive. Users of this tool should seek to collect and study these documents or facts, if they exist, in advance of the field interviews.

Individual items of evidence are marked "+" for positive evidence of readiness and "-" for negative evidence of readiness. The absence of particular evidence is not necessarily evidence the other way, but reasons for its absence is certainly something to should test in relevant interviews. Also, the evidence referenced in each section is not exhaustive. Conducting the assessment may reveal other evidence (positive or negative) that has bearing on a given area of readiness.

Questions

The Assessment Framework is arranged as eight themes, and within them a small number of "primary questions". It is those themes and primary questions which form the basis of the assessment and recommendations. For each primary question a number of subsidiary questions are suggested to test the detail of your interviewees' responses. It is not necessary to rigorously ask all the subsidiary questions of all interviewees.

Assessment

In assessing each area, take account of the relevant factual evidence as well as the responses to the primary and supplementary questions.

Red: Evidence/responses to questions suggest significant obstacles exist to an Open Data program.

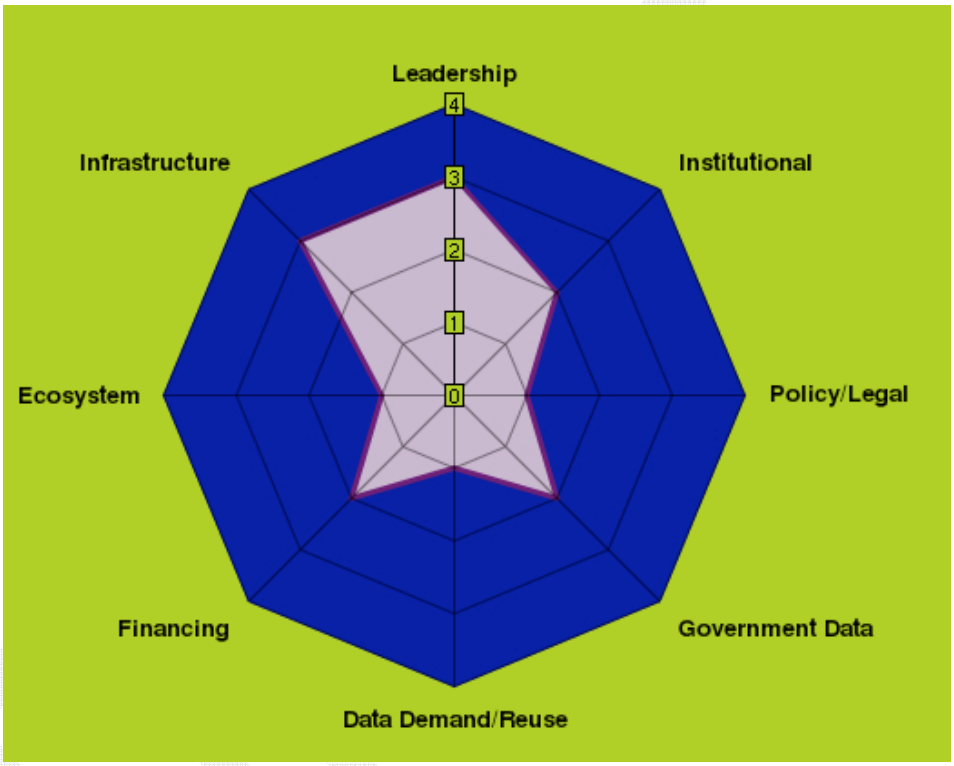
Amber: Evidence/responses to questions do not show significant obstacles, but also do not show positive evidence of favorable conditions.

Green: Evidence/responses to questions show favorable conditions for an Open Data program.

Assessment Report

As indicated, the final format of an Open Data readiness report will be agreed among the World Bank, the client government, World Bank Country Office and possibly other stakeholders. It is anticipated that a final report and presentation will seek to visualize its findings for easy reference, for example using a "radar chart" (sample shown in Figure 3).

Figure 3 – Readiness Radar Chart



It is intended that the results of the assessment will be presented to a client government and a broader audience of stakeholders, which can help socialize Open Data while also identifying key champions and partners for an Open Data initiative. The assessment report will be designed to serve as an immediate input into the rapid development of an Open Data implementation plan by a client government.

1. LEADERSHIP

Importance Very High

Why is this important? Open Government Data programs often face resistance both from bureaucratic forces within government with a culture of secrecy, and by actors inside and outside government who have benefitted from privileged access to data. Strong, sustained, political leadership is therefore important in overcoming resistance and giving cover to political and other risks from opening up government information.

What does good look like? One of US President Obama's first acts - on his first day in office - was to issue a memorandum establishing an Open Government Initiative and calling for a formal Open Government Directive to be drafted and issued within 120 days. This act, plus sustained promotion of Open Government by the White House, has empowered those working on data.gov and those within individual agencies working to release their data.

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 cross-government influence.

- 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 the Open Data agenda, with machinery of government in place to coordinate their leadership of open government/access to information across ministries.

Questions to ask

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

- Is PM or president aware and supportive?

- Which Minister (if not the PM himself) would be able to lead an open data initiative? Is he aware and supportive?
- Which Minister is responsible for "right to information" issues? Is he supportive of Open Government in a proactive way?
- Are there any identified champions for Open Data at the political level?

1.2 Is there an established political structure for policy and implementation of cross-government initiatives? (Importance: High)

- What is the model for cross-government initiatives? Can they be imposed top-down, or is a lot of discretion left to individual agencies or local authorities?
- Which group(s) will be most nervous about the data release? How powerful are they? How could they be handled?

1.3 Are there any existing political activities or plans relevant to Open Data? (Importance: Medium)

- Has any socialization about Open Data been done at political level? Have there been any awareness-raising events/activities about Open Data for agencies or the general public?
- Does the government have any Open Government related activities or initiatives, such as transparency initiatives, statistical reform programs or a Right To Information Act? What have the results been? How are these seen by politicians?
- Any Open Data activities at the city/regional level? How are the initiatives there, and the politicians leading them, perceived at a national level?

1.4 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?
- Are there individual Parliamentarians or legislative committees who can provide supportive leadership of open government initiatives linked to one or more of these drivers?
- Where is the country in the political cycle? Is there scope for sustained momentum to release data before the next elections?
- Are there wider political concerns/is there sentiment in favor of "open"?
- Are there political priorities whose implementation could be significantly assisted by open data given experience elsewhere?

Assessment of Leadership and Recommended Actions

Question Area	Importance	Assessment	
		Red/Amber/ Green rating*	Commentary
Political Leadership	Very High		
Political Structure	High		
Existing Activities	Medium		
Wider Context	High		
OVERALL	Very High		

* See guidance

Leadership Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			

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2. POLICY/LEGAL FRAMEWORK

Importance High

Why is this important? Open Government Data programs should wherever possible work within and leverage existing legal codes and policies, especially in the start-up phase. This greatly reduces the legal/policy impediments and lead times, means that the initiative can work with relevant policy experts and that any policy/legal changes needed for steady-state sustainability can be based on practical experience. Conversely it is important to identify at an early stage actual or perceived "blockers" in order that policy or legal change can be initiated early if essential.

What does good look like? The UK data.gov.uk initiative leveraged existing policies and law on the Reuse of Public Sector Information, Government Copyright and Freedom of Information. By doing so the independent agencies responsible for these policies became strong partners and supporters of the initiative, and helped manage their stakeholders and networks of subject experts. The legal/policy framework for Open Data, including the Open Government License, then evolved over time to address gaps and needs as they were identified.

Evidence

+ Existing laws or policies on reuse of public sector information.

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

+ Government uses an open license with respect to release/use of its data. - Freedom of Information/Right to Information Bill stuck in the legislature for years.

- Exclusive arrangements with companies with respect to government data.

+ Existing Copyright Law and legal provision for "Government Copyright" that makes clear who "owns" government data in a legal/copyright sense.

+ Statistics Law and/or independent "National Statistics Council."

+ Independent and proactive information/privacy commissioner or equivalent office, with effective enforcement by courts or through other legal channels .

- Various laws limit the use of government information by the public and civil society (secrecy laws, press and media law, Internet regulations, laws about third party rights such as company registers and trade secrets).

Questions to Ask

2.1 Is there any policy on Open Data or (re-)use of public sector information?

- Does government (or any agency or local authority) use any license with respect to release/use of its data?
- How are concerns around privacy/harm handled? What privacy safeguards exist for data about citizens?
- Have recognized Open Licenses, such as Creative Commons By Attribution, been transposed into local form, or could the imported forms be effective under the local legal code?
- Who "owns" government data in a legal/copyright sense - is it government as a whole or individual ministries? Who is able to set/agree a license?
- What is the policy (if any) on charging for government information? Who is responsible for setting this policy? Does this policy allow the commercial use of data? Do any/many agencies sell their data?
- Does government have any exclusive arrangements with any companies with respect to any datasets? Conversely, does the government have any national or international obligations to be non-discriminatory (cf. the 2003 EU Public Sector Information Directive)?
- Is there a "right to data" or "open by default" legislation? If so, how is this enforced?
- Can the government avoid liability for misuse and/or accuracy?

2.2 What are policies/laws on government secrecy and access to information?

- What official policy/law/regulations exist on privacy, official secrecy, copyright, intellectual property, freedom of information, information security, electronic transactions or other information-related issues?
- What government secrecy policies, laws and obligations apply on public agencies and their employees? Who has authority to authorize release data (and override civil service secrecy obligations, etc.)? What approvals need to be addressed before publishing data?
- When was the Statistics law, if it exists, last updated? Would its provisions help or hinder the release of open data?
- What laws exist about respecting anonymity/third party rights in government data (e.g. company registers, business data underlying official statistics), and how would these impact an Open Data Initiative?

2.3 What policies/laws help or hinder the use of information by public and civil society?

- Freedom of speech law?
- Internet access and freedom?
- Press and media law?
- Who has a role in setting policy on the release of information?

- What is the role of judicial review in open government information? Are there any other independent bodies that review or approve release of government information?

Assessment of Policy/Legal Framework and Recommended Actions

Question Area	Importance	Assessment	
		Red/Amber/ Green rating*	Commentary
Policies on reuse of information	High		
Policies on Access to Information and Secrecy	High		
Wider use of information	High		
OVERALL	High		

* See Guidance

Policy/Legal Framework Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			

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3. INSTITUTIONAL STRUCTURES, RESPONSIBILITIES AND SKILLS WITHIN GOVERNMENT

Importance High

Why is this important?

As well as top political leadership, middle management level skills and leadership are important to success: Open Government Data 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 Open Data, agencies must engage with communities that reuse Open Data — including developers, companies, non-governmental organizations, other agencies and individual citizens. For many, this requires openness to news kinds of partnerships.

What does good look like?

In the Republic of Moldova, Europe's smallest and poorest country, a coordinating body for Open Data (and Open Government) was created within the State Chancery reporting directly to the State Secretary and Prime Minister. This unit—called the eGovernance Center—directly manages Moldova's Open Data efforts in close coordination with the Chief Information Officers (CIOs) that now exist at every ministry, including operations of the Open Data portal and implementation of the Open Data Directive by every agency.

Evidence

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

+ Government is supportive of innovative initiatives 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 Is there an agency or entity that has the mandate, project management experience and technical skills to manage an Open Data portal? (Importance: Very High)

- If yes, do they have sufficient political authority or support to manage across entire government? Are they connected to any political leadership who has already shown visible support for Open Data?
- Has this entity managed any government-wide ICT projects before?
- Have they (or the main proponents of Open Data) started or thought about how to socialize and introduce Open Data with agencies and civil servants?
- Is there an agency or department responsible for ICT or information systems across government?

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

- If yes, what power do they wield in reality?
- How long have they been in place?

3.3 Are there any inter-agency mechanisms to coordinate on ICT issues (such as for technical matters)? (Importance: Medium High)

- If yes, on what technical matters have they coordinated?
- Which agencies actively participate in such coordinating mechanisms?
- Have key stakeholders for Open Data been identified?

3.4 Is there any process currently used to measure agency performance or quality of service delivery? (Importance: Medium)

- If yes, is performance management done by individual agencies or on a government-wide basis?
- Is any performance management done with respect to ICT? Service delivery?

3.5 Is there an agency or ministry primarily responsible for data or statistics? (Importance: Medium)

- If yes, do they already provide any data as Open Data?
- Is there a systematic process for collecting, cleaning and managing data?
- Does the statistics agency already release data as Open Data? Or at least offer downloadable data?

Assessment of Institutional Preparedness and Recommended Actions

Question Area	Importance	Assessment	
		Red/Amber/ Green rating*	Commentary
Lead OGD Agency	Very High		
CIOs/Inter-agency Mechanisms	Medium High		
Performance management	Medium		
Data/Stats Agency	Medium		
OVERALL	Medium High		

* See Guidance

Institutional Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			

4. DATA WITHIN GOVERNMENT

Importance High

Why is this important? Open Government 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, reusable data quickly and cheaply. Conversely, good existing information management practices within government can make it much easier to find data and associate 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.

What does good look like? All government data would be held digitally. The government would have a comprehensive inventory of its data holdings (sometimes called an "information asset register"), and each dataset would have comprehensive metadata and supporting documentation.

Evidence

+ Comprehensive inventory of data holdings.
+ Coherent information management policies and standards, consistently enforced across government.
+ There is data available on government websites that is downloadable or scrapeable.
+ There is a process for digitization of paper format records already underway.
- Vast majority of government-held data is in paper format.
- Agency evidences little awareness of its inventory of data assets.
- There is no governance process for information and data security, and no policy on archiving.
- There are no common data standards or interoperability framework for the entire government.
- Procurement laws/regulations do not guarantee that government retains ownership of information generated or held by contractors, PPPs or outsourced suppliers.

Questions to Ask

4.1 What are the policies/laws on the management of government information?

- Does the government have a governance process for information and data security?
- What policies or standards exist on the provenance, accuracy and quality control of data?
- What policies/laws exist on use of languages? Do all government publications and data have to be in multiple languages?
- Is there a policy for data archiving?

4.2 Does the government have a coherent view of its data holdings?

- Is an inventory of data held at whole-of-government level, or by each agency responsible for data? Are there cross-government standards?
- If there is no government inventory, do any key individual agencies (such as the National Statistics Office) have one?
- How comprehensive and up-to-date are the inventory(s)?
- Are there established metadata standards, and are data holdings described by accurate metadata records?
- 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?

- 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? Is there an interoperability framework?
- If public service information is held by contractors, PPPs or outsourced suppliers, does the agency responsible have rights to access and distribute it? Do procurement laws/regulations retain ownership of such information with the government?
- How is data archived once it has ceased to be used operationally? Who has authority/ability to access archived data?

4.4 What data is already published - either free or for a fee - and on what conditions?

- What datasets are published? In what format, and is it re-usable?
- Is information available in fixed files, or also through APIs?
- What income (if any) is generated? What are the costs of administrating any charges?
- What conditions are imposed? For what reason?
- Is data on government websites downloadable or scrapeable?

4.5 Are there some agencies with established capabilities in data management (e.g. the NSO) which could give leadership to a wider initiative? Useful existing capabilities would include:

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

Assessment of Data within Government and Recommended Actions

Question Area	Importance	Assessment	
		Red/Amber/ Green rating*	Commentary
Policies on Information Management	Medium		
View of Data Holdings	High		
How is data held	Very High		
Existing publication of data	Medium		
Agencies with existing capability	High		
Availability of key datasets	Very High		
OVERALL	High		

* See Guidance

Data within Government Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			

Availability of key datasets

Consider the following areas (which, in other jurisdictions, have been found to be especially valuable for re-use and civic engagement). Which agency is responsible for each, and what relevant skills, capacity and experience does each agency have? How difficult would it be to release this data in reusable form? What would be the key obstacles? ***(Complete "key dataset template" for as many of the following as possible, and summarize results in "key dataset findings and recommendations")***

1) budget data (both at Ministry of Finance and individual agency level)
2) disaggregated expenditure and grant data (e.g. which school got what money, when)
3) statistical data (from the National Statistics Office or individual departments publishing recognized national statistics)
4) census data
5) Parliamentary data including records of proceedings, draft laws under debate and enacted version of legislation
6) Procurement data (who was awarded what) and contract data (the documents and details of the deal)
7) Data on public facilities including schools, hospitals, police stations, public toilets, libraries, government offices etc. - location and services available
8) Public service delivery and performance data at the level of individual school, hospital/clinic etc.
9) Transport data including roads and public transport
10) Crime data to the level of individual crimes and their locations
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.
13) Geospatial information - maps, address registers, points of interest.
14) Weather data
15) Construction data (permits, zoning)
16) Real estate data (sales, listings, taxes, other property-specific data)

KEY DATASET TEMPLATE

Dataset title and description	
Agency which "owns" the dataset	
State of the Data *(questions to be submitted to data owner in advance of assessment)*	
Does the data exist? Is it in digital and reusable form?	
What format(s) is the data currently in?	
What is the "granularity" of the data? How aggregated or de-aggregated is it?	
Is data archived in its raw, more granular form?	
How often is the data updated?	
Is the data available as a complete set (eg raw data download) or only as the result of individual queries?	
How is the production and distribution of data currently funded?	
To what extent is the data available to the public, to businesses or to others outside government?	
If the data is available to others, is it free or charged-for?	

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If the data is available to others, what restrictions are placed on their use, and why?	
What relevant skills, capacity and experience does the owning agency have?	

Feasibility assessment of Release*(assessment to be done as part of the Readiness Assessment, prioritized as time allows)*		
Policy feasibility: What are the key policy obstacles which would have to be overcome?	High/Medium/Low	Comment
Technical feasibility: What are the key obstacles which would have to be overcome?	High/Medium/Low	Comment
Institutional feasibility: What would be the key obstacles in terms of capacity and capability?	High/Medium/Low	Comment

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KEY DATASET FINDINGS AND RECOMMENDATIONS

Dataset	Feasibility			Recommendation*
	Policy	Technical	Institutional	

* Easy/Quick Win
Priority/Medium Term
Difficult/Longer Term

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5. DEMAND FOR OPEN DATA / CITIZEN ENGAGEMENT

Importance Very High

Why is this important? 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 the open government data is turned into economically or socially valuable services for citizens. The "pull" can come either from civil society or from businesses, or both.

What does good look like? In Brazil the "Transparency Hackers" have shown that innovative applications and transparency insights can be gained from the data which the government is releasing, and have created a pressure for further releases of data.

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 demand for data from Civil Society and the media?

- Are there any civil society champions for Open Data?
- Are any NGOs using government data in a systematic way in their work, reporting, etc.?
- Is there a "social audit" movement with a possible demand for spending and budget data?
- Have civil society/NGOs asked for any particular types of data? How would they express these requests? Have they been asked?
- How advanced are the media in terms of "data journalism"?
- Are there any civil society organizations focused on data/technology issues?

- Are there civil society organizations with capacity to develop or manage software applications or innovative websites?

5.2 What is the level and nature of demand for data from business/the private sector?

- Are there any businesses that use government data or try to deliver services despite access to it?
- Are there local businesses in geospatial data and maps, in weather or in 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 What is the extent of engagement with government through social media and other digital channels?

- How extensive is the use of social media by citizens? What are the main platforms?
- 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? Would the availability of government data improve this debate?

5.4 What is the extent of intra- and inter-government demand for data?

- 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? Do any 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?

5.5 How do public agencies listen to demands for data and respond?

- Is there a 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?
- Is there currently a process for people to request information from public agencies / government? If yes, is there any understanding of 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?

Assessment of Demand for Open Data and Recommended Actions

Question Area	Importance	Assessment	
		Red/Amber/ Green rating*	Commentary
Demand from civil society and media	Very High		
Demand from business	High		
Digital Engagement	High		
Intra-government demand for data	High		
Response to demands for data	Medium		
OVERALL	High		

* See Guidance

Demand for Data Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			

6. OPEN DATA ECOSYSTEM

Importance High

Why is this important?

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.

What does good look like?

New York City has aggressively pursued Open Data in a way that promotes growth of a real ecosystem. The City's efforts have included: issuance of Open Data legislation that is part of a larger Digital NYC Roadmap led by a Chief Digital Officer within the Mayor's Office; an annual NYC BigApps contest that helps investors identify promising apps/start-ups to fund; creating linkages between City government and the local developer community; and launch of a Citizen Toolkit for engaging with New York City government online.

Evidence of an Open Data Ecosystem

+ 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 eServices. 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) organized in your country/locality.
+ 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 in your country (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 Are there infomediaries (such as data journalists) who are able to help translate Open Data into meaningful information for the public? (Importance: High)

- Are there NGOs, journalists or media organizations that actively use government (open) data?
- 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? Do state-owned or state-controlled media dominate?
- Do any independent journalism associations exist?

6.2 Has government engaged in activities to promote reuse of government-held data (e.g., in developing apps or organizing co-creation events)? (Importance: High)

- Have government / agencies engaged in any development of applications (Web, mobile)?
- Have any co-creation events been organized in your country/locality)?
- Are there any internal (government) or external (non-government) communities using government data?
- Is there evidence of data sharing between government agencies (or signs of one agency reusing data from another agency)?

6.3 Is there an Apps Economy that already exists in your country/locality? (Importance: Medium High)

- Is there a culture of apps use in your country/locality?
- Has anyone (business, non-government) developed any apps based on Open Data or government data?
- Are there many (or any) companies selling services using government data?

6.4 Is there an academic or research community that both trains people with technical skills and has people skilled at data analysis? (Importance: Medium)

- Are there technical schools or universities with computer science programs? Any estimate of number of graduates per year with technical degrees?
- Do any universities offer advanced statistics programs?
- Do any computer/web science academics connect with the government?
- Is there an existing network of researchers or research centers in your country/locality?
- Does secondary school curriculum include computer science or ICT training?
- Do any programs address relevant technologies (e.g., web science, semantic web, big data technologies)?

Assessment of Open Data Ecosystem and Recommended Actions

Question Area	Importance	Assessment	
		Red/Amber/ Green rating*	Commentary
Infomediaries / Data Journalism	High		
Reuse of Data	High		
Apps Economy	Medium High		
Academic / Research Community	Medium		
OVERALL	Medium High		

* See Guidance

Open Data Ecosystem Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			

7. FINANCING

Importance Medium High

Why is this important?

Financing with respect to both the "supply side" and "demand side" of Open Data is important to drive innovations with Open Data. While Open Data need not be a high-cost effort by government, it does require resources that are best invested across the Open Data ecosystem.

What does good look like?

Kenya offers an example of an "ecosystem" approach to financing Open Data. Financing for Kenya's Open Data Initiative (KODI) is embedded in a larger program—Kenya Transparency and Communication Infrastructure Project— that enables investment in both the supply and reuse of Open Data. Through KODI, Kenya will invest in many elements of its Open Data ecosystem. There is financing to develop its policy/legal framework; training for agency data managers and CIOs; tools for data and performance management; an Apps Fund to finance apps development/incubation; and Code4Kenya to bring talented civic fellows to help agencies and civil society address data challenges. Thus, resources exist if there is a sustained commitment to implement KODI. The size of investments in successful Open Data initiatives varies. Open Data initiatives with small, initial amounts of funding can realize a strong return on the investment.

Evidence

+ Sufficient resources from government and/or others (*e.g.*, donors or private sector) have been identified to fund an Open Data initiative – including development and maintenance of an Open Data portal for the first few years, and where necessary the digitization of priority data still in paper format.

+ Government is already thinking how to measure return on investment for its investment in Open Data (e.g., potential cost savings, value of new services, or economic impact).

+ Government has identified funding to finance development of selected, high priority apps and eServices 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 identified no sources of potential funding for an Open Data initiative.

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

- Government has never invested in development of any eServices, applications or eGovernment projects.
- Government is unable or unwilling to dedicate full-time staff to be responsible for an Open Data initiative or data management in key agencies.
- Government has not identified potential funding sources to support development of the ICT infrastructure needed to support an Open Data ecosystem.

Questions to ask

7.1 Have sufficient resources been identified to fund an initial phase of an Open Data initiative? (Importance: Very High)

- Are there currently any projects through which Open Data activities might be funded (government or donor financed)?
- Is there any budget available for an Open Data initiative?
- Have any donors or development partners indicated an interest in Open Data or Open Government issues?
- Are resources identified to fund development and maintenance of an Open Data portal?
- Has anyone given thought on how to measure the return on investment or the business case for Open Data?
- Who must be convinced to fund an Open Data initiative? Which political leaders must support it?

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

- Does the government have any funding for apps development available for agencies or others to use?

7.3 Is sufficient funding available to support the necessary ICT infrastructure and ensure enough staff have the skills needed to manage an Open Data initiative? Importance: Medium High)

- Is there a common infrastructure across agencies that can be leveraged?
- Is there already dedicated staff for data management, both for the overall Open Data initiative and among key agencies?
- Is there funding and a pool of tech skills in key agencies to get data supplied to an Open Data portal (including curation and cleaning of data)?
- Have you assessed what vendor skills you need and what they might cost?

7.4 Does your government have any funding mechanisms for innovation? (Importance: Medium High)

- Does your government have funds to finance development of applications or eServices?
- Does your government have any programs that support or promote entrepreneurship, start-ups or development of SMEs?
- Is funding available to build the capacity of civil society? Is there funding (e.g., from donors or non-government sources) for innovations to promote transparency and accountability?
- Has your government established any public-private partnerships related to technology?

Assessment of Open Data Financing and Recommended Actions

Question Area	Importance	Assessment	
		Red/Amber/ Green rating*	Commentary
Funding Open Data Initiatives	Very High		
Investing in Open Data Reuse	High		
Financing Training & Infrastructure	Medium High		
Financing Innovation	Medium High		
OVERALL	High		

* See Guidance

Open Data Financing Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			

8. NATIONAL TECHNOLOGY AND SKILLS INFRASTRUCTURE

Importance High

Why is this important?

In very practical ways, successful Open Data initiatives require adequate infrastructure, in terms of technology platforms and ICT skills among officials, infomediaries and the general public.

What does good look like?

There will be widespread access to the Internet through broadband and mobile devices with a significant proportion of citizens with smartphones and/or web access at home. There will be ready availability of developers outside large corporations with the technical skills to build data-driven applications and an entrepreneurial culture - both business and social - to make use of them. The Government will have a modern web presence (not just static content) and will be experimenting with increased civic engagement through its websites and social media, and it will have access to the skills - in-house or through the private sector - to maximize the value of these.

Evidence

+ Government already uses share ICT infrastructure and shared eServices.

+ Most agencies have a Web presence.

+ Individual agencies offer eServices, 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 Is Internet access at sufficient levels and at low enough cost to support a robust Open Data ecosystem in your country/locality? (Importance: High)

- What is the Internet coverage in the country?
- What is the Internet penetration in your country/locality?
- What is cost of high-speed Internet access? How costly is it relative to average incomes?

- What is mobile coverage for your country? Mobile Internet access? Costs of mobile?
- Where does your country rank in major ICT indexes (such as ICT Development Index published by the ITU)?
- What online channel reaches the most people (mobile, Web)?
- How serious are the digital divide issues in your country?
- Do major government institutions and universities offer free Internet access?

8.2 Does government use shared infrastructure or shared services? (Importance: Medium High)

- Is there an enterprise architecture used by your government?
- Are any shared services used by your government? (For example: email, payroll, HR)
- Is there any use of Cloud Computing in your country/locality?
- Does the government have any required technical standards? Any use of open standards? Any standards that apply to data (including formats and how it is collected, archived and disseminated)? Any use of metadata?
- Is there an interoperability framework in place?
- How does your government address data security?

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

- Do leaders know the basics of ICT? Are they digitally literate?
- Do any government officials receive training on ICT, data standards or data analytics?
- Does government use any assessment (e.g., ICT competency framework) to determine or track ICT skill levels among civil servants?
- Does your government have formal criteria for deciding civil service grades and promotions? Are ICT skills used as criteria for this?

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

- Any statistics on size of local ICT industry (e.g., in terms of employment, revenues or percentage of GDP)?
- Does your government outsource any IT functions or services to the private sector?
- What does software development/web design industry look like in your country/locality? Are there any organized communities of developers? Any estimate of its size?
- What is the start-up scene in your country/locality? Are there any incubators/accelerators for entrepreneurs or startups, any venture capital or early stage investment funds?
- Are there any industry associations or groups for IT companies?
- What is overall level of Internet use skills in your country/locality?
- What is overall level of data skills among non-government organizations?

- What are education levels within your country/locality?

8.5 How active is the government's presence on the Web? (Importance: Medium)

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

Assessment of Technology/Skills Infrastructure and Recommended Actions

Question Area	**Importance**	**Assessment**	
		Red/Amber/ Green rating*	Commentary
Internet/Mobile infrastructure	High		
Shared Infrastructure & Services	Medium High		
ICT Skills Base in Government	High		
ICT Skills Base Outside Government	High		
Government Online Presence	Medium		
OVERALL	High		

* See Guidance

Technology/Skills Infrastructure Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.			
2.			
3.			