



THE WORLD BANK

Working for a World
Free of Poverty

OPEN DATA READINESS ASSESSMENT

Prepared for

Government of Antigua and Barbuda

June 2013

Executive Summary

Antigua and Barbuda is in a position to move forward quickly with an Open Data initiative. In doing so, it would not only lead the Caribbean in the supply of Open Data but it could also use its first-mover advantage to harness the skills and enthusiasm of people throughout the region to generate data applications which would benefit Antigua and Barbuda.

In addition, existing modernization and digitization programs already underway for financial and other process would make it possible for Antigua and Barbuda to be in the top class globally in Open Data for government transparency- particularly if financial transaction data were to be released. Since the data is already centralized and digitized there would be no technical difficulty in doing so.

In addition to reputational and transparency benefits, an Open Data program could lead to greater business efficiency and competitiveness in Antigua and Barbuda, both in absolute terms and relative to other countries in the region, in key areas such as tourism and foreign inward investment, and to community engagement in addressing public service improvement. Again, Antigua and Barbuda could have a first-mover advantage.

This assessment has found that Antigua and Barbuda has strengths in its institutions (particularly the Ministry of Telecommunications, Science and Technology (TST) and the Ministry of Finance, the Economy and Public Administration (FEPA)), in relevant laws and in its high-quality internet infrastructure which give a sound foundation on which to build. However a successful Open Data initiative would require:

- (1) Collective political commitment and sustained political leadership and communication across government.
- (2) Rapid policy development, within the framework of existing laws, and the rationalization and partial removal of existing charging practices. Policy development should involve collaboration with the new Information Commissioner and re-invigoration of the Freedom of Information Act, 2004.
- (3) Demand-side initiatives to stimulate the use of Antigua and Barbuda's data and the skills in using it, including promotion of application development in areas which are of particular importance to Antigua and Barbuda including tourism, disaster management and financial transparency.

The costs of an Open Data initiative would not be substantial: where data exists in digital form it is easy to extract for publication in reusable form, and many Ministry programs already have in principle commitments to do so; and where Antigua and Barbuda's existing ICT infrastructure cannot be used there are opportunities to share costs with others in the region. (Where data is still held in paper form, publication as Open Data should be seen as part of any justified digitization project.)

TABLE OF CONTENTS

Executive Summary	2
Methodology	4
Acknowledgements	5
1. LEADERSHIP	7
2. POLICY AND LEGISLATIVE FRAMEWORK	10
3. INSTITUTIONAL STRUCTURES, RESPONSIBILITIES AND SKILLS WITHIN GOVERNMENT	16
4. DATA WITHIN GOVERNMENT	20
4A. KEY DATASET FINDINGS AND RECOMMENDATIONS	24
5. DEMAND FOR OPEN DATA / CITIZEN ENGAGEMENT	39
6. DATA USER COMMUNITIES	43
7. FINANCING	46
8. NATIONAL TECHNOLOGY AND SKILLS INFRASTRUCTURE	48
CONCLUSION	50
OUTLINE IMPLEMENTATION PLAN	52

Methodology

This "Open Data Readiness Assessment" was prepared for the Government of Antigua and Barbuda. It is the product of a joint team of experts representing the Government of Antigua and Barbuda, the World Bank and the Caribbean Open Institute.

The purpose of this assessment is to assist the government in diagnosing what actions the government could consider in order to establish an Open Data initiative. This means more than just launching an Open Data portal for publishing data in one place or issuing a policy. An Open Data initiative involves addressing both the supply and the reuse of Open Data, as well as other aspects such as skills development, financing for the government's Open Data agenda and targeted innovation financing linked to Open Data.

The World Bank Open Data Readiness Assessment Framework uses an "ecosystem" approach to Open Data, meaning it is designed to look at the larger environment for Open Data – "supply" side issues like the policy/legal framework, data existing within government and infrastructure (including standards) as well as "demand" side issues like citizen engagement mechanisms and existing demand for government data among user communities (such as developers, the media and government agencies).

This Assessment evaluates readiness based on eight dimensions considered essential for an Open Data initiative that builds a sustainable Open Data ecosystem. Its recommendations assume that an Open Data initiative will address various aspects of an Open Data ecosystem.

The readiness assessment is intended to be action-oriented. For each dimension, it proposes a set of actions that can form the basis of an Open Data Action Plan. The recommendations and actions proposed are based on global best practices while also incorporating the needs and experiences of the Government of Antigua and Barbuda to date. Within each dimension, the assessment considers a set of primary questions, and for each, notes evidence that favors or disfavors readiness. The evaluation of each dimension and primary question is color-coded:

- **Green (G)** means there is clear evidence of readiness
- **Yellow (Y)** means that evidence of readiness is less clear
- **Red (R)** means there is an absence of evidence for readiness
- **Grey (O)** means insufficient information to assess readiness

When addressing a particular question, evidence of readiness has a "+" sign. Evidence against readiness has a "-" sign. Evidence that has mixed implications or neither favors nor weighs against readiness has an "o" sign.

Not all evidence is weighed equally when determining the overall color indicator for a given primary question. Certain factors may weigh more heavily when deciding readiness status.

Acknowledgements

This Open Data Readiness Assessment Report was prepared with support from the Government of Antigua & Barbuda, the World Bank, the International Research Centre of Canada and the Caribbean Open Institute. Its primary author is Andrew Stott, Senior e-Government Consultant to the World Bank and the UK government’s former Director of Transparency and Digital Engagement. The team was led by Anat Lewin, ICT Operations Officer, World Bank, and included Axel Rifon-Perez, ICT Policy Analyst and Amparo Balivian, Lead Economist and lead of the Open Government Data Working Group at the World Bank. The team collaborated closely with the Caribbean Open Institute, led by Dr. Maurice McNaughton of the Centre of Excellence for IT-enabled Innovation at the Mona School of Business and Management, University of the West Indies and comprised Dr. Patrick Hosein, Senior Lecturer in Computer Science at the University of the West Indies in Trinidad and Tobago, and Amparo Arango, e-Health Consultant to the Ministry of Health, Instituto Tecnológico de Santo Domingo (INTEC) and PAHO, Dominican Republic. The Caribbean Open Institute was supported by the International Research Centre of Canada through Fernando Perini, Senior Program Officer, Information and Networks. World Bank funding for this assessment was provided by the Open Data Trust Fund under the Trust Fund for Statistical Capacity Building of the Development Economics Data Group (DECDG), the Caribbean Country Management Unit, and the Latin America and Caribbean ‘ICT Beam’.

The team would like to thank Dr. Edmond Mansoor, Minister of State in the Office of the Prime Minister responsible for Telecommunications, Science and Technology and his Open Data Readiness Assessment counterpart team led by Daryl Jackson, Telecommunications Consultant and comprising Asha Christian-Philip, Isoke Perry, Nasheta Richards and Clement Samuel.

The review team also wishes to thank the following Antigua & Barbuda stakeholders, in alphabetical order, for agreeing to be interviewed for the study, and whose input and feedback contributed greatly to this report:

Antigua & Barbuda Chamber of Commerce	Dr. Errol Samuel, Ms. Holly Peters, Mr. Shreedhar Nene
Antigua & Barbuda Media Congress	Mr. Colin James
Chief Health Inspector	Mr. Lionel Michael
Development Control Authority	Mr. Frederick Southwell
Government Registry	Ms. Cecile Hill

Information Commissioner	Mr. Alister Thomas
Intellectual Property Office	Ms. Ricki Camacho
Meteorological Office	Mr. Keithley Meade
Ministry of Agriculture	Mr. Robelto Isaac
Ministry of Education	Dr. Patricia George, Ms. Priscilla Nicholas
Ministry of Finance, Economy and Public Administration (FEPA)	Minister Harold Lovell, Dr. Gale Archibald, Mr. Daniel Knight, Mr. Ralph Warner
Ministry of Health – Health Informatics Department	Health Informatics Unit
Ministry of Telecommunications, Science and Technology (TST)	Mr. Luxmore Edwards
National Office of Disaster Services	Mr. Philmore Mullin
Office of National Drug and Money Laundering Policy (ONDCP)	Col. Edward Croft
Public Works Department	Mr. Walter Christopher
Software Developers	Mr. Trent Davis, Mr. Sidlow Frank, Mr. Cleofoster Spencer
Statistical Division	Mr. Rohan Anthony
Survey Department	Mr. Vernon Bird
UWI Open Campus	Mr. Ian Benn, Ms. Alison Hull

A special thank you is also extended to those individuals who attended the Open Data Public Forum. The comments and concerns expressed during this event provided a valuable insight into the public demand for Government data in Antigua & Barbuda.

1. LEADERSHIP

1.1 Is there visible political leadership for Open Data/Open Government? (Importance: Very High) **Yellow**

- + The Minister with responsibility for ICT is prepared to champion an Open Data initiative, he was actively engaged in the Open Data Readiness Assessment process and he ordered immediate action on some of the “quick wins”;
- + There is an excellent track record of political leadership on IT and communications infrastructure delivery.
- + The Minister of FEPA is leading a program to modernize and increase the transparency of the Government of Antigua and Barbuda’s central financial systems, and saw greater financial transparency as essential to Antigua and Barbuda’s commitments.
- There was no evidence of a wider Government political commitment to Open Data and Open Government; the lack of full implementation of the 2004 Freedom of Information Act (including the appointment of information officers in each Ministry) may signify a low priority.
- + From interviews inside and outside government there was no evidence that there was political hostility towards Open Data; it is most likely that it simply has not been prioritized in the political agenda.
- + the recent appointment by the Government of a new (and independent) Information Commissioner with a clear agenda to take action to implement the Act may signify a raising of priorities in this area.

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

- + There is a structure for the implementation of cross-government IT initiatives - with a Government data center and a number of functions centralized in the Ministry of Telecommunications, Science and Technology.
- + Similarly some of the financial functions, such as procurement and payments, are centralized in the Ministry of FEPA, meaning that the implementation of Open Data in these areas does not require as much cross-government co-ordination as in other jurisdictions.
- However there is no formal structure, other than the Cabinet itself, for the implementation of cross-government initiatives.

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

- + Improvement in financial systems and greater financial transparency are urgently being made in order to raise the assessment of Antigua and Barbuda by the EU due in December.
- + Promotion of tourism is a major political priority, and there is the potential of Open Data to provide better information services to potential tourists as well as to visitors once on-island.
- + There is political importance to Disaster Risk Management, and the importance of data both in planning and in response is increasingly recognized.

1.4 Does the wider political context help or hinder Open Data? (Importance: High) **Green**

- + The wider political context is one of modernization and promotion of economic growth. This has already been evidenced by the promotion of high-quality mobile and mobile data services, and by the phased program of modernization of government services and processes.
- + The wider political context of the Caribbean - both within the Organisation of East Caribbean States and more widely - also creates an environment for innovation and growth.
- + There is a friendly rivalry among Caribbean states so Antigua and Barbuda taking a leading position on Open Data (as it has started to do by having the first Open Data Readiness Assessment itself) is an opportunity for regionally- and globally-recognized regional leadership.

Assessment of Leadership and Recommended Actions

Question Area	Importance	Assessment	
		Red/Yellow/Green rating	Commentary
Political Leadership	Very High	Yellow	High level political leadership on Open Data does not fully exist yet, but political leadership has been demonstrated in closely related fields.
Political Structure	High	Yellow	The cross-government structure for Open Data implementation does not exist, but

			the fact that Antigua and Barbuda is a small country with several Open Data-related functions centralized significantly mitigates the risks of operating without it.
Existing Activities	Medium	Green	Existing political priorities fit closely with opportunities for early progress on Open Data
Wider Context	High	Green	The wider context provides drivers for Open Data leadership, particularly as Antigua and Barbuda has “first mover” advantage.
OVERALL	Very High	Yellow	The political potential is there, but it would need to be crystallized into political backing across government and specific commitments by the Cabinet collectively to the principles and the delivery of an Open Data initiative.

Leadership Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
1.1 Develop a declaration on “Open Data” for agreement by the Cabinet and subsequent publication. This should include specific key datasets and a rolling program of release from each Ministry.	Ministry of TST	Months 1-2	Various models available for such a declaration - cf for instance Australia and New Zealand
1.2 Secure Cabinet agreement to the declaration on Open Data policy, and then publish	Minister of TST	Month 2	.
1.3 Appoint a clear political leader to be the “public face” of the initiative and to work with political colleagues to ensure delivery	Prime Minister	Month 2	Clear, empowered and sustainable political leadership will be essential. Provide high-level backing for initiatives across government.

2. POLICY AND LEGISLATIVE FRAMEWORK

Note: This section is policy analysis and advice based on information and opinions collected during this study and common policy and legislative issues arising in other jurisdictions. **It does not constitute legal advice;** nor does it attempt to cover the full extent of the laws which might apply to Open Data in general or to the disclosure of information of specific types or by specific bodies. Recommendation 2.6 suggests that the Government of Antigua and Barbuda should commission a formal legal study and advice from its lawyers.

2.1 What policies exist related to public sector information that may impact Open Data? **Yellow**

- + There is an established, modern, Copyright Act enacted in 2003.
- + Copyright in Ministries' data vests in the Government collectively.
- o There is currently no specific concept of "Government Copyright" or "Crown Copyright", although one is being considered for future enactment in revisions to the Copyright Act. This could usefully ensure that any information produced with public funds or for a public service belonged to the Government (and so could be released as Open Data), even if it was produced by a contractor.
- + The Intellectual Property Office provides expert advice to Government on copyright and licensing issues when needed. To date this has not been much needed, but the expertise exists and there are established processes for seeking advice.
- o There had been a case where unauthorized copying of official information had taken place, and the Intellectual Property Office had assisted the information holder in asserting the Government's rights.
- The Intellectual Property Office however only provides advice. We were advised that decisions on licensing of government information probably rest with the Prime Minister's office, but since this has not been an issue to date the decision-making process is not formalized.
- Copyright in the data of statutory boards vests in each of the Boards themselves. Licensing their information would require agreement with them individually or the introduction of a form of Government Copyright which applied to them.
- o Some public bodies charge some customers for access to information which they hold. The rationale for doing so and the pricing policies were not clearly articulated across government. In particular:
 - * any revenue from sales of information was returned directly to the Ministry of FEPA. Public bodies operated on a gross funding basis agreed with the Ministry

of FEPA. While it is possible that from year to year annual budgets are adjusted to enable the requested services to be provided at the level demanded, public bodies were exposed to the risk of additional demand for services within each financial year.

- * provision of information to other Ministries was not charged.
 - * there was no clear rationale for the level of pricing set. In some cases it seemed to reflect the cost of the work involved to respond to the request (especially where the information was kept on paper files), but in other cases it seemed also to reflect some of the costs of collecting and maintaining the information.
 - * some agencies had ambitions in principle to move to a self-funding basis. However we did not see the management information systems which would be necessary for them to do so safely.
- o There was concern in the Statistics Division that release of statistical data in reusable form would introduce the risk that official statistics would be surreptitiously modified and presented as authoritative. Other National Statistics Offices have faced and tackled this problem by publishing both a PDF version as the definitive version, and also a reusable data file version of the same information without the formal status of official statistics, or by requiring the attribution to point to the definitive version on the official website.

2.2 What policies/laws exist on government secrecy and access to information? **Yellow**

+ Article 12 of the Constitution provides that:

“ [freedom of expression] includes the freedom to hold opinions without interference, freedom to receive information and ideas without interference, freedom to disseminate information and ideas without interference (whether the dissemination be to the public generally or to any person or class of persons) and freedom from interference with his correspondence or other means of communication.”

+ There is a Freedom of Information Act enacted in 2004, whose stated purpose is to *“give maximum effect to [the right in Article 12 of the Constitution] in respect of information held by public authorities etc. (subject only to such exceptions as are reasonably justifiable in a democratic society or specifically prescribed by law) and to enhance good governance through knowledge, transparency and accountability.*

+ The Freedom of Information Act specifically requires (Section 10) *“Every public authority shall, in the public interest, publish and disseminate in an accessible form, updated annually, basic information, clearly dated including (a) an accurate and sufficiently detailed description of its structure, functions, duties and finances; (b)*

relevant details concerning services it provides directly to members of the public; ... (d) a simple guide containing adequate information about its record-keeping systems, the types and forms of information it holds, the categories of information it publishes and the procedure to be followed in making a request for information; ... (g) the content of all decisions and policies it has adopted which affect the public, along with the reasons for them, any authoritative interpretations of them, and any important background material”. This is a relatively strong policy commitment to proactive publication and, importantly, requires Ministries to maintain and publish details of the datasets which they hold (a feature only just introduced by President Obama in the United States).

- + In terms of policy, the Antigua and Barbuda Freedom of Information Act is rated best in the Caribbean and 7th in the world by Access-Info and the Center for Law and Democracy¹. However the authors of these ratings did comment:

“This law scored quite well, but there are some uncertainties as to whether it belongs on this ranking. ... we have been unable to properly confirm whether this law has in any way been implemented, Although this methodology does not purport to measure implementation, this may be an exceptional case in that some indications we have received back from regional experts are that the law is purely theoretical.”²

- After 9 years, the implementation of the Freedom of Information Act is still lacking. There is an absence of the guidance required by the Act for citizens and for officials, and a network of Information Officers in each Ministry had not been created. No officials interviewed for this Assessment could recall being asked for information under the Freedom of Information Act, and there seemed to be only one celebrated case where journalists had sought information under the Act.
- + A new Information Commissioner has been appointed. He told us that he is personally determined to move quickly to implement the Act, including the appointment of an Information Officer in each Ministry by August 2013. However he is concerned that his office is still under-resourced for the scale of the task now to be done.
- The Freedom of Information Act appears to provide for access³ to information, but it does not appear clearly to give a right of re-use of that information. The Act (like some similar Acts in other jurisdictions) appears silent on the requestor’s rights to use the information.

¹ <http://www.rti-rating.org/>

² http://www.rti-rating.org/view_country.php?country_name=Antigua

³ Section 15

- + The Freedom of Information Act provides⁴ that an applicant can request the information in a specific format, and that the public body should meet that preference where it could reasonably be met. The Act specifically mentions that an applicant can request “a transcript of the content of a record, in ...electronic ... where such transcript is capable of being produced using equipment normally available to the authority”. This should mean, for instance, that information maintained on spreadsheets but published as PDF files should be obtainable as spreadsheet under the Freedom of Information Act (although this provision would not help where the information is “a document that is available for public inspection in a registry maintained by the Registrar or other public authority”⁵);
- + The Statistics Act 1975 specifically requires the Statistics Division to “collect, compile, analyze, abstract and publish statistics portraying various aspects of the social, demographic and economic conditions of the people of Antigua and Barbuda”⁶;
- o The Statistics Act provides that “Information collected through inquiries conducted under this Act may not be published in a manner which enables the identification of the cost of production, capital employed and profits arising in any particular undertaking or business or which discloses the affairs of an individual household or person.”⁷ This is a fairly typical provision.

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

- + As already mentioned, the use of information by public and civil society is embedded in Article 12 of the Constitution of Antigua and Barbuda.
- + Many officials said that part of their normal duties was to supply information to the public and to other stakeholders; this was a clear part of the government’s culture, and was not linked to the specific requirements of the Freedom of Information Act.

Assessment of Policy/Legislative Framework and Recommended Actions

Question Area	Importance	Assessment	
		Red/Yellow/ Green rating	Commentary

⁴ Section 21

⁵ Section 16(1)(c)

⁶ Section 3(1)(a)

⁷ Section 12(1)

Policies on reuse of information	High	Yellow	The copyright position is satisfactory, but the policy on charging is unsystematic and potentially inimical to Open Data.
Policies on Access to Information and Secrecy	High	Yellow	The Freedom of Information Act is well regarded in theory, but it has not been put into practice.
Wider use of information	High	Green	Wider use of information is supported explicitly in the Constitution
OVERALL	High	Yellow	There are no show-stoppers, but a detailed policy for Open Data would need to be developed and would need to be accompanied by work on charging policy and making the FOI Act provisions for proactive disclosure “live”.

Policy/Legislative Framework Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
2.1 Develop overall Open Data policy, including “Open by Default”, standards, processes and other recommendations in this Assessment	Ministry of TST	Months 2-4	Develop policy in conjunction with Information Commissioner as the FOI implementation and the Open Data policy should, although different in nature, be closely aligned where appropriate
2.2 Develop Open Data licensing policy	Intellectual Property Office	Months 2-4	Rather than draft a specific Antigua and Barbuda license emerging best practice is that the globally recognized Open License “Creative Commons Attribution” be adopted.

<p>2.3 Clarify data charging policy, with a presumption that electronic copies of information will be available free of charge</p>	<p>Ministry of FEPA</p>	<p>Months 2-6</p>	<p>The US Federal policy is that the information already belongs to the taxpayers who have paid for it, and so is available free. In the UK and some European countries there is a legacy of charging for certain data, which is now having to be dismantled. Economic analysis shows that the maximum national value is obtained when information is available at the marginal cost of distribution, which on the internet is free. However this need not prevent public bodies charging for information where there are specific costs, for instance for paper copies, for manual searches of registers, or for certification that the copy is a true copy of an official record.</p>
<p>2.4 Ensure that the proposed “Government Copyright” provision makes clear that information produced by Statutory Boards and by contractors belongs to the Government and so that the Government can release it as Open Data</p>	<p>Intellectual Property Office</p>	<p>Timing dependent on legislative program</p>	<p>Ad hoc action may be needed to ensure that Government retains ownership of essential data in contracts passed before Government Copyright is enacted</p>
<p>2.5 Develop policies that allow publication of statistics in reusable form without the risk of surreptitious change to official statistics</p>	<p>Statistics Division</p>	<p>Months 1-2</p>	<p>Other National Statistics Offices have found ways of managing this risk, as indicated in the text. Statistics are a “Quick Win” dataset</p>
<p>2.6 Conduct a formal legal study of the law of Antigua and Barbuda as it relates to Open Data and obtain advice from lawyers of the Government of Antigua and Barbuda</p>	<p>Attorney General</p>	<p>Months 1-2</p>	

3. INSTITUTIONAL STRUCTURES, RESPONSIBILITIES AND SKILLS WITHIN GOVERNMENT

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)

Green

- + The Ministry of TST operate the Government of Antigua and Barbuda website and the Government Data Center including Government shared ICT infrastructure. It has the related mandates, the project skills and most of the technical skills necessary to implement an Open Data initiative.
- The Ministry of TST does not currently have the precise technical skills (e.g., in the Python language) to install an Open Source portal package such as CKAN, although some programmers are learning Python. However they could quickly develop these skills, or the CKAN package could be acquired as a supported and hosted service - perhaps in a way which provided a platform for the Caribbean more generally.
- o The Ministry of TST does not have any experience of the use of public Cloud Computing services. There is an understandable caution about security for sensitive data.

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

- + Some Ministries have these positions, particularly where their data has been digitized. Other Ministries are talking about setting up “Data Units” as they start to digitize their data.
- For some IT systems the owning Ministry is reliant on off-island external vendors to make changes to system, including the changes necessary to unlock the data held in those systems. This could introduce extra cost and delay.

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

- + The Ministry of TST provides strong leadership in this area, and provides a range of centralized technical services to avoid duplication within the public sector.

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

- o There was no evidence of a systematic agency performance measurement framework, but this does not materially affect the overall Assessment.

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

- + The Ministry of TST is responsible for IT policy and many IT services, and has a good view of data more generally.
- + The Statistics Division is responsible for official statistics for the Government as a whole, although some key macro-economic data are collected and published by the East Caribbean Central Bank.
- o The Archivist’s responsibilities under the Archives and Records Act are more for the preservation of past records than for policies on current records.
- + The Intellectual Property Office is responsible for advice on copyright and licensing of government information (see section 2).

Assessment of Institutional Preparedness and Recommended Actions

Question Area	Importance	Assessment	
		Red/Yellow/ Green rating	Commentary
Lead OGD Agency	Very High	Green	The Ministry of TST is very well placed to lead the initiative
CIOs/Inter-agency Mechanisms	Medium High	Yellow	The strength of each Ministry depends to a large degree on the extent to which its information has been digitized.
Performance management	Medium	Unable to assess	No information available
Data/Stats Agency	Medium	Green	There are clear single-point responsibilities
OVERALL	Medium High	Green	

Institutional Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
3.1 The Ministry of TST should lead the implementation of an Open Data initiative; they are best placed to do so.	Ministry of TST	Month 1	
3.2 The Ministry of TST should form a distinct core team to lead the initiative; with the wide responsibilities of the Ministry there is a risk of focus being lost. However the team should be supported by a working group of experts from within the Ministry and elsewhere in Government (eg Intellectual Property Office)	Ministry of TST	Months 1-2	
3.3 For the quick wins, data should be hosted on the Government Website	Ministry of TST	Months 3-6	
3.4 At a later stage there should be a migration to a standard Open Data portal software package. Options and skills requirements for doing so should be investigated, and the possibility of sharing costs and skills requirements with other Caribbean countries should be evaluated.	Ministry of TST	Month 7 onwards	UWI has already expressed an interest in providing a shared CKAN instance to provide an Open Data portal for Antigua and Barbuda and for other interested Caribbean nations.

Action	Responsibility	Timescale	Comments
3.5 The Ministry of TST should consider the hosting of large Open Data datasets on public cloud storage	Ministry of TST	Months 3-4	By definition Open Data does not raise the security issues which have been raised in relation to other uses of Cloud. Using it for large Open Data sets would be more efficient than enhancing the Government Data Center and would help the Ministry of TST develop Cloud skills and experience more generally.

4. DATA WITHIN GOVERNMENT

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

- There is no systematic policy or laws on the management of government information. There are some obligations within the Freedom of Information Act and within the Archives and Records Act, but these do not seem to be commonly applied.

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

- Although there is an obligation to do so under the Freedom of Information Act, there is no evidence that there is a systematic or coherent view of data holdings across government. In some Ministries there was a “Data Unit” or equivalent that had a view of the Ministry’s own data, but in other Ministries data holdings were a matter for individual units.
- + Ministries which have digitized their key records unsurprisingly tend to understand better what data they hold than Ministries who still hold their records on paper.
- + The centralization and integration of certain functions, such as finance, budgeting, procurement and payments means that there is a good understanding of those datasets.
- + The emergence of “Data Units” may signify that the Government is starting to see data as a strategic resource as well as a transactional record.
- + The scale of Antigua and Barbuda would make it the task of bringing even manual systems into Open Data doable

4.3 How and where is government data held? **Yellow**

- + There is a Government Data Center which holds a lot of the digitized data of the Government of Antigua and Barbuda.
- Digitisation is patchy. There are some good systems, but also some ad hoc spreadsheets held on local PCs and servers, and some data which is not digitised at all.
- However substantial amounts of information, including key datasets such as the Company Register, are still held in the form of paper records.

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

Green

- + A substantial amount of data is already published, although it is not usually in a machine-readable and re-usable form. A lot of information is published as PDFs, even though it is clearly derived from structured databases.
- + There was some evidence that Ministries would release information in response to requests, although not many such requests were made through the Freedom of Information Act.
- o Some of the data is charged for, but policies are inconsistent, and it is not possible to see whether the charge is for the data or whether it is for the retrieval service.
- Little attention has been paid to terms of licensing and, in particular, licensing for re-use as well as access.

4.5 Are there agencies with established capabilities in data management that could give leadership to a wider initiative? **Green**

- + The Ministry of TST has a good capability and could give leadership to a wider initiative. Other Ministries, such as the Ministry of FEPA and the Ministry of Education, have data management capabilities in their specific fields.
- Elsewhere in Government there are several projects to digitise key datasets under way, but opening the data is either considered out of scope or is undefined in detail.

Assessment of Data within Government and Recommended Actions

Question Area	Importance	Assessment	
		Red/Yellow/ Green rating	Commentary
Policies on Information Management	Medium	Red	Although appropriate policies are not in place, this not necessarily needed in order to start an Open Data initiative. It is good practice to implement these for commonality in action by ministries.

View of Data Holdings	High	Yellow	There is no comprehensive government view. However Ministries which have digitized their key records have a better view than those who have not yet done so, and since digitized records are clearly more suitable for early release as Open Data the absence of a comprehensive view need not impede progress on an Open Data initiative.
How is data held	Very High	Yellow	Digitized data held as part of structured systems is held in a form and in locations which should be relatively easy to supply data to an Open Data portal. Locally held data and data held in non-digital records is more problematical, but may not be a short-term problem
Existing publication of data	Medium	Green	There are good examples of digitized data being published already, although sometimes for a charge and usually not in reusable form.
Agencies with existing capability	High	Green	The Ministry of TST is able to lead, and a number of other Ministries have capabilities relating to their own data
Availability of key datasets	Very High	Yellow	The availability of key datasets depends on the extent to which they are digitized and on overcoming, in some cases, charging policies.
OVERALL	High	Yellow	

Data within Government Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
4.1 Introduce a staged release of data, starting with a number of quick wins of easily releasable data which is already digitized, then ensuring delivery of Open Data parts of existing publication plans, and tackle more difficult datasets	Ministry of TST	Releases: 1A: Month 2 1B: Month 4 2: Month 6 And then beyond	

4.2 Specific programs of work should be put in place to ensure that digitized data which cannot be immediately released have a defined pathway to release	Ministry of TST	Months 4-6	
4.3 All programs to digitize datasets currently held in paper form should be reviewed to ensure that they have, as an integral component, the necessary functionality to release the data once it is digitized	Ministry of TST	Months 4-6	

4A. KEY DATASET FINDINGS AND RECOMMENDATIONS

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Weather forecast and observation data	This information is already freely available on the Met Office website	The Met Office has the technical capability to implement an API - it is already under test	The Met Office is keen to release this data and have the resources to implement and manage it.	+ businesses have already asked for this data in API format + Better/faster communication of weather conditions including threats of extreme conditions	Quick Win: release as soon as practicable, and place on Open Data page of Government website without waiting for the commissioning of an Open Data portal (1A)
Education data	This information is already freely available in PDF format, so there is no policy issue in its release		The Ministry of Education is willing to have this data released in reusable form	+ Education data is essential for parents to choose schools for their children and to press their teachers and headteachers to improve performance at local level. + Educational performance data compared with educational budget data is a key accountability - Potential pressure for additional spending	Quick Win: release as soon as practicable, and place on Open Data page of Government website without waiting for the commissioning of an Open Data portal (1A)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Official Statistical data	This information is already freely available in PDF format. The Statistics Division is concerned to prevent the surreptitious modification of official statistics, and this can be managed as indicated in the text	The PDF is generated from Excel spreadsheets. The spreadsheets need to be checked for hidden metadata, and then released	The Statistics Division is willing to consider releasing this data in reusable form subject to resources and necessary safeguards	<ul style="list-style-type: none"> + This is key data which businesses in Antigua and Barbuda and potential foreign inward investors have been requesting. + Release in reusable form will make better use of the professional work already undertaken by the Statistics Division - The definitive version of the official statistics needs to be highlighted on the government website to maintain the integrity of the official statistics 	Quick Win: release as soon as practicable, and place on Open Data page of Government website without waiting for the commissioning of an Open Data portal (1A)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Budget and spending data	Much of this information is already publicly available in the 400-page budget book. The publication of further detail for the purposes of financial transparency is an existing policy priority	There are existing plans to enhance the FreeBalance system to provide an online “results portal” by September 2013. The staging table required for this could be simply released as a reusable data file as well	The Ministry of FEPA has the institutional capacity to implement the results portal and the simultaneous release of its data in reusable form.	+ Budgetary information is key citizen engagement and transparency information + Transparency will help improve the rating of Antigua and Barbuda + The amount of data in the budget book is considerable, but it is impossible to process; making it available in reusable form will set the bar high for others in the Caribbean.	Release by the end of September 2013 , in line with existing plans. (1B)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Disaster Management Data	<p>The National Office of Disaster Services (NODS) possesses a comprehensive spatial data inventory. There is no problem in releasing non-sensitive data (Geospatial Information System GIS) such as data on critical facilities, shelters, schools, and release map information on hurricanes areas, evacuation and emergency routes and flood zones. All data could be in an open source platform for sharing geospatial data and maps. (see Technical: GeoNode).</p>	<p>The Office collected data during 9 months for the future Geonode platform. GeoNode is a web-based application and platform for developing GIS and for deploying spatial data infrastructures (SDI). It is developed as an intra-agency platform but it is developer friendly so it could become a quick win in terms of open source and reuse of data.</p>	<p>The NODS insisted on having a political leadership that accounts for the legal responsibility and consequences of releasing data (e.g. map on tsunami, which are potential spots but not certain in case of disaster). Ensure“Government Copyright” provision (include information produced by Statutory Boards and National Offices belongs to the Government that can release it as Open Data and avoid charge for data) CARICOM has a regional policy and agreement on information sharing</p>	<p>+ There is political importance to Disaster Risk Management, and the importance of data both in planning and in response is increasingly recognized. + Subject to resources and necessary safeguards, NODS would not impede the release of disaster management data which would become a quick win (main datasets computerized and machinery readable). +Geonode platform is developer friendly and open source. The platform is nourished with complete datasets. -Lack of effective data management and time consuming.</p>	<p>Release by the end of September 2013, (1B)</p> <p>There is no established system to collect post-disaster personal information uploaded by citizenship: this could be a potential app to be developed.</p>

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Business Identifiers	This information giving the business identifiers, name and addresses of businesses (registered companies, partnership and sole traders) should already be published; the Inland Revenue Department has not been able to resource doing so	The underlying data is held on a computer database, so it should be relatively simple to write and run a query periodically to extract the data. The data can then be published in raw form	The Inland Revenue Department is willing to release the data (indeed it considers that it has an unfulfilled obligation to do so) and it has the technical capacity to do so.	+ Key “core reference data” for the operation of the business-to-business sector, including credit rating. + Places Antigua and Barbuda in the upper part of the league of transparency of company registers. - While business-related data about sole traders is not normally regarded as sensitive personal data, there will need to be communication and explanation in order to avoid privacy concerns	Release by the end of September 2013, or as soon thereafter as the Inland Revenue Department can achieve it (1B)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Registers of Professionals	The Registers of Professionals maintained by the Registrar (lawyers, doctors, vets, marriage officers) and by others (eg private surveyors by the Surveyor) are intended to be published, so there would not be policy issue in making these available as Open Data.	The registers are maintained manually but it would not be a major job to put them into reusable form periodically.	The Registrar did not consider that there would be a problem in publishing these registers	+ Better policy outcome: these registers are maintained in order that the public can locate qualified professionals, and greater availability of information would assist this. - Personal data within the registers would have to be considered, in consultation with the professional bodies for these professions. However prima facie these are public registers anyway.	Release within 6 months, after appropriate consultation (2)
Property price-paid information	This information could be released free of charge without affecting the revenue stream from providing full copies of the Land Register entry	This information is held on computer since 2005. A relatively small software change would be needed to extract the data from the database	The Registrar was prepared to consider release of this data	+ Greater transparency in the property market, aiding both buyers and sellers + Proven area where value-added services can be built on the data (cf Zillow in the US, Zoopla in the UK)	Release within 3 months, and periodically (monthly) thereafter. If possible release data back to 2005 to enable Zillow/Zoopla-style pricing algorithms to operate better. (1B)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Tourism data	<p>This information could be released using the data compiled in the register of immigration⁸ (e.g. entry points: airport, harbor). The civil society and private sector (e.g. Chamber of Commerce, Antigua Hotels and Tourist Association⁹, community of developers) could reuse the information to develop apps, increase efficiency and attract more foreign investors.</p>	<p>Anonymised landing card data is already uploaded to the Caribbean Tourism Board for analysis</p>	<p>Promotion of tourism is a major political priority. There is the potential of Open Data to provide better information services to potential tourists as well as to visitors once on-island. Dr. Mansoor committed on enhancing the release of quick wins datasets (e.g. Tourism data)</p>	<p>+ Better data for tourist-related businesses in Antigua to plan and price their services - Risk of competitor nations using the data to compete better - however this data is already pooled on a Caribbean basis so limited additional risk</p>	<p>Release within 3 months, and monthly thereafter (1B)</p>

⁸ <http://www.immigration.gov.ag/>

⁹ <http://www.antiguahotels.org/v2/index.php>. The Antigua Hotels & Tourist Association is a non-government organization and the representative voice of the local tourism private sector with a membership which comprises hotels, airlines and nearly 50 other tourism-related entities.

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Population Census results	Existing policy that Census information should be released in conformance with PARIS21. Data is scheduled to be published in June 2013 - already delayed	Information is held on computer, but it is not clear how the existing publication plans would operate	Statistics Division acknowledge that census data should be published	+ Core data for a wide range of business and government needs; easy availability on the internet would greatly increase accessibility and reuse + Existing plans to publish the data so costs already in Statistics Division budget - Any Census information has privacy issues, but these would already have been considered in existing publication plans - the channel or form of publication does not affect these.	Release within 3 months , in line with current publication plans (1B)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Cadastral maps	Cadastral maps are available to the public at the public counter in the Surveyor's office. There is a search fee of EC\$35 and then EC\$5 for each parcel map hard copy.	There is an existing plan to put cadastral maps online	The Surveyor is keen to put this information online, but currently intends to charge	<ul style="list-style-type: none"> + Better access to information by those working with property + Lower costs to business + Better service to potential foreign investors + Avoids need for payment administration in online system + Would still charge on a cost-related basis for searches and paper copies at the counter - Potential loss of future revenue 	Release within 6 months, using planned online facility but without charging. Most of the current charges are for the costs of the service of manually searching records and manually printing paper copies. There would be no significant transaction costs in making the online system free. While it would cannibalize some of the existing counter traffic, this would already be expected due to the planned online, paid, system anyway (2)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Topographic maps	Topographic maps are available, and paper copies can be purchased	There is a digitized vector topographic map at 1:50,000. There are scanned versions of the 52 sheets of 1:5000 maps	The Surveyor has been concerned that maps are already being copied and sold, and that it is difficult and time-consuming to enforce copyright in these maps	<ul style="list-style-type: none"> + Mapping data is the basis of many Open Data applications for the visualization of other information. + Allows more competition in the business of making maps, with the possibility of greater innovation and diversity. + Saves current costs of copyright enforcement - Possible effect on existing revenue for paper maps, but evidence elsewhere shows that this is not material - digital maps are used in other ways. 	Release within 6 months (2)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Land Register entries	The Land Registration system is 100% complete. Copies of Land Register entries can be purchased for EC\$35 (uncertified) and EC\$50 (certified)	The Land Register is computerized. A software enhancement would be required to make this information available online	The Registrar would be prepared to make the information available online, but only for a fee.	<ul style="list-style-type: none"> + Easier access to information by businesses and individuals + Greater transparency of the market for land and housing + Easier to identify owners of disused land and bring back into use, aiding development and renewal - Potential loss of revenue, but could be covered (see recommendation). 	Consider publication as Open Data. Review should consider the issues of the actual cost of online access and whether charging a fee reflective of this amount would be worthwhile. The Review should also consider whether the costs should be included in <u>Registration</u> fees as an easier and more dependable way of covering the costs (3)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Financial transactions/ Payments	There is already a commitment to budget and outturn transparency (see above). The policy of publishing individual payments has not been considered yet in Antigua and Barbuda	95% of government payments are made by the FreeBalance system, and it is planned to reach 100%. Extracting data periodically is feasible	The Ministry of FEPA would be able to do this, but it would require the approval of the Accountant General and the Minister of Finance.	+ Publication would make Antigua and Barbuda “world class” in this key test of Transparency + Range of commercial (eg Spikes Cavell) and community (eg Open Spending) applications which could use the data + Useful business intelligence + More competitive supply to government + Behavioral effects on public servants leading to more economical spending - Sensitive spending items: a redaction policy aligned with the FOI could be adopted	Consider publication as Open Data , aiming provisionally to do so within 6 months (2)
Procurement data	Existing plans to introduce the Procurement module of FreeBalance, in order to make procurement more transparent	Procurement module of FreeBalance would need to be implemented, as in current plans	Ministry of FEPA prepared to consider	+ Greater transparency + Greater confidence in procurement system by potential government suppliers, leading to greater competition	Consider publication as Open Data as the existing plans to implement the Procurement Module are progressed. (3)

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
<p>Inspections:</p> <p>Hotels, restaurants, street food, caterers;</p> <p>Drinking and recreational water quality</p> <p>Occupational Health</p> <p>Mosquito, rats and other vectors</p>	<p>Information on individual inspections is currently held manually and not released, but it would be released in response to an FOI Act request, and has done so in response to court orders. Some concerns about public response</p>	<p>Data on all inspections is currently held only in paper form.</p>	<p>Chief Health Inspector at Central Board of Health oversees all these inspections</p>	<p>+ Publication of inspections of food service establishments well proven elsewhere as improving public safety</p> <p>+ Publication of data about mosquito areas has allowed significant reduction in dengue fever cases in Lahore, Pakistan</p> <p>+ Recreational water quality information should improve competitive position of Antigua and Barbuda in tourism, because water quality is better than some competitors</p> <p>- Adverse inspection data could weaken competitive position if other nations do not publish it.</p>	<p>Publication as Open Data would need to await digitization of Chief Inspector's office.</p> <p>In the meantime the policy issues should be considered, and the different types of inspections prioritized for release. Where there is a competition element, Antigua and Barbuda should proactively push for publication of comparative data across the Caribbean. (4)</p>

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Agricultural data <ul style="list-style-type: none"> - Registered Farmers - Farm Properties - Agriculture Production - Retail/Farmgate Crop prices 	Information already made available to interested parties such as students and prospective students	Extensive data collections, down to farm level, and about imports, but much held only in paper form	Ministry of Agriculture is considering setting up a “Data Unit” to make better use of its data	+ Enhance the productivity & effectiveness of extension officers using tablet-based Apps built around the Open Data, for more efficient data collection and informed advice to farmers + Leverage current Open Data initiatives in Jamaica through collaboration with COI and Rural Agriculture Development Authority + Provide a platform for improved linkages between Agriculture stakeholders and other sectors i.e. Agro-Processors, Tourism, Education, etc. + Open Data enables new approaches in tackling issues such as praedial larceny, production planning & forecasting	Ministry of Agriculture should develop a Data Plan for its Data Unit, the digitization of remaining data flows, and for Open Data (4) Design data collection processes around an open data platform which can take advantage of mobile Apps to enhance data processing efficiency, validation and currency Encourage Developer communities to examine Agriculture Apps being developed in Jamaica/COI for adaptation/re-use in Antigua

Dataset	Feasibility			Key Benefits and Risks	Recommendation*
	Policy	Technical	Institutional		
Companies Register	The Companies Register is manually searchable, with a EC\$20 search fee and a EC\$1 per page copying fee to the private sector. There are about 40 such searches a day. The Inland Revenue and other statutory bodies do not pay for searches.	The Companies Register is kept manually. There are around 13,000 companies on the register, with 300-500 added each year.	The manual nature of searches puts a lot of pressure on the staff of the Intellectual Property Office	+ Key data for business-to-business services, including credit checking + Increasingly a global expectation that companies registration data will be freely available in order to track transnational businesses	The IFC-assisted project for digitization of the business registers should be scoped to including the release of company and other relevant information as Open Data (4)

5. DEMAND FOR OPEN DATA / CITIZEN ENGAGEMENT

5.1 What is the level and nature of demand for data from Civil Society and the media? **Yellow**

- There was limited evidence of explicit demand for data from the public and from civil society. The Freedom of Information Act is not being widely used to obtain data.
- Although the media have made some limited use of the Freedom of Information Act, data journalism skills are not well developed. In addition, the team was told that the competitive media environment meant that editors were reluctant to allocate the time needed for investigative or deeply researched stories.
- + The high level of mobile phone penetration and smartphone ownership suggests that there could be a market for apps using Open Government Data.
- + There was a strong demand for data from the academic community. Population census and demographic data, economic, tourism, crime, health and education data was considered particularly important.
- + Developer communities were interested in government Open Data, particularly in the fields of agriculture, census and demographics, public services and government spending.
- Civil Society and the public are not aware of what data is held by the government. This limited their ability to ask for it.

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

- + There was evidence of business demand for data: Weather, Trade, Census and Tourism. The re-usable format of the twice-daily weather forecast was being developed as a result of requests from business.
- + In the absence of local data, one business application developer had been trying to re-engineer data about Antigua and Barbuda from more readily available US data.
- + There was evidence that potential inward investors sought data in order to evaluate investment in Antigua and Barbuda against investment in other countries, but that data was not easy, or in some cases possible, to obtain. We were told that this could place Antigua and Barbuda at a disadvantage when being considered as an investment destination relative to competitors.

- Business was not aware of what data was held by the government. This limited their ability to ask for it.

5.3 To what extent can people engage with government through social media and other digital channels? Green

- + The Government has an extensive social media operation, with extensive use of Facebook and the facilities to produce engaging online video content. The social media team is pro-active in generating content.
- While the viewing figures for the social media content was impressive, it was not clear that this was leading to a lot of active engagement back to the government.
- + The wide availability of very good mobile data services (including 4G) means that most engagement is through mobile channels.

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

- + There is evidence of bi-lateral arrangements to share data between public bodies. This particularly applies to “reference data”. Costs of sharing data are borne where they fall - the team found no instances of inter-agency charging, even in cases where the public or private sector were being charged for the same data.

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

- + Some public agencies were willingly supplying data to the private sector or the public in response to ad hoc demands. This may explain the limited use which is being made of the formal Freedom of Information Act procedures.
- There seemed to be no established mechanism to request more data. Requests were not being made under the Freedom of Information Act so there was no surrogate set of requests for public agencies to consider.
- Some public bodies were starting to take a more pro-active stance in terms of the management of their data and extracting more value from it, but others were not considering how their data could be used more widely and were not engaging with prospective data users.

Assessment of Demand for Open Data and Recommended Actions

Question Area	Importance	Assessment	
		Red/Yellow/ Green rating	Commentary
Demand from civil society and media	Very High	Yellow	This is an under-developed area, although evidence from elsewhere in the Caribbean is that there is likely to be a significant appetite for data which, because it is not being met, is not visible yet.
Demand from business	High	Green	There is some active demand for data from business, but because there is insufficient information about the data available this demand is being suppressed from its true level.
Digital Engagement	High	Green	There is extensive digital engagement, particularly through mobile devices.
Intra-government demand for data	High	Green	There are extensive transfers of reference and other data within government. Costs are borne by the data provider.
Response to demands for data	Medium	Yellow	Requests for data are very much ad hoc and there is no recognized system for such requests. The Freedom of Information Act is not being used for this purpose
OVERALL	High	Yellow	Under-developed demand for data, although indicators that there is considerable latent demand yet to be met.

Demand for Data Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
5.1 Engage potential data users in dialogue on what data they want	Ministry of TST	Months 3-4	As an early part of the Open Data initiative there should be engagement with potential data users. The Government's social media expertise could be used in this.
5.2 Establish data request system as part of Government website, and then transfer to Open Data portal when ready	Ministry of TST	Months 3-4	A data request process is part of the best practice in Open Data portals, and because current potential data users do not know who to ask it should be established on the Government

			website without waiting for the Open Data portal
5.3 Establish a process for handling data requests, including informed scrutiny of reasons why data should not be released	Ministry of TST	Months 3-4	It will be important for the lead Minister to have the chance to review any proposed refusals to supply data, and to pursue this politically if needed.

6. DATA USER COMMUNITIES

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)

Yellow

- Data journalism is still comparatively under-developed in Antigua and Barbuda, and journalists lack both “data skills” and the time for investigative work.
- + The work of the Caribbean Open Institute has shown significant capability and enthusiasm for using data in innovative and engaging ways, and to address regional and sectorial problems, across the Caribbean, especially among young people.
- + The Caribbean Open Data Conferences and Code Sprints have already engaged people in Jamaica, Barbados, Cuba, Trinidad & Tobago and the Dominican Republic. Although there has not been direct Antiguan and Barbudan participation so far it is believed that similar enthusiasm exists in Antigua and Barbuda.
- + There is considerable regional mobility - both physically and virtually - and if Antigua and Barbuda is a first mover in Open Data then it is likely that developers throughout the region will seize upon Antigua and Barbuda’s data as the first systematic data release and produce innovative applications.

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)

Red

- There has been no direct Government activity in this area yet.
- + The Government does however plan to commence a GATE Cadet program to develop skills in computer hardware and these could be extended to cover data/software skills

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

- + A mobile application development training program, involving 30 young people has been established by the Precision Center in Antigua, including Android, Java and XML skills.
- + Infodev hosted a mobile innovation feasibility workshop in Antigua in 2012, and plans to launch a Mobile Innovations Program in the Caribbean over the next 12-18 months.

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)
Green

- + Relevant courses are run by the Antigua and Barbuda International Institute of Information Technology (although not to bachelor level) and by the University of the West Indies (although not in-person in Antigua).

Assessment of Data User Communities and Recommended Actions

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

Data User Communities Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
6.1 “Hackathons” and competitions should be used to test demand for Open Data and to demonstrate innovative uses both to stakeholders in Government and to potential data users.	Ministry of TST	Month 2 Month 4 Month 6 And onwards	Because Antigua and Barbuda has first-mover advantage they could draw in enthusiasts not just from Antigua and Barbuda but also from other Caribbean nations.
6.2 A program of Hackathons and competitions should be linked to key stages of releasing government data and to key themes of importance to the Government	Ministry of TST	Month 2 Month 4 Month 6 And onwards	Hackathons and competitions could be around key themes such as Tourism, Disaster Management and Financial Transparency. These could use Antigua and Barbuda data and because the themes are relevant throughout the region they could attract wider participation

6.3 Government should consider extending the GATE-Cadet program to cover relevant software and data skills	Ministry of TST	Months 5-6	This would build on the establish structures and success of the GATE program
6.4 Government should work with the Caribbean Open Institute to bring the 2014 Caribbean Open Data Conference to Antigua	Ministry of TST	Month 9	This would also provide an event for which Antigua could aim to have implemented the first phase of its Open Data initiative, including the Open Data portal, all the policy development, and the release of key datasets including all the “Green” datasets in Section 4 above.
6.5 Government should stimulate the demand side of the media through a Data Journalism Bootcamp.	Ministry of TST	Month 4	This would provide an event hosted by Antigua and be run as a wider OECS/Caribbean event. The World Bank Institute has an established Data Journalism Bootcamp program that could be used.

7. FINANCING

7.1 **Have sufficient resources been identified to fund an initial phase of an Open Data initiative, including apps development? (Importance: Very High) Yellow**

- + Most of the identified early key datasets are either produced as part of existing, funded, projects with a commitment to transparency or can be produced by simple extraction from current data systems
- + Where there are existing or planned projects for the digitization of records or business processes currently kept manually then it should be possible to include the small increment in functionality to support Open Data within the budgets already allocated or planned
- + Existing policy offices (such as the Intellectual Property Office) should be able to help formulate policy as part of their normal responsibilities.
- The Ministry of TST has no budget for a small central unit to manage an Open Data initiative.
- o Hackathons and competitions would need some funding, although there is the opportunity to partner with others to deliver them and to leverage existing programs in the region
- + The existing Government social media operation could provide resources to communicate Open Data effectively to the online community.

7.2 **Is the necessary ICT infrastructure present for Open Data and do enough staff have the skills needed to manage an Open Data initiative? Importance: Medium High) Green**

- + The Government Data Center and the government website could provide an initial presence for an Open Data website
- + There are a variety of options for hosting a full Open Data portal, including a facility which could be shared with others in the Caribbean
- + The Ministry of TST does have staff with the skills and project management experience to manage an Open Data initiative, if funding could be found.
- + Technical skills are largely available or being acquired, and there is the opportunity to leverage skills through the involvement of others in the region.

7.3 Does government have innovation funding mechanisms? (Importance: Medium High) Unable to assess

- o There was no relevant evidence on this.

Assessment of Open Data Financing and Recommended Actions

Question Area	Importance	Assessment	
		Red/Yellow/ Green rating	Commentary
Funding Open Data Initiatives	Very High	Yellow	Key need is funding for small central unit, and perhaps a smaller amount of funding for hackathons
Financing Training & Infrastructure	Medium High	Green	Existing skills and infrastructure could be used at the start of the initiative, and then there are opportunity to share costs with others
Financing Innovation	Medium High	Unable to Assess	No evidence
OVERALL	High	Green	If a small central unit could be funded then there would not be significant other financial barriers to making early rapid progress

Open Data Financing Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
7.1 Fund small central unit to lead	Ministry of FEPA	Months 1-2	Important first step
7.2 Identify modest funding and partnership mechanisms for hackathons and competitions	Ministry of TST	Months 3-4	
7.3 Develop regional cost-sharing approach with potential partners such as Caribbean Open Institute or GeoNode, and present to potential sponsors/donors	Ministry of TST	Months 3-6	

8. NATIONAL TECHNOLOGY AND SKILLS INFRASTRUCTURE

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) **Green**

- + There are 182 Mobile Cellular Subscriptions (MCS) per 100 people
- + 82% of the population use the internet
- + There is good broadband availability, although demand is suppressed by the general availability of exceptionally good mobile data.
- + There is good availability of mobile and mobile data, with one 4G service already operational and a second likely to be operational by the end of 2013
- + Antigua has good-quality internet links with the rest of the world through submarine optical cable.

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

- + Most Government IT is centralized in a Government Data Center and a central project planning, web development and technical support function.

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

- + The Ministry of TST has strong ICT skills both at strategic and at engineer levels.
- There was some evidence of concern within Government of the lack of skills to strategically leverage data. This was one of the drivers for the establishment of "Data Units" in some Ministries.

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

- + There is a small but active developer community appropriate to the size of the Antigua and Barbuda market. Business reported that IT skills were available in the labor market when needed.

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

- + The Government has a strong web presence actively maintained; most of the content is on a single Government website, although some Ministries and individuals also maintain other websites.

Assessment of Technology/Skills Infrastructure and Recommended Actions

Question Area	Importance	Assessment	
		Red/Yellow/ Green rating*	Commentary
Internet/Mobile infrastructure	High	Green	Very strong infrastructure base, especially in mobile
Shared Infrastructure & Services	Medium High	Green	This is the established operating model for ICT services
ICT Skills Base in Government	High	Yellow	Good technical and project management skills; some concerns about skills to use data strategically in all Ministries
ICT Skills Base Outside Government	High	Green	Appropriate for size and demand in Antigua and Barbuda
Government Online Presence	Medium	Green	Good and actively maintained web presence
OVERALL	High	Green	

Technology/Skills Infrastructure Recommendations for Action Plan

Action	Responsibility	Timescale	Comments
8.1 The Open Data initiative communications should positive encourage the re-use of Open Data within Government itself	Ministry of TST	Months 5-12	This should be an ongoing theme
8.2 Consideration should be given to a program to develop Data Skills in senior officials	Training Division	Months 7-12	This could be prioritized around skills in using financial and performance data.

CONCLUSION

This Open Data Readiness Assessment is designed to produce a rapid evaluation of a government’s readiness to sustain an Open Data initiative. In doing this, the Assessment looks at key dimensions. While each dimension is important, the Assessment methodology gives each a weighted rating of relative importance.

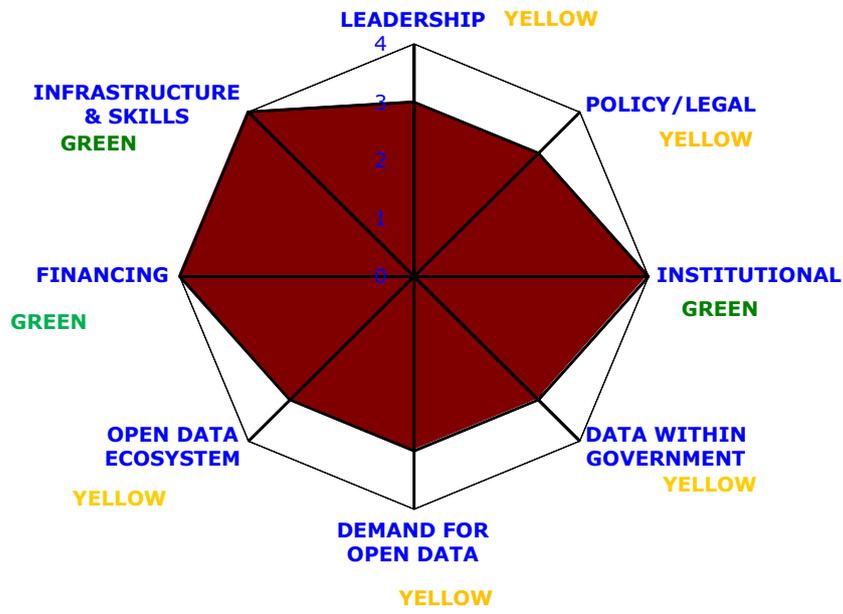
DIMENSION	IMPORTANCE	RATING
Leadership	VERY HIGH	Yellow
Policy/Legal Framework	HIGH	Yellow
Institutional Preparedness	MEDIUM HIGH	Green
Data within Government	HIGH	Yellow
Demand for Data	HIGH	Yellow
Open Data Ecosystem	MEDIUM HIGH	Yellow
Financing	HIGH	Green
Technology & Skills Infrastructure	HIGH	Green
Key Datasets	HIGH	Analysis & Recommendations Provided

It is important to note that all governments have their own combination of challenges and comparative advantages as they implement Open Data initiatives. Open Data offers opportunities for every government to drive innovation, improve public services and engage citizens in new ways.

Figure 1 below provides a visual representation of the current readiness of Antigua and Barbuda as it prepares to execute its Open Data agenda. It attempts to capture in simple terms the strengths and challenges among the dimensions of Open Data readiness evaluated during this assessment.

Figure 1

Open Data Readiness - Antigua



OUTLINE IMPLEMENTATION PLAN

			1	2	3	4	5	6	7-9	12	Y2	Y3	
A. Policy Development													
	1.1 Develop a declaration and release plan for agreement by the Cabinet.		█	█									
	1.2 Secure and Cabinet agreement to the declaration on Open Data policy			█									
	1.3 Appoint a clear political leader			█									
	2.1 Develop overall Open Data policy, including “Open by Default”, standards, processes and other recommendations in this Assessment			█	█	█							
	2.2 Develop Open Data licensing policy			█	█	█							
	2.3 Clarify data charging policy			█	█	█	█	█					
	2.4 Proposed “Government Copyright”										█		
	2.5 Develop policies that allow publication of statistics in reusable form without the risk of surreptitious change to official statistics		█	█									
	2.6 Formal legal study and advice		█	█									
B. Implementation Project													
	3.1 The Ministry of TST should lead the implementation of an Open Data initiative; they are best placed to do so.		█										
	3.2 The Ministry of TST should form a distinct core team to lead the initiative		█	█									
	3.3 For the quick wins, data should be hosted on the Government Website				█	█	█	█					
	3.4 At a later stage there should be a migration to a standard Open Data portal software package.								█	█	█	█	
	3.5 The Ministry of TST should consider the hosting of large Open Data datasets on public cloud storage				█	█							
	7.1 Fund small central unit to lead		█	█									

			1	2	3	4	5	6	7-9	12	Y2	Y3	
	7.2 Identify modest funding and partnership mechanisms for hackathons and competitions												
	7.3 Develop cost-sharing approach with potential partners such as Caribbean Open Institute or GeoNode												
C. Release of Data													
	4.1 Introduce a staged release of data, starting with a number of quick wins of easily releasable			1A		1B		2		3	4	5	
	4.2 ensure that digitized data which cannot be immediately released have a defined pathway to release												
	4.3 All programs to digitize datasets currently held in paper form should be reviewed												
D. Use of and Demand for Data													
	5.1 Engage potential data users in dialogue on what data they want												
	5.2 Establish data request system as part of Government website; transfer to Open Data portal when ready												
	5.3 Establish a process for handling data requests, including scrutiny of reasons for refusals												
	6.1 "Hackathons" and competitions should be used to demonstrate innovative uses												
	6.2 A program of Hackathons and competitions should be linked to key stages of releasing government												
	6.3 Government should consider extending the GATE-Cadet program to cover relevant software and data skills												
	6.4 Bring the 2014 Caribbean Open Data Conference to Antigua												
	8.1 Encourage the re-use of Open Data within Government itself												
	8.2 Consideration should be given to a program to develop Data Skills in senior officials												