Open Data Readiness Assessment

Prepared for the Government of Sierra Leone

OPEN DATA FOR BUSINESS REPORT

WORLD BANK GROUP

OPENAID PARTNERSHIP

Open Data for Business report[1]

SIERRA LEONE FINDINGS AND RECOMMENDATIONS

Prepared by Laura Manley, January 2015

DISCLAIMER

The Open Data for Business (OD4B) Tool is intended to help inform a long-term strategy to increase the business use of government data. The representativeness of any OD4B assessment is dependent on the number and spectrum of companies and business groups interviewed. It is not a comprehensive or necessarily representative assessment of private sector use of government data in client countries. In some countries or circumstances, the OD4B Tool may not be the most appropriate approach to assessing the business environment for open data. The OD4B Tool is also not meant to provide an overview of all aspects of an open data program, which can be developed through an Open Data Readiness Assessment (ODRA) or other means.

I) EXECUTIVE SUMMARY

Open Data for Business Tool

The Open Data for Business (OD4B) Tool is a methodology to assess the private sector's current and potential use of government data in various countries. It is designed to increase the business use of government data through (1) increased private sector awareness of government data, (2) identification of high-value data and barriers to use, and (3) a recommended Action Plan to engage with private sector stakeholders on an ongoing basis.

The following findings and recommendations are based on interviews, questionnaire responses, discussions and the roundtable, and insights from the Local Partner during field work in early November 2015. All of the information collected has been aggregated and analyzed across four assessment areas – high value data, barriers, capabilities, and engagement. Each section of this document demonstrates both the spectrum of responses and overall trends.

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1   This report was originally published as Annex 8 of the Sierra Leone Open Data Readiness Assessment

Participants

Sectors: Agriculture, Business and Legal Services, Consumer and Retail, Data and Information Technology, Education, Construction and Real Estate, Finance and Investment, Manufacturing and Distribution, Research and Consulting, Security, Telecom and ISP, Tourism, Transportation and Logistics

Interviews: 14

Roundtable attendees: 52

Types of participating organizations: 8

TYPE	#	%
Small (<10)	35	54
Medium (11–100)	12	18
Academia	7	11
Government	4	6
CSO	2	3
Incubator	2	3
Large (>100)	3	3
Association	1	2
TOTAL	66	100

Key Findings

Overall, there is a high level of demand for government data from a broad spectrum of the private sector, from large telecommunication companies to small agri-businesses. Although larger tech-related companies have higher technical capacity and skills-base to utilize data, the smaller non-tech related companies are eager to begin using data primarily for benchmarking and identifying customers. Across all sizes and sectors, the company register, demographics, and economic conditions data was the most highly requested by companies. Critical barriers to the private sector use of government data included inability to find relevant data and get a response to requests, out of date and inaccurate data, high cost of Internet access, and lack of technical skills to utilize the data (primarily SMEs).

Assessment Area	Key Findings
High Value Data	
Government data of greatest interest	Business (company register), demographics, economic conditions
Most important characteristics of government data	Timeliness
Capabilities	
Technical infrastructure available	2.68/5 – Average on 1 (low) – 5 (high) scale
Data literacy and skills	2.84/5 – Average on 1 (low) – 5 (high) scale
Capability of greatest interest	Additional technical skills training
Awareness of government data resources	3.26/5 – Average on 1 (low) –5 (high) scale
Barriers	
Most significant barriers	Difficulty finding data, out of date, inaccurate
Impact on businesses	Inability to scale, effectively budget, and forecast. Lack of ability to segment markets. Major cost inefficiencies.
Engagement	
Level of government responsiveness to data requests	1.55/5 – Average on 1 (low) –5 (high) scale
Most effective outreach and feedback channels	Public workshops/roundtables, publicized phone number, online feedback forms

II) HIGH VALUE DATA

This includes types of data that are most important to business. High value is determined both by the data's relevance and application for users and specific characteristics such as data quality, timeliness, and formats.

Current Information Use and Access

Most companies use a portfolio of information sources to gather the critical data needed to conduct business. Information is typically used for organizational optimization (39.4%), research (25.8%), and the identification of new customers (18.2%). The following sources were most frequently cited:

▸ Internet searches, most frequently for commodity and equipment prices, or exchange rates

▸ Media, such as radio, newspaper, and TV that provide ads for contractors, new companies in town, or information about the economy

▸ Family and friends who provide observations about the market and potential leads

▸ Internal data on customers and previous contracts/projects

> *"Most of the time the information that we have is wrong or incomplete. Each sector works to get their own information and they don't work with each other or compare. There are always disparities. For example, if I want to know all the SMEs we send out a questionnaire to our members, but it only reflects those institutions or who they know. It's time consuming, costly, and not very comprehensive.*
>
> *– Trade Association*

Most companies use Google as the first place to look for data, but said the information is typically not specific or "deep" enough to provide real insights for business. In addition, much of the information found online is not reflective of the realities in the country. For example, the exchange rate is currently 4400 Leones to 1 $. The going rate in Freetown is 5500 Leones to 1 $.

> *"We need data about the economy it's very important for telecom. For example, the valuation of the currency reflects on the valuation of my revenues. I need to be able to plan my budget how the currency will change to offset the loss. We also care about the economy and how much it will help us to grow. We need to be able to change our prices if the economy is dropping and customers lose their ability to pay."*
>
> *— Telcom, Large-Sized Enterprise*

Many companies also use informal networks such as friends, family, and professional contacts. They also find information through newspapers and radio. Many companies cited the newspaper as a source for finding new business through ads or learning about the economy through TV and radio shows. Larger companies and associations said they paid to have market research conducted such as paper surveys, face-to-face interviews, and other types of research. For some of the larger companies, primarily the Telcos, internal data collected on their customers provided the most accurate data.

All of the companies said that the information currently used is not reliable and mostly estimates. Because of the lack of centralized, complete, and timely data, many companies average figures and overestimate costs for their budget. For example, one company estimated (based on what they have seen in their neighborhoods) that approximately 1 in 5 households have a TV. This determined how they stocked their inventory. Airtel stated that they budget a large amount annual for an international market research company to conduct interviews and field research. The Chamber of Commerce stated that they conducted member surveys when they need information about the business environment. One of the largest construction and safety material distributors in Freetown said they use newspapers to find new business and then they go door-to-door to meet with potential clients.

Demand for Government Data

Overwhelmingly, the company register was the most requested type of government data by 53% of companies. Demographics data (21.2%) and economic statistics (18.2%) were the second and third most requested type of data. More specifically, companies requested information on processes, such as business registration protocols and guidelines for taxes. In addition, most companies requested disaggregated data, in order for it to be specific enough for business decisions. For example, when looking for the amount of loans disbursed for women, one company was only able to find the total # of loans disbursed.

Many companies were interested in government data that would provide a credible benchmark for industries such as electricity, internet penetration, or employment levels. Several participants stated that even basic indicators could allow them to expand into new areas of business or understand market segments better for more targeted services.

In addition, many companies stated that they did not know or understand the official process for registering a business. They said it was very difficult to find the correct information online and typically did not hear back from government when they requested forms. They also requested greater understanding of how they were taxed. Several companies said they didn't know the breakdown of taxes and knew of others who had become tax evaders because they felt they are were cheated.

III) BARRIERS

Findability

Companies were asked to select the three most significant barriers to government data use. Firstly, finding any data was incredibly difficult or even impossible for many companies. When asked to select the three most 39.4% of companies said the findability of data was the most significant barrier to use. Many stated that they didn't know where to begin looking for government information.

Timeliness

The second most significant barrier was the timeliness of data. Another 39.4% of companies said that out of date data was a critical barrier to their use of data because of the importance of time in business decisions. Repeatedly, companies said that they had come across dead links, incorrect phone numbers and emails, and wrong information. In addition, data needs to be published soon after collection.

> *"We can't take big risks because the data isn't up to date data, so it limits our ability to scale and expand. We have to average and over-budget because of this and it seriously affects business."*
>
> *– Data/Information Technology, Small-Sized Enterprise*

Accuracy

The third barrier most frequently cited was inaccurate data. 34.8% of companies stated that even if they were able to find and access the information, many times it is incorrect or fake. There was major concern about the reliability of data because of collection issues, inconsistent definitions and schemas, and political interests.

For example, many stated that because data is physically centralized in Freetown, it doesn't provide an accurate picture of the country. This centralization of data was ex-

plained in terms of business registration. According to several companies, if someone wants to obtain information, they must come to Freetown and the information is primarily about activity and businesses in Freetown. For example, if a company outside of Freetown wants to register a company, they must come to Freetown. According to the Office of the Administrative Registrar General (OARG), there are offices in rural parts of the country, but many companies and the Chamber of Commerce said that they have never seen an office and that most of the time city councils handle registration for a fee and that registrations typically don't make it to the central registrar.

IV) CAPABILITIES

Awareness

The concept of using government data (in machine readable formats) for many of the companies without an IT focus was very new. On average, companies' awareness of open data was 2.03/5 (1–not aware, 5– very aware).

Data Literacy & Skills

Several of the companies were interested in using data, but stated that they lacked the IT skills to utilize the data. The average level of data literacy and skills was 2.84/5 (1–poor, 5–excellent). However, the average level of data literacy and skills for larger companies and incubators was much higher. Many companies mentioned basic computing courses that they had taken or sent employees to, but said advanced computing or IT courses available in the country was lacking. 54.5% of companies stated they were most interested in technical skills trainings to build capacity.

> *"Recruiting talent is very difficult. It's just not there. We have to go to the schools to find people with the right skills. Technical training is definitely needed in Sierra Leone. People could also get paid to be mentors and develop network."*
>
> *– Data/Information Incubator*

In particular, SMEs stated that finding workers with IT skills was a major constraint for utilizing any advanced technologies or scaling their business. The SME IT companies also complained of the difficulty finding and maintaining talent because they were "poached" by large companies or went abroad.

The larger companies, particularly the Telcos, stated that they were able to attract the best talent because of competitive salaries and benefits. Despite being able to attract skilled workers, many of the large companies did say that the limited IT skills in the country were a concern.

Technical Infrastructure

On average, companies' technical capacity to utilize data, such as equipment and data management tools was 2.68/5 (1-poor, 5-excellent). This ranged significantly based on the type of organization. Several of the SMEs said they had limited financial resources available to pay for the equipment and basic tools required to make sure of data. Again, larger companies and incubators had much higher technical capacity.

V) ENGAGEMENT

Current Communication Channels

Most participants (36.4%) stated that they did not communicate with government about information at all because of lack of clear channels. Of the participants that did have interactions with government, most visited the office (24.2%) or wrote a hand-written letter (21.2%). Most companies stated that they were unaware of any process for requesting data. Several companies cited specific examples where they visited government offices on a weekly basis until they were able to get a response to inquiries for data and many times it was paper-based. Of the companies that were aware of RAIC and the formal process for requesting data, several stated that the process was extremely unclear and that they still had not received the data requested.

Responsiveness to Requests

The average perceived responsiveness of government to data requests was a 1.55/5 (1-poor, 5-excellent). Several participants cited examples of writing letters, visiting offices, and making phone calls with no response. Of the companies that knew specifically what data they wanted from government, they said it was essential to have a personal connection to someone in the Ministry in order to get the data needed.

Optimal Communication Channels

When participants were asked about effective strategies to engage with government, the top three options were: public workshops/roundtables (40.9%), data hotline or help number (31.8%), and online feedback forms (24.2%).

Many participants expressed interest in participating more actively in the process to open government data and said any kind of public event would be highly attended. Several suggested a business advisory council for government data that would include representation of not only large companies and associations, but also SMEs and incubators.

> *"We need a place online that people can get up to date information. Knowing the last time information was updated is very important to our business. There should also be a feedback form or survey that people can express their satisfaction or dissatisfaction. I would use that."*
>
> *— Housing/Real Estate, Small-Sized Enterprise*

Participants also expressed the need to promote government data communication channels through media, like newspapers, radio, and TV. Several stated that one publicized hotline or phone number was essential for many companies in rural areas or for business owners with lower literacy rates.

VI) PILOT PROJECTS

Based on the Open Data for Business findings, this section describes recommended pilot projects to increase the private sector use of government data.

Pilot Project #1: Awareness Campaign for RTAI Act

Description	Create awareness campaign for the Right to Access Information Act data request process and include status communication after data has been requested. For example, receipt of request with approximate response date, status update, etc.
Rationale	Several companies stated that they were unaware of the RTAI Act and the process for requesting data. Of the companies that had requested data through the current process, many stated that they did not receive the information and there was no way to follow up.
Potential Impact	Increased use of RTAI Act by companies
Potential Stakeholders	RAIC, potential users of government data

Pilot Project #2: Monthly Newsletter

Description	Create monthly newsletter, both print and electronic, highlighting intelligence mined from the datasets. In the newsletter, MDAs are recognized/rewarded based on their compliance with the open data policy in place. Some aspect of this can also be worked into the Performance Trackers that MDAs are required to sign and work against. This newsletter could also be a good avenue to promote a gamification strategy by rewarding top performers with mentions and features
Rationale	Open data is still a new concept for many businesses. Providing specific examples of the value of datasets in a monthly newsletter will help entrepreneurs and business owners understand how it can be applied to their current work.
Potential Impact	Increased awareness about the value of open data through specific examples and publication of progress. Also, provides concrete incentive for MDAs to participate in the open data policy actively
Potential Stakeholders	RAIC, MDAs, potential users of government data

Pilot Project #3: Create private sector engagement strategy

Description	Host recurring public events or roundtables to allow companies to provide feedback that are not participating in the advisory council. This could be based off of the format from the initial open data for business roundtables (see annex) or held as a more casual public event.
Rationale	Give companies from larger spectrum of sectors and sizes an opportunity to provide feedback on what types of data they are interested in using and for what purposes.
Potential Impact	Increase in SME and non-technical company participation in the open data conversation and use; better understanding of high value datasets for business and optimal channels for ongoing communication
Potential Stakeholders	RAIC, SMEs, non-technical companies, entrepreneurs

Pilot Project #4: Partner with businesses for competitions and sponsorships

Description	Several of the companies interviewed were interested in partnering with the government on competitions to build the country's data-driven entrepreneurial community. The following two organizations could be valuable partners: ▸ AFFORD (African Foundation for Development) – Adding data component to the National Business Bomba competition to provide access to financing for data-related initiatives ▸ Airtel – Airtel is interested in providing sponsorship or support for an apps competition or Data Centers. "We are interested in helping people develop their entrepreneurial skills. We are looking at sponsoring business competitions, especially dealing with data. We sponsored this type of competition in Nigeria. We would be very interested in having some kind of joint business and data competition with the government. We have also build a Data Center, which was a major investment. It has the capacity to hold data from Sierra Leone, Guinea, and Liberia. We would be interested in helping with the dissemination of data for citizens. A letter of intent is what's needed to get this type of collaboration started."
Rationale	Many private sector organizations have the technical and skills capacity to support the government's open data efforts.
Potential Impact	The creation of companies and/or applications utilizing government data; additional financing available for data-driven companies
Potential Stakeholders	AFFORD, Airtel, RAIC, entrepreneurs

Pilot Project #5: Utilize public-private partnerships

Description	Partner with iDT Labs to build applications for improved service delivery – specifically related to healthcare. Refer to the Ebola Response Worker payment system as a prime example of a successful partnership
Rationale	iDT Labs has the technical and skills capacity, in addition to the experience of developing healthcare-related applications to assist the government in their data efforts.
Potential Stakeholders	iDT Labs, RAIC, Partnering Ministry

Questionnaire Responses - COMPANY BACKGROUND

Industry/Sector	Total	%
Business and Legal Services	11	16.7%
Education	8	12.1%
Agriculture	7	10.6%
Data/Information Technology	7	10.6%
Consumer services	6	9.1%
Telecommunications/ISP	6	9.1%
Governance	5	7.6%
Housing and Real Estate	5	7.6%
Mining/Manufacturing	3	4.5%
Tourism and hospitality	3	4.5%
Research and consulting	2	3.0%
Finance/Investment	1	1.5%
Security/Public Safety	1	1.5%
Transportation/Logistics	1	1.5%
Grand Total	66	

Type of organization	Total	%
Small (<10)	35	54%
Medium (11–100)	12	18%
Academia	7	11%
Government	4	6%
CSO	2	3%
Incubator	2	3%
Large (>100)	3	3%
Association	1	2%
Grand Total	66	

Business/Rev Model	Total	%
Direct sales	21	31.8%
Contracting	11	16.7%
Other	9	13.6%
Fee for service	8	12.1%
(blank)	7	10.6%
N/A	4	6.1%
Subscription	4	6.1%
Add on	1	1.5%
Affiliate	1	1.5%
Grand Total	66	

Funding for data initiatives	Total	%
N	50	75.8%
Y	16	24.2%
Grand Total	66	

Questionnaire Responses - **DATA USE**

How do you access information? (Select top 3)
What do you use the data for? (Select top 3)

Source	Total	% (out of 66)
Internet search	**25**	**37.9%**
Radio	**19**	**28.8%**
Personal networks	**18**	**27.3%**
Collect data internally	17	25.8%
Newspapers	17	25.8%
Professional networks	17	25.8%
TV	14	21.2%
Social media	8	12.1%
Other	5	7.6%
Government websites	4	6.1%
Formal request	3	4.5%
Scraping	3	4.5%
Other businesses	1	1.5%
Grand Total	152	

Application	Total	% (out of 66)
Org optimization	**26**	**39.4%**
Research	**17**	**25.8%**
ID new customers	**12**	**18.2%**
Pricing	11	16.7%
New product/service	7	10.6%
n/a	1	1.5%
Other	1	1.5%
Grand Total	75	

Questionnaire Responses - **CAPABILITIES**

Rate your organization's technical capacity to aggregate, analyze and manage data (1-5)
Average technical capacity: 2.68

Rate your organization's data literacy and skills (1-5)
Average data literacy and skills: 2.84

How aware are you of what government data is available in your country? (1-5)
Average open data awareness: 2.03

How valuable is government data to your business? (1-5)
Average value of open data for business: 3.26

What capabilities are most interested in improving or increasing? (Select 1)

Capability	Total	% (out of 66)
Technical skills training	36	54.5%
Data management tools	11	16.7%
Hiring technical staff	6	9.1%
Technical infrastructure	5	7.6%
Data analysis	3	4.5%
(Blank)		7.6%
Grand Total	61	

Questionnaire Responses - **HIGH VALUE DATA**

Type of **government data** of greatest interest (select up to 3)

Data Type	Total	% (out of 66)
Business	35	53.0%
Demographics	14	21.2%
Economic	12	18.2%
Agriculture	11	16.7%
Education	11	16.7%
Labor	8	12.1%
Housing/real estate	4	6.1%
Financial	3	4.5%
Manufacturing	2	3.0%
Health	1	1.5%
Tourism	1	1.5%
Weather	1	1.5%
Grand Total	103	

Questionnaire Responses - **BARRIERS**

Select the **greatest** barriers to use of government data. (Select top 3)

Barrier	Total	% (out of 66)
Difficulty finding data	26	39.4%
Not up to date	26	39.4%
Inaccurate	23	34.8%
Lack of relevant data	12	18.2%
Lack of data skills	10	15.2%
Formats	5	7.6%
Not specific enough	3	4.5%
Grand Total	105	

Questionnaire Responses - **ENGAGEMENT**

Rate the level of responsiveness of government to businesses about data (1–5)

Average level of responsiveness: 1.55

How do you **currently** communicate with government about data? (Select top 3 ways)

Current Communication	Total	%
None	24	36.4%
Visit office	16	24.2%
Hand-written letter	14	21.2%
Individual meetings	6	9.1%
Surveys	4	6.1%
Email	1	1.5%
Letter/email	1	1.5%
Grand Total	66	

What are the **most effective ways** businesses can communicate with government about data? (Select top 3)

Communication channels	Total	% (out of 66)
Public workshops/roundtables	27	40.9%
Phone number	21	31.8%
Formal feedback form	16	24.2%
Email	9	13.6%
Social media	8	12.1%
Media outreach	3	4.5%
Survey	3	4.5%
Hackathon/competition	2	3.0%
Government web portal	1	1.5%
Individual meetings	1	1.5%
Visit office	1	1.5%
Grand Total	92	

Organizational Capability Analysis

Type of organization +current capabilities (1–5 scale)

Type of org	Average tech capacity	Average of literacy & skills	Average level of awareness	Average of value of govt. data
Large (>100)	4.33	4.17	4.33	4.67
Medium (11–100)	2.64	2.91	2.08	3.00
Small (<10)	2.29	2.47	1.89	3.06
Incubator	5.00	5.00	3.00	4.00
Association	3.00	2.00	2.00	2.00
Academia	3.33	3.60	1.71	4.00
CSO	3.50	4.00	1.50	3.50
Grand Total	2.68	2.84	2.03	3.26

Type of organization + capabilities of greatest interest

ROUNDTABLES SUMMARY

On November 10, 2015, the RAIC in collaboration with the World Bank co-hosted two Business Roundtable discussions as part of the Open Data Readiness Assessment (ODRA)[2]. The Roundtables are facilitated discussions that bring together current and potential users of government data to (1) raise awareness about open data among the private sector, (2) help identify high-value datasets, and (3) discuss solutions to data problems.

Participants were asked a series of questions in groups about their interest in government data, experience accessing the data, challenges, and potential solutions. The following sections summarize the main points of conversation from the two round table discussions.

Total Participants: 52

Sectors Represented: Agriculture, Business and Legal Services, Consumer and Retail, Data and Information Technology, Education, Construction and Real Estate, Finance and Investment, Manufacturing and Distribution, Research and Consulting, Security, Telecom and ISP, Tourism, Transportation and Logistics

WHAT TYPES OF DATA ARE YOU MOST INTERESTED IN?

Business and Economy

▸ Business registry that includes type of company, sector, location, etc. We look online on Google because you can't find it from one source. This is critical for our marketing strategy, like understanding potential customers and competitors. If companies are to scale, this information needs to beyond only Freetown.

▸ If you are buying cargo from overseas, then you need to know what the tariffs are. You can't access this current information.

▸ Economic outlook of the country and market trends. We want to know basic information about what's happening with our economy, like the scale of services and skills. You can't find this information.

▸ How to register a business, what forms are needed, and how much it costs. There aren't common documents. Having a database of information about this is very important.

▸ Exchange and interest rates.

▸ Taxes and tariffs. What businesses are supposed to pay, how the government arrives at these figures, and so on. We don't understand how much we are supposed to pay and how it changes according to how our business changes.

Labor

▸ Labor laws. We had to contact the lawyer and get the full law and how it applies because it isn't publicly available on the websites.

▸ Overall job market data is needed, such as how many people are employed. Which kind of employment and jobs are available. Wages of upper, middle, and lower classes.

▸ Skills available/needed and corresponding trainings. This helps us understand what kind of trainings we could provide.

Education

▸ How many people graduate and drop-out from different levels of school

▸ What kind of vocational trainings are available and what are the skills that are being taught at schools and universities.

▸ I wanted to find scholarships online and I found a link to at the Ministry of Education. There were dead links everywhere and unfortunately, I wasn't able to find anything online.

Demographics

▸ Census data to better understand Sierra Leoneans and what kind of products they might want. This is very important for market segmentation and to match the services that we provide. Having statistical data helps to diversify and expand nationwide if you know more about the population.

Agriculture

▸ Availability of tools and equipment around the country to enhance production

▸ Commodity prices

Health

▸ Better information about facilities and overall health statistics would be very helpful. Also would like data about what public services are available, especially after the Ebola outbreak.

Environment

▸ Waste management systems or any basic environmental information. We tried the internet and the government website, but no luck. We then went to the EPA and made a formal request, but no response.

HOW DO YOU CURRENTLY ACCESS THIS INFORMATION?

Formal request

▸ You have to write endless letters or emails. You still don't get the information. The new commission needs to force the agencies to respond with the information. There is currently no follow-up or consequence if you don't get a response.

▸ When writing letters to RAIC, they acknowledge the letter and say they have asked the Ministry to release the information, but they don't follow up. I've already asked the Ministry for the information and they didn't release it. This is not helpful. Nobody forces them to give up the information.

Government website

▸ You can't find the information most of the time, so I usually don't check here. There's no central place that I know of. If you do find something, it isn't usually correct or up to date.

▸ Many of the government websites are empty and poorly designed.

Internet search

▸ Google for most of the information I need, but it isn't specific enough most times. The data isn't relevant for Sierra Leone or it's not up to date.

▸ Content online is very misleading according to the source. It's difficult to get objective data to do business when you are just doing a Google search.

▸ *XE.com* for exchange rates, but the online exchange rate isn't the same thing as what it is on the ground. Sometimes you can go directly to the bank.

▸ Downloading large data files takes a long time and I usually have to do it overnight.

Professional Network

▸ Asking some other companies that are doing similar business. We can exchange information about the prices of different products or how much tariffs are. The problem is that the information is usually estimated and limited.

Personal Network

▸ You usually call your friend or family and they can give you some information based on knowing the community and Sierra Leoneans. Most of the time you can't get the specific information you are looking for.

WHAT ARE THE BARRIERS TO DATA USE?

Quality

▸ Time is very important for the business community. Many of us would prefer to make a call and get somewhat accurate information, as opposed to waiting for the correct information or relying on data that isn't correct.

▸ Timeliness of the data is really important. Many times we hear things in the news, but there isn't any actual information on the government website about these items. For example, environmental impact assessments are not online and when you ask the government, they say it you have to get someone's approval and then it will take 3–4 months to get the information.

▸ The biggest problem is the fact that the data isn't up to date. A lot of the information is wrong, especially contact information.

▸ Accuracy of the data is a major issue. We don't know if we can trust the information enough to make a business decision.

Internet connectivity and cost of data

▸ The data isn't really free because we have to pay so much for Internet and data.

▸ It takes a very long time to access data, so many people won't use it in the first place.

▸ There is actually a lot of information out there, but the main problem is the cost of data. We pay so much for Internet access. Access to data or 3G networks is so expensive.

Lack of skills

▸ Most of the SMEs don't have the required skillsets to understand and use this data. Training is needed badly. Many people are illiterate and the Internet is a new concept for some people.

▸ Overall capacity building is definitely needed. It should be part of the curriculum from high school through university. Many people have never sat behind a computer.

▸ Government people also need training, so they can set up the systems properly for citizens.

Finding relevant data

▸ It is very difficult to find the data you are looking for. Sometimes you can find some information on one website, but then the link is dead that provides the rest of it. Many times it isn't specific enough. There should be online access for all government data in one place. I am unaware of any such place as of now.

▸ We haven't been able to find any historical data on the country and certain events. It is very hard to find any archival information.

▸ I don't know where you begin accessing government data. I assume that you can only access it from newspapers and radio because I haven't heard otherwise.

▸ No contextual data. There is no information about how to understand it and know if it's relevant. There should be enough information, so that an average person can understand what they are looking at.

RECOMMENDATIONS FROM PARTICIPANTS

Presentation of data

▸ One stop shop is needed.

▸ Data needs to be presented in a different way. If a farmer in the remote part of the country needs information displayed so they can use it. Information depends on who needs it, why they need it, and their skill sets.

▸ Building mobile apps can help people give access to information (push notification). A competition to build mobile apps for the government would be good.

▸ RAIC should collaborate with key ministry (trade, agriculture, income tax administration, and register general) should all coordinate their data efforts.

Timeliness and accuracy

▸ People can help contribute information about what's happening in their areas. A system that allows citizens to contribute from all over the country (not just Freetown) would make the information more accurate.

▸ A data validation system would help make sure the information is consistent.

▸ There should be one place for all of the data, so if there's an update, it's reflected everywhere.

▸ If I could depend on the data, I would use it much more often for my projects. I also think it would give rise to many new ones.

Engagement

▸ **Awareness** – I need to know the information is there in the first place. Radio, TV, and newspaper are things that everyone has access to. The government should promote what they are doing through these channels. It's good to send messages on cell phones. Because of Ebola, people still get it and it works.

▸ **Data Hotline** – In Sierra Leone, the best way to communicate is to call someone directly. There should be a number to call to get more information because some people are illiterate and can't write. One help hotline for information that is promoted would be good.

▸ **Feedback** – There needs to be a feedback or a suggestion box or a place on the Internet where you can share your experience or give ideas.

▸ **Trainings** – The government should hold trainings or partner with universities to get more people using this.