OPEN DATA FOR BUSINESS (OD4B) TOOL

Version 2.8 – December 2015

PURPOSE

The purpose of this Tool is 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 Open Data for Business (OD4B) Tool provides a methodology to assess the private sector's current and potential use of government data in various countries.

AUDIENCE

The Tool is designed to be relevant and useful in countries at all stages of open data development. A variety of stakeholders may use this Tool, including representatives from government, international development organizations, trade associations, academia, and civil society groups.

WORLD BANK OPEN DATA TOOLKIT

The OD4B Tool is an addition to the World Bank's "Open Government Data Toolkit" and is made freely available for others to adapt and use. It can be used as a supplement to the World Bank's Open Data Readiness Assessment (ODRA) methodology or as a standalone Tool. The ODRA covers 8 essential dimensions for launching an open government data program. The OD4B Tool is designed specifically to provide a deeper view of private sector current and potential use of government data.

ACKNOWLEDGEMENTS

GLOSSARY

Government Data

Government data is information produced or commissioned by governments.

Local Partner

The Local Partner provides support and regional knowledge to the OD4B Project Lead throughout an engagement.

OD4B Project Lead

The OD4B Project Lead is responsible for the overall leadership and coordination of an OD4B assessment.

Open Data

Data or content is open if anyone is free to use, re-use or redistribute it, subject at most to measures that preserve provenance and openness.

Private Sector

The part of the economy that is not state controlled, and is run by individuals and companies for profit. The private sector encompasses all for-profit businesses that are not owned or operated by the government.[1]

Roundtable

Roundtables are facilitated discussions that bring together current and potential users of government data to raise awareness about open data among the private sector, help identify high-value datasets, find solutions to data problems, and establish new collaborations.

OD4B Participant

OD4B participants include private sector organizations (such as businesses, trade associations, startups, and incubators) from whom data is collected, either in an interview or a roundtable.

For more information on open data terms, visit the World Bank's Open Data Toolkit:
http://opendatatoolkit.worldbank.org/en/essentials.html

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[1] *InvestoPedia, Definition of Private Sector: http://www.investopedia.com/terms/p/private-sector.asp*

I) INTRODUCTION

Background

Open data is free, publicly available data that anyone can access and use, without restrictions. It is a major global resource for economic growth and social good. It has the potential to transform public, private and nonprofit institutions to meet their goals more effectively and efficiently. While social media, companies, and NGOs can all be sources of open data, the most widely used open data comes from government and government-supported institutions – open government data. But despite growing international awareness and interest, the potential of government data use by the private sector has not yet been met in many countries. It can help launch new businesses, optimize existing companies' operations, create jobs, and improve the climate for foreign investment. For a full description of the benefits of private sector use of open data, refer to Annex 1.

A deeper understanding of the private sector demand is essential if the global open data movement is to succeed. Like any public resource, open data needs to be developed, managed, and provided in a way that meets the needs of the people and organizations that use it. Several global initiatives such as the Open Data Index[2] and Open Data Barometer[3] have gone a long way in assessing the supply and quality of open data around the world. To date, however, there has been no equivalent effort to assess the business use of open data from the demand-side perspective.

The World Bank's work with client countries has shown that meaningful user engagement is essential to develop and maintain successful open data programs. The demand for government data, particularly from the private sector, provides a compelling rationale for growing these programs and helping prioritize the most important datasets based on a user perspective.

Description

The OD4B Tool provides a methodology to assess the private sector's current and potential use of government data in various countries. This is the second version of the OD4B Tool based on feedback received and practical experience in testing earlier versions throughout 2015.

Purpose

The purpose of this Tool is 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.

Audience

The tool is designed to be relevant and useful in countries at all stages of open data development by assessing both current and potential uses of government data. A variety of stakeholders may use this Tool, including representatives from government, international development organizations, trade associations, academia, and civil society groups.

World Bank Open Data Toolkit

The OD4B Tool is an addition to the World Bank's Open Government Data Toolkit and can be used as a supplement to the World Bank's Open Data Readiness Assessment (ODRA) methodology or as a standalone tool. The OD4B Tool's

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[2] Open Knowledge Foundation, Open Data Index: http://index.okfn.org/
[3] World Wide Web Foundation, Open Data Barometer: http://barometer.opendataresearch.org/

underlying methodology is designed specifically to provide a deeper view of the private sector current and potential use of government data by using a demand-driven approach. The ODRA covers 8 essential components of launching an open data program: senior leadership, policy/legal framework, institutional structures, responsibilities and capabilities within government, government data management policies and procedures, demand for open data, civic engagement and capabilities for open data, funding an open data program, and national technology and skills infrastructure.[4]
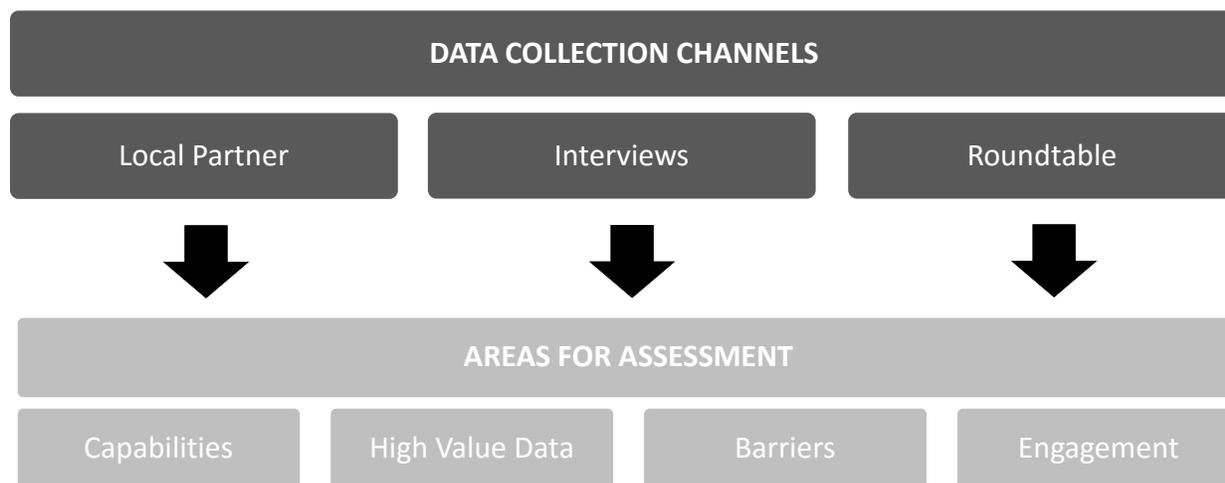
Limitations

The 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 determined by the number and spectrum of companies and business groups interviewed. It is not an exhaustive 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 ODRA or other means.

II) METHODOLOGY

Demand-Driven Open Data Approach

The OD4B Tool takes a demand-driven approach to open data to inform recommendations and next steps to the government. The Tool assesses the private sector use of government data based on an examination of four areas: (1) private sector capabilities, (2) high value data, (3) barriers to use, and (4) engagement. Within each area, a series of questions provide further context on the business use of government data. These areas are assessed by collecting data through three channels: (1) Local Partner, (2) interviews, and (3) a roundtable discussion.

DATA COLLECTION CHANNELS		
Local Partner	Interviews	Roundtable

AREAS FOR ASSESSMENT			
Capabilities	High Value Data	Barriers	Engagement

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[4] World Bank Open Data Toolkit: http://opendatatoolkit.worldbank.org/en/odra.html

Areas for Assessment

1) Capabilities – A number of factors determine the private sector's ability to utilize government data, including organizations' technical and financial resources to access, manage, and analyze the data. The Tool measures the following capabilities:

- Awareness about government data resources
- Internal data literacy and skills
- Internal available technical infrastructure
- Availability of financial resources for data-related activities

2) 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. The Tool gathers information on:

- Data used by the private sector and associated cost, formats, and sources
- Data applications (e.g. development of a new product/service, organizational optimization)
- Demand for government data, including data types and datasets of greatest interest
- Key factors determining data's value, such as timeliness or completeness
- Current and/or potential impact of government data for business

3) Barriers – Private sector organizations may face a number of obstacles to use of government data. Barriers can include legal and regulatory constraints, as well as cost, quality, and accessibility issues. The Tool identifies:

- Key barriers to data use
- Impact of such barriers on business
- Potential solutions for addressing these barriers

4) Engagement – Government engagement with data users has proven to be an essential element in successful open data programs. The Tool assesses:

- Current and most effective methods for the private sector to request government data and provide feedback
- Responsiveness of government to data requests and feedback
- Potential for public-private collaborations to increase the business use of government data.

II) DATA COLLECTION

The four areas outlined above are assessed by collecting information from three channels: (a) Local Partner, (b) interviews, and (c) a roundtable discussion. Together, data from these channels provide a more holistic picture of the private sector's interest in and use of government data. The primary information gathering instrument is the OD4B Questionnaire that provides both qualitative and quantitative findings (Annex 4). All three channels should be used together for the most accurate and complete findings.

Local Partner

The Local Partner plays an important role in providing initial background on the current known use of government data, recommendations for companies to interview and participants for the Roundtable and overall support in the coordination of meetings. Local Partners may include World Bank in-country office staff, private sector development specialists, and/or other international organizations. Local Partners may also include the local Chamber of Commerce

or government agencies, particularly from the Ministry of the Economy/Industry and Trade and the Business Registry Agency. For full guidance on the Local Partner, see Annex 2.

Interviews

Interviews with a diverse spectrum of the private sector provide specific and in-depth insight into current business use and interest in government data. Interviews are conducted by the OD4B Project Lead.

Who should be interviewed? – At minimum, 10 interviews should be conducted. Interviewees should be decision-makers with technical and/or business understanding of how their organizations use data. Companies that have demonstrated high interest or use of government data should be prioritized for interviews as opposed to the Roundtable discussion.

Identifying interviewees – Interviewees are identified through initial background research, in consultation with the Local Partner, and through recommendations from the local Chamber of Commerce and other business, IT, or trade associations. The following variables should be taken into account when selecting participants for interviews to ensure representation across the private sector:

- **Users:** Known users and potential users of government data, typically data-driven organizations
- **Sectors:** Major and emerging industries
- **Sizes and Types:** SMEs, Large established companies, Multinationals, State-Owned/National, Associations, Incubators

The Local Partner should provide guidance in identifying candidates and coordinating as many interviews as possible with the OD4B Project Lead, based on time constraints. See Annex 3 for a template to collect and track potential participants.

Timing - The interviews should take place before the Roundtable, and can also help inform specific topics for discussion at the Roundtable. In cases where interviews are scheduled as a follow up to a Roundtable, participants will already have filled out the OD4B Questionnaire at the event. The interviewer should use the Questionnaire as a general guide to ask more specific details about their responses.

Before the interview – All interviewees should be sent the "Introduction to Open Data for Business Briefing" (Annex 1) prior to the interview as background on open data and how it is relevant to the private sector.

During the interview – The OD4B Project Lead should use the OD4B Questionnaire (Annex 4) as an interview guide for prompt questions to guide the conversation. The questionnaire is not to be self-administered. The scoring sheet (Annex 8) can be used by the OD4B Project Lead to collect responses to the questions, which will help streamline response aggregation for the final report.

Roundtable

Roundtables are facilitated discussions that bring together current and potential users of government data to raise awareness about open data among the private sector, help identify high-value datasets, find solutions to data problems, and establish new collaborations. The Roundtables can also help identify champions of open data for follow-up action.

Roundtables provide a setting to discuss open government data in a way that differs from individual interviews. They generate the kind of input on private sector data use that is best captured through a group discussion or through

brainstorming with colleagues. This part of the assessment adds another layer of knowledge and context to compare with insights from the Local Partner and individual company interviews.

The OD4B Project Lead facilitates the roundtable after an introductory presentation with a series of questions for group discussion. The Roundtable typically lasts 2-3 hours. The Local Partner should invite participants to the Roundtable and coordinate logistics, such as space and materials including printing, a projector, and event space. For a full roundtable planning guide, see Annex 3.

Who should be invited? – The ideal Roundtable size is between 15-30 private sector attendees, contingent on availability of facilitators for breakout sessions. If there are more than 30 attendees, it is recommended to hold multiple roundtables in order to facilitate the group effectively. Attendees should be decision-makers with technical and/or business understanding of how their organizations use data. Companies that have already been interviewed should not be invited to the roundtable discussion to avoid duplication of responses.

Identifying participants – Similarly to the individual interviews, the Local Partner provides guidance on potential Roundtable participants. These should include a broad spectrum of representatives from the categories described in the "Interviews" section.

Timing – The Roundtable should take place after interviews so that the roundtable questions are updated and informed by the initial learnings from those conversations.

Before the interview – All interviewees should be sent the "Introduction to Open Data for Business Briefing" (Annex 1) prior to the interview as background on open data and how it is relevant to the private sector.

At the end of the roundtable – The OD4B Questionnaire (Annex 4) is self-administered by all participants to increase the sample size of questionnaire responses and bring a broader perspective to the findings. The responses to questionnaires should be added to the scoring sheet (Annex 8) to keep all data from interviews and roundtables in one centralized and comparable place.

IV) PHASES & TIMELINE

The OD4B Tool process takes approximately 7-8 weeks from the initial background research to the finalizing of report (may vary based on project-specific circumstances.) There are three phases: scoping, data collection, and findings and recommendations. This chart provides guidance to the OD4B Project Lead in coordinating and managing key tasks.

Phase 1 | Scoping: This phase, which takes about 4-6 weeks, sets the stage for data collection and includes framing of the project, initial background research, and identification of participating organizations. It begins with confirming the Local Partner and collaborating with that organization to identify priorities for the assessment and key stakeholders. This phase also includes research on the business climate, identifying companies to interview, and beginning to plan the roundtable.

Step	Description	Materials Needed	Estimated Time Frame
1. Framing of Project	• Confirm Local Partner • Send Local Partner Briefing (Annex 2)	Local Partner Briefing	Varies

Step	Description	Materials Needed	Estimated Time Frame
	• Identify potential priority areas with the Local Partner		
2. Initial background research	• Pre-mission research on business and economic environment and open data ecosystem. See Annex 6 for research resources.	Resources List	1 week
3. Identification of participating organizations	• Develop a list of participants to interview and invite to the Roundtable based on research and recommendations • Begin organizing interviews and roundtable • Send "Introduction to Open Data for Business" Briefing prior to interviews AND roundtable participants	Potential Participant Template; Roundtable Planning Guide; Introduction to OD4B Briefing	2-3 weeks

Phase 2 | Data Collection: This phase takes approximately 5 to 7 days in the field and involves collecting information from current and potential data users through three different channels. It includes consultation with the Local Partner; conducting interviews using the questionnaire, and holding a roundtable.

Step	Description	Materials Needed	Estimated Time Frame
4. Local partner consultation	• Gather any additional background information and context from Local Partner • Finalize interviews and roundtable participants and logistics	Potential Participant Template	
5. Interviews	• Interview priority companies using the OD4B Questionnaire as an interview guide and Scoring Sheet to collect responses • Obtain additional recommendations for further interviews/roundtable participants • Based on the scoping and interviews, refine the topic areas/questions for the roundtable breakout sessions	OD4B Questionnaire; Scoring Sheet	Field Work 5-7 Days
6. Roundtable	• Host Roundtable using the Planning Guide for prompt questions • Distribute OD4B Questionnaire (Annex 4) to be self-administered by all participants at the end of the event • Obtain recommendations for additional follow-up interviews	Roundtable Planning Guide; OD4B Questionnaire	

Phase 3 | Findings and Recommendations: In this final phase, the information collected in Phase 2 are aggregated, analyzed, and published. It includes consolidating questionnaire responses and notes from interviews and the roundtable, writing up a report of findings and recommendations for action, and presenting that report to the Local Partner and government officials in the host country.

Step	Description	Materials Needed	Estimated Time Frame
7. Scoring	• Consolidate all responses from OD4B Questionnaires gathered during interviews and at the roundtable using the Scoring Sheet (Annex 8)	Scoring Sheet	2-3 days

	• Review notes from interviews and roundtable discussion for context and fact-checking of OD4B Questionnaire responses		
8. Report & Next Steps	• Draft report of findings and recommendations to distribute to Local Partner and key stakeholders for feedback, taking into account privacy considerations from the opt-out box on the questionnaire. • Prepare Final Report incorporating any feedback received • Follow up with participants with thank you messages and next steps (where applicable) • Additional engagements may be conducted at the discretion of the Local Partner and/or the OD4B Project Lead including follow up surveys, roundtables, interviews	Final Report Template	Varies

V) OUTCOMES

The OD4B Tool is designed to benefit private sector current and potential data users and government policy makers by increasing the business use of government data. This is achieved through an (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 key performance indicators (KPIs) are listed for both short and long-term outcomes based on the findings from the scoring sheet.

Short Term Outcomes	KPI
Greater private sector awareness of the benefits of open government data	• # of organizations interviewed • # of organizations at the Roundtable
Identification of high-value data and barriers to use	• Top 3 high value data types identified • Top 3 barriers to use identified
Recommended Action Plan with findings and next steps	• Action Plan published

Long-term outcomes can be tracked by the Local Partner after the publication of the Action Plan. It is recommended that the Local Partner follow up with the organizations that participated in OD4B interviews or roundtables to assess the Tool's long-term performance using the following indicators:

Long-Term Outcomes	KPI
Higher use of government data by the private sector	• Increased number of downloads of government data • Increased requests for government data
Ongoing government engagement with private sector data users	• Implementation of private sector engagement strategy including data requests and feedback • Establishment of data advisory council that includes private sector representatives from large and small companies

	• # of government data-related public private partnerships established
Improved legal and regulatory environment for private sector use of open data	• # of open data policies relevant to the private sector created or passed by governments

VI) ANNEXES

1. "Introduction to Open Data for Business" Briefing

2. Local Partner Briefing

3. Roundtable planning guide

4. OD4B Questionnaire

5. Final Report Template

6. Resources List

7. Potential Participants Template (separate attachment)

8. Scoring Sheet (separate attachment)

ANNEX 1

INTRODUCTION TO OPEN DATA FOR BUSINESS
A World Bank Briefing Note
Lead Authors: Laura Manley and Joel Gurin

INTRODUCTION

Open Data – data freely available online for anyone to use and republish for any purpose – is recognized as a major public resource. While social media, companies, and NGOs can all be sources of Open Data, the most widely used Open Data comes from government and government-supported institutions. Their data covers many sectors of the economy, and can improve public-sector services and open up new private-sector opportunities as well.

Open Data promotes private sector growth in a number of ways.[5] It can help launch new businesses, optimize existing companies' operations, and create jobs and increase employment, and improve the climate for foreign investment. Several studies have attempted to estimate the economic value of Open Data worldwide. The most widely quoted is a study by the McKinsey Global Institute,[6] which estimated that Open Data (from government and non-government sources) could create three to five trillion dollars annually in economic value worldwide in seven sectors of the economy. These include education, transportation, consumer products, electricity, oil and gas, health care, and consumer services.

That study found Open Data benefits consumers as well as businesses. These beneficiaries can include farmers who increase their crop yields by working with data-driven agriculture companies, shoppers who find better prices through data-enabled websites, workers who use Open Data services to improve their education and training, and many others. By fueling new and existing business, Open Data also helps create jobs that benefit both the private sectors and individuals who have new employment opportunities.

This paper reviews the business benefits of Open Data in four major areas: its use as a resource for both startups and existing companies, employment opportunities, and the investment climate.

NEW BUSINESS CREATION

New companies around the world are using Open Data as a resource to fuel businesses in all sectors of the economy.

Open Data in areas like health, education, energy, agriculture, and finance has fueled new companies across the globe. These new ventures have been documented through in-depth studies of Open Data in the U.S.[7] and several other countries, and through several global studies, including a project done as part of the Open Data for Development (OD4D) network.[8] These companies can take very different forms in different parts of the world. In developing countries where mobile phones are ubiquitous, for example, mobile platforms may serve as the most efficient data-delivery system for new companies.

New companies are using Open Data to provide entirely new kinds of products and services. These can be as specific as individual mobile apps or as wide-ranging as major companies that have launched using weather, agriculture, geospatial, and housing or real estate data.

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[5] Stott, "Open Data for Economic Growth," World Bank, 2014. http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf

[6] Manyika et al., "Open Data: Unlocking Innovation and Performance With Liquid Information," McKinsey & Company, 2013. http://www.mckinsey.com/insights/business_technology/open_data_unlocking_innovation_and_performance_with_liquid_information.

[7] http://www.opendata500.com

[8] http://www.opendataenterprise.org/map

In general, new data-driven businesses follow one of two broad models. They may provide data as a resource for other businesses by improving data quality, create new data platforms and formats. Alternatively, they can provide information and analytics through products and services designed for direct use by businesses or consumers. Many companies focus on making open government data itself more accessible, usable, and easy to analyze. These companies have a positive cascade effect, providing improved data for use by a wide range of other data-driven companies that use it to build their business. Open Data startups are growing in a number of sectors of the economy, such as the following:

Healthcare: Open Data companies connect patients to healthcare providers, provides a check on healthcare quality, and helps keeps medical costs in line. In Mexico, Medii[9] uses geospatial data and government data on pharmacy locations and prices to help consumers find the medicines they need when they need them. Tipsdokter [10] in Indonesia, Medicinia[11] in Brazil, and eVaidya[12] in India use online data-driven systems to improve healthcare access.

Education: Open Data helps ensure the availability of quality education, reduces corruption in education funding, improves school operations, and gives parents information to find the best education for their children. A number of organizations in Mexico are using Open Data both to assess school quality and to promote innovation, while projects in the Philippines and Uganda are using Open Data to fight corruption in education funding.

Agriculture: Open Data is improving the transparency and efficiency of agricultural markets, helping farmers adopt more productive and efficient techniques, and empowering consumers through information. The Climate Corporation in the US is using sophisticated analysis of weather and satellite data to promote what has been called "precision agriculture." In addition to efforts at this scale, several developing countries have seen the growth of new entrepreneurial companies that help small farmers with relevant data. In Ghana, the company Farmerline sends farmers essential information on weather and agriculture by voice and text to their mobile phones. [13] Solapa, an Argentinian company, is building a platform to help farmers analyze their crop strategy and yield by combining market data with sensory and GIS data.[14]

Transportation: Urban transportation is being transformed by Open Data. There are now hundreds of apps around the world that help commuters know when the next bus or train is coming, from YourBus in India[15] to NextBus[16] in the U.S The Digital Matatus project in Kenya addressed an even more basic problem: There was no map for Nairobi's matatu minibus system so commuters didn't know where to wait for a ride.[17]

Energy: Open Data companies can help improve energy efficiency by analyzing energy use patterns, help consumers find the most cost-effective energy sources, and help build the renewable energy industry. On the consumer side, for example, the German comparison portal CHECK24 provides online price comparisons for consumers comparing local energy providers. On the industry side, the Indian company REConnect Energy has built data-driven Tools to forecast power output from wind and solar sources.

Finance: For new businesses, Open Data is not just a resource for developing products and services; it can also be a means to getting the financing needed to launch a company in the first place. Innovative new lending companies in several countries are using Open Data to provide financial help to small businesses. The Mexican company Aspiria[18] uses Open Data to facilitate micro-lending. Mexico's Konfio[19] and Columbia's Lenddo[20] use market and other data sources to provide loans to people with no credit history.

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[9]http://medii.co/

[10] https://www.techinasia.com/free-medical-consultation-straight-home-indonesias-tipsdokter/

[11] http://medicinia.com.br/

[12] http://www.evaidya.com/

[13] http://www.farmerline.org

[14] http://www.solapa4.com/en

[15] http://www.yourbus.in/

[16] http://www.nextbus.com/

[17] www.digitalmatatus.com

[18] https://www.aspiria.mx/

[19]https://konfio.mx.prestamos/

[20] https://www.lenddo/com/

BUSINESS OPTIMIZATION

Companies can use Open Data to operate more efficiently, compete more effectively, grow into new markets and make better decisions.

Existing businesses as well as startups can benefit greatly from using open government data. Open Data can help companies optimize their operations in several ways. It can help them become more efficient, for example by streamlining processes or logistics; improve their competitive advantage, for example through market intelligence; analyze the potential in new markets; or improve decision-making in any number of areas.

Streamlining operations: Efficiency gains from using Open Data can benefit companies of all kinds. Using weather and other data to predict demand can create major savings for the fresh foods industry. Transport companies can use GPS data and Open Data about vehicle cost and maintenance to purchase, deploy, and maintain fleets more efficiently. A number of companies now use Open Data to save energy in their operations and in commercial buildings.

Competitive advantage: Businesses use Open Data to improve their competitive edge. Some new companies, for example, help brands and media outlets generate the content their audiences want by analyzing data with predictive analytics.[21] Marketers use open government data from census studies to tailor their appeals to different kinds of consumers, while market researchers can combine Open Data with proprietary data to get deeper insights into their current and potential customers.

Assess new markets: Open government data can also help companies decide where to launch new ventures or branches. In New York City, for example, the NYC Business Atlas Tool[22] provides a wealth of local information for companies to use in deciding on new locations. They can use the Atlas Tool to evaluate neighborhoods to find most optimal locations for new stores by pedestrian activity, age groups, and more.

Improved decision-making: Finally, Open Data can help improve business and professional decisions at all levels, from those made by multinational corporations to decisions that directly impact individuals. Oil and gas companies use open geological data as well as data on economic trends and other factors to guide decisions about plant location and other investments. At a different level, healthcare researchers and companies are now combining Open Data with patients' records to personalize their medical care in the hope of improving treatment outcomes.

JOB CREATION AND EMPLOYMENT OPPORTUNITIES

Open Data has the potential to create jobs, match potential employees to jobs that need their skills, and improve job training.

New jobs: By serving as a business resource in the ways just described, Open Data creates jobs. It helps launch new businesses that create new job opportunities, and enable existing companies to operate more profitably, grow their business, and increase hiring. While it is difficult to estimate the number of jobs created by businesses using Open Data, some studies have attempted to do so. One study found that "infomediaries" (companies that sell services on top of Open Data) employ around 4,000 people and generate 330-550 million Euros annually in Spain. A study done by an industry group estimated that GPS data adds close to $100 billion annually to the U.S. economy and supports 3.3 million American jobs.[23]

Skills and job matching: Open Data can be used to match job-seekers with employers and help increase national employment levels overall. In high-income countries, both for-profit companies like Linked In and Monster.com and

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[21] http://blogs.worldbank.org/ic4d/new-surveys-reveal-dynamism-challenges-open-data-driven-businesses-developing-countries
[22] http://maps.nyc.gov/businessatlas/
[23] Cited in Stott, Open Data for Economic Growth, World Bank, June 2014, http://www.worldbank.org/content/dam/Worldbank/document/Open-Data-for-Economic-Growth.pdf

government information systems help connect workers to employment. National governments can provide platforms for data about their own government positions, and help set standards for open employment data in the process. Companies in several countries are developing their own job-matching platforms, using a combination of mobile and internet Tools. These include a startup called Kalibrr[24] in the Philippines, Souktel[25] in the Middle East and Africa, Assured Labor[26], which operates in Brazil, Nicaragua, and Mexico, and LabourNet[27] in India.

A 2013 World Bank report summarized how Open Data in job-matching services can help both employers and potential employees. For employers, these services make it possible to find more qualified candidates through a larger candidate pool, reduce recruiting costs and time, find people to hire for entry level and low-skill level positions, and apply filters so that specific listings will be visible only to qualified applicants. Job seekers can avoid the time and cost of submitting their profiles through a traditional employment agency, search for work without having to travel to the employer's location, increase the chance of employment by getting access to more job openings quickly and efficiently, and receiving advice, training, and services to make their work experience and skills look more professional and attractive to employers.[28]

Job training: Finally, Open Data itself can be a Tool for training young people in the technology skills that can lead to successful employment. TuvaLabs, for example, uses a wide variety of datasets this way and has helped promote data skills in the U.S., in India, and elsewhere, including through a partnership with the World Bank in Sudan.[29] Governments around the world now run challenges and hackathons that use Open Data at a national, regional, or city level, and teachers can put together teams of computer science students to compete. The success of these programs will depend on the demand for technically skilled workers in a given country as well as the supply. In some regions, however, technical training can help create both a more skilled workforce and a wider range of opportunities for them.

IMPROVED INVESTMENT CLIMATE

Open Data can give potential investors essential information they need on a country's governance, infrastructure, and resources, and can help build ICT infrastructure as well.

Another major benefit of Open Data is its positive impact on the potential for attracting investment. Investors may be interested, for example, in data about a country's census statistics, workforce skills, tariffs, land, or the national information infrastructure. Open Data such as these can reflect the resources and infrastructure available to support investment in new ventures. For foreign investors concerned about risk, Open Data about the workings of government can be especially valuable.

The process used by the Millennium Challenge Corporation, a major vehicle for U.S. Foreign Aid, illustrates the importance of data in investment decisions. The Corporation uses a number of indicators as criteria for considering countries eligible for funding. While these indicators are developed by third parties (including the World Bank), they reflect measures related to the economy, health, education, and the environment. The Corporation uses these indicators to produce country scorecards which, in turn, are used by foreign investors to make their decisions.[30]

Increasingly, investors look to a country's own open government data – not just third-party data – as a similar guide to investment decisions. The extent of a country's Open Data program itself is now being seen as an indicator of

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[24] https://www.kalibrr.com/

[25] http://www.souktel.org/dev-products/job-matching

[26] http://assuredlabor.com/

[27] http://labournet.in/

[28] ICT Sector Unit, The World Bank, Connecting to Work: How information and communication technologies could help expand employment opportunities, Washington, DC, September 2013.

[29] https://tuvalabs.com/

[30] https://www.mcc.gov/pages/selection/indicators

open government, an important measure for investors. Two major initiatives now track the implementation of Open Data programs around the world: the Open Data Barometer[31], published by the World Wide Web Foundation, and the Open Data Index[32] from Open Knowledge, both updated annually. Countries that are looking to attract international investment may find that a higher ranking on the Index, the Barometer, or both is helpful to them.

CONCLUSION

Open Data can help governments and businesses around the world find new opportunities for economic growth and private-sector innovation. It can help launch new businesses, make existing businesses more efficient and profitable, increase employment, and attract foreign investment. Open Data is a versatile resource that can benefit businesses, consumers, and national economies as a whole.

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[31] Open Data Barometer: http://www.opendataresearch.org/project/2013/odb
[32] Open Data Index: http://index.okfn.org/

ANNEX 2

SUMMARY

The Open Data for Business (OD4B) Tool provides a methodology to assess the private sector's current and potential use of government data in various countries. The purpose of this Tool is 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.

ROLES AND RESPONSIBILITIES

OD4B Project Lead
Responsible for overall leadership and coordination of the OD4B engagement including:
- Initial planning and background research for the assessment
- Identifying participants for the interviews and roundtable
- Conducting interviews and facilitating the roundtable discussion
- Note taking and consolidating all discussions and findings
- Writing and publishing the findings and recommendations

Local Partner
The Local Partner provides support and regional knowledge by:
- Providing background information relevant to the local business use of government data
- Securing interview and event space and materials
- Assisting with identifying participants for the interviews and roundtable in collaboration with the OD4B Project Lead, in particular obtaining contact information
- Sending invitations and confirming participants
- Assisting the OD4B Project Lead with Roundtable facilitation (where needed)
- Reviewing and providing feedback on the Report (where appropriate)

INTERVIEWS WITH DATA USERS

Interviews with a diverse spectrum of entities provide specific insight into the private sector's interest in and current use of government data. Representatives from the following business groups should be interviewed by the OD4B Project Lead to ensure representation across the private sector:

- **Users:** Known users and potential users of government data, typically data-driven organizations
- **Sectors:** Major and emerging industries
- **Sizes:**
    - Large businesses (i.e. >250 employees)
    - Small to medium-sized enterprises (i.e. <250 employees)
    - Startups (i.e. entrepreneurs, incubators, accelerators, innovation hubs)
    - Other (e.g. state-owned companies, multinationals, and/or trade associations)

The Local Partner should provide guidance in identifying candidates and coordinating as many interviews as possible, based on time constraints. At minimum 10 interviews should be conducted, dependent on time constraints. Interviewees should be decision-makers with technical and/or business understanding of how their organizations use data. The interviews should be scheduled before the roundtable, and can also help inform specific topics for discussion at the roundtable. Organizations that have demonstrated high interest in or use of government data should be underlined prioritized for interviews as opposed to the Roundtable discussion.

All interviewees should be sent the "Introduction to Open Data for Business Briefing" (Annex 1) prior to the interview as background on open data and how it is relevant to the private sector.

ROUNDTABLE

Roundtables are facilitated discussions that bring together current and potential users of government data to raise awareness about open data among the private sector, help identify high-value datasets, find solutions to data problems, and establish new collaborations.

Similarly to the individual interviews, the Local Partner provides guidance on potential roundtable participants. These should include the broad spectrum of representatives from the categories described in the "Interviews" section. Companies that have already been interviewed should not be invited to the roundtable discussion to avoid duplication of responses.

The OD4B Project Lead facilitates the roundtable after an introductory presentation with a series of questions for group discussion. The Roundtable typically lasts 2-3 hours. The Local Partner should invite participants to the Roundtable and coordinate logistics, such as space and materials including printing, a projector, and event space.

All participants should be sent the "Introduction to Open Data for Business" Briefing prior to the Roundtable as background on open data and how it is relevant to the private sector.

Recommended Attendees
The ideal Roundtable size is between 15-30 private sector attendees, contingent on availability of facilitators for breakout sessions. If there are more than 30 attendees, it is recommended to hold multiple roundtables in order to facilitate the group effectively. Attendees should be decision-makers with technical and/or business understanding of how their organizations use data.

Structure
Roundtables are composed of a presentation and breakout sessions.
- **Opening Presentation(s):** The purpose of the brief opening presentation(s) is to familiarize attendees with open data and its value to the private sector, provide information on the regional context and national open data initiatives, and give examples of how the companies are using government around the world. These presentation(s) should be a basis for discussion in the breakout sessions. The presentation(s) should be tailored to the client country and reflect initial findings of the preliminary research and interviews. Typically the OD4B Project Lead and the Local Partner give the presentation(s) to introduce the purpose of the discussion and any regionally specific context.
- **Breakout Sessions:** After the opening presentation, attendees are split into smaller breakout groups (based on the number of total participants and available facilitators.) The participants should be broken up

according to their level of familiarity with open data. If the group overall has low familiarity with open data, participants should be split up by sector.

During each session: For each group, the facilitator introduces, guides and moderates the session.

Reports-out: After each session, the facilitator at each breakout table will summarize the main discussion points for the rest of the room. These report outs may last between 5-7 minutes per table, based on the number of participants and level of conversation.

Suggested Agenda

9:30 am   Welcome

9:40 am   Brief Presentations:

  ▪ What is open data & why does it matter to the private sector?
  ▪ Open data in the local context
  ▪ International examples of private sector use of government data

10:00 am   Session 1: Private Sector Priorities & Barriers to Data Use

  - Discuss the role of data for businesses
  - Awareness of and interest in open government data
  - Feasibility of using open government data

10:40 am   Session 2: Opportunities and Next Steps

  - Priority datasets/ data types
  - Public private partnerships possibilities
  - Identifying channels for ongoing engagement

11:20 am   Administer OD4B Questionnaire

11:30 pm   Closing

LOCAL PARTNER CHECKLIST

Scoping (Pre-Field Work)
- ☐ Send any relevant background information about the business climate to the OD4B Project Lead, where applicable
- ☐ Develop list of priority companies (10 minimum) to participate in interviews AND additional list of companies (approx. 15-30) to participate in the roundtable discussion using the "Potential Participants Template." Make sure to include various:
  - o **Uses:** Known users and potential users, typically data-driven organizations
  - o **Sectors:** Major industries
  - o **Sizes:** Incubators/Startups, SMEs, Large established, Multinationals, State-Owned/National
- ☐ Organize interviews for OD4B Project Lead with Chamber of Commerce and/or trade associations, where applicable
- ☐ Confirm logistics for interviews AND roundtable, such as space and schedule

☐ Invite companies to participate in the roundtable and/or interviews and include "Introduction to Open Data for Business" briefing note (separate attachment)

Data Collection (Field Work)

☐ Finalize logistics for roundtable with OD4B Project Lead: confirm location, speakers, materials, availability of translators and note-takers, where applicable

☐ Assist with facilitation of breakout sessions at the roundtable

☐ Follow up with participants as needed (e.g. Letters of thanks)

Findings and Recommendations (Post-Field Work)

☐ Review and provide feedback on Open Data for Business (OD4B) Report findings and recommendations

ANNEX 3

OPEN DATA FOR BUSINESS TOOL

ROUNDTABLE GUIDE

DESCRIPTION

Roundtables are facilitated discussions that bring together current and potential users of government data to raise awareness about open data among the private sector, help identify high-value datasets, find solutions to data problems, and establish new collaborations.

The OD4B Project Lead is responsible for giving an introductory presentation and facilitating the breakout sessions at the Roundtable with a series of questions for group discussion. The Roundtable typically lasts 2-3 hours. The Local Partner is responsible for inviting participants to the Roundtable and coordinating logistics, including printing, a projector, and event space.

All participants should be sent the "Introduction to Open Data for Business" Briefing prior to the Roundtable as background on open data and how it is relevant to the private sector.

RECOMMENDED ATTENDEES

The ideal Roundtable size is between 15-30 private sector attendees for breakout sessions. If there are more than 30 attendees, it is recommended to hold multiple roundtables in order to facilitate the group effectively. Attendees should be decision-makers with technical and/or business understanding of how their organizations use data.

Similarly to the individual interviews, the Local Partner should provide guidance on potential roundtable participants. These should include the broad spectrum of representatives from the categories described in the "Interviews" section. Companies that have already been interviewed should not be invited to the roundtable discussion to avoid duplication of responses.

STRUCTURE

Roundtables are composed of a presentation and breakout sessions.

- **Opening Presentation(s):** The purpose of the brief opening presentation(s) is to familiarize attendees with open data and its value to the private sector, provide information on the regional context and national open data initiatives, and give examples of how the companies are using government around the world. These presentation(s) should be a basis for discussion in the breakout sessions. The presentation(s) should be tailored to the client country and reflect initial findings of the preliminary research and interviews. Typically the OD4B Project Lead and the Local Partner give the presentation(s) to introduce the purpose of the discussion and any regionally specific context.

- **Breakout Sessions:** After the opening presentation, attendees are split into smaller breakout groups (based on the number of total participants and available facilitators.) The participants should be broken up according to their level of familiarity with open data. If the group overall has low familiarity with open data, participants should be split up by sector.

<u>During each session</u>: For each group, the facilitator introduces, guides and moderates the session.

<u>Reports-out</u>: After each session, the facilitator at each breakout table will summarize the main discussion points for the rest of the room. These report outs may last between 5-7 minutes per table, based on the number of participants and level of conversation.

SUGGESTED AGENDA

9:30 am   Welcome

9:40 am   Brief Presentations:

- What is open data & why does it matter to the private sector?
- Open data in the local context
- International examples of private sector use of government data

10:00 am   Session 1: Private Sector Priorities & Barriers to Data Use

- Discuss the role of data for businesses
- Awareness of and interest in open government data
- Feasibility of using open government data

10:40 am   Session 2: Opportunities and Next Steps

- Priority datasets/ data types
- Public private partnerships possibilities
- Identifying channels for ongoing engagement

11:20 am   Administer OD4B Questionnaire

11:30 pm   Closing

SUGGESTED QUESTIONS

Most of the questions below are similar to those that are recommended for individual interviews with government data users (see Annex 4). In a roundtable setting, they can be asked of individual participants during the initial breakout session, presented for group discussion, or used in whatever way will advance understanding of the participants' data use.

Session 1
The goal of this session is to understand how the participating businesses work and what their specific priorities and data use are. Facilitators should aim to gage private sector interest in government data and discuss how it can be used to optimize or expand their current work. Facilitators should not spend too much time on open data but focus on the nuances of the participants' business, how/where government data may be a beneficial resource, and what is currently impeding its use.

<u>Prompt Questions</u>

- Please give a brief description of your business or association.
    - What are your key lines of work/products/services?
    - What are your key goals and priorities?

- Please describe the ways in which you use data.
    - What are the most important types of data you currently use?
    - Is this data open?
    - Where do you get it from? (Ask for details: National, regional, city data? Specific ministries and/or datasets?)
    - How do you access it?
    - How do you use it to advance your goals/priorities?
- What are some examples of how your company or others you know of in your country are using government data successfully?
- What are the current or potential barriers to data access and use? Ask for observations on policy, capacity, and technical barriers. As needed, ask for further detail on:
    - Barriers to entry – E.g. Availability of skilled data and technical experts, limited technical infrastructure
    - Challenges in accessing government– E.g. Issues such as legal and/or governmental policies on data reuse; availability of government for free or for a fee; existence or lack of government data policy
    - Challenges in using government data: Data not interoperable, not machine-readable, or difficult to use for other technical reasons
    - Lack of availability of relevant government data
    - Perceived risk in using government data – E.g. reliability of the data, legal constraints to reuse

Session 2
The goal of this session is to pick up on the conversations from the previous session with a focus on what is needed to begin using government data. Focus on (1) prioritizing key types of data, (2) identifying potential private sector partners for government. Do not focus on the theoretical problems of government data – instead, focus on what is needed to move forward and where these companies are willing to start collaborating with government.

Prompt Questions

- What kind of technical capacity do you have to collect, manage, and analyze data? If technical capacity is a limitation, what kinds of resources, technical assistance, or other help would you need to improve it?
- Beyond the data you currently have, what are the most important other types of data and datasets you wish you had? How might this data improve or benefit your company?
- What kinds of government, commercial, or third-party solutions would you like to see to help overcome barriers?
- Which of these are immediate opportunities? Which are long-term solutions?
- What is needed to accomplish these? (*Look for potential champions that are willing to partner with government to test private sector integration)
- What are the optimal communication channels for you and the government? What is the best way for the government to disseminate information about its data?

ANNEX 4

QUESTIONNAIRE INSTRUCTIONS

The Open Data for Business (OD4B) Questionnaire is designed to gather data across the four key areas of assessment - Private sector capabilities; High value data; Barriers to use; and Engagement – and suggestions for increasing business use of government data.

The OD4B Project Lead should use the Scoring Tool (Annex 8) to tally the responses from all questionnaires. The tallied qualitative and quantitative responses provide a basis for the OD4B Report (Annex 5).

INTERVIEWS

The OD4B Project Lead is the main interviewer. During the interviews, the OD4B Questionnaire should serve as a guide, and is <u>not</u> to be self-administered by the interviewee. The interviewer should use one questionnaire per organization in order to tally the responses effectively at the end of the process. The areas in boxes marked as 'additional information' should be used to gather as much context and detail as possible.

ROUNDTABLES

During the roundtable(s), the questionnaire is to be <u>self-administered</u> by participants at the end of the roundtable, and collected as soon as they are completed. Additional notes should be taken at all roundtable breakout sessions to complement the questionnaire responses.

OPEN DATA FOR BUSINESS TOOL
QUESTIONNAIRE

The Open Data for Business (OD4B) Questionnaire is designed to collect information on private sector current and potential use of government data. The Questionnaire contains 21 questions. Please answer all questions as completely as possible. (*Required)

Name: _____

Title: _____

Contact information: _____

Organization Name: _____

GENERAL INFORMATION

1) Type of Organization (Select 1)*

- ☐ Business – Small (<20)
- ☐ Business – Medium (21-100)
- ☐ Business – Large (>100)
- ☐ Multinational
- ☐ Industry/Trade Association
- ☐ Incubator/Accelerator
- ☐ Academia
- ☐ Civil Society Organization
- ☐ Other:_____

2) Industry/Sector (Select 1)*

- ☐ Agriculture
- ☐ Arts and Culture
- ☐ Business and Legal Services
- ☐ Consumer Services
- ☐ Data/Information Technology
- ☐ Education
- ☐ Energy
- ☐ Environment
- ☐ Finance and Investment
- ☐ Geospatial/Mapping
- ☐ Governance
- ☐ Healthcare
- ☐ Housing, Real Estate, Construction
- ☐ Insurance
- ☐ Media and Communications
- ☐ Mining/Manufacturing
- ☐ Research and Consulting
- ☐ Security and Public Safety
- ☐ Scientific Research
- ☐ Telecommunication/Internet Service Providers
- ☐ Tourism
- ☐ Transportation and Logistics
- ☐ Water and Sanitation
- ☐ Weather
- ☐ Other:_____

3) Brief description of organization and key lines of work

_____

4) What is your business or revenue model?*

- ☐ Advertising
- ☐ Affiliate
- ☐ Contracting
- ☐ Direct Sales
- ☐ Fee for service
- ☐ Subscription
- ☐ Other:_____

5) Do you have financial resources available for utilizing data? (Circle 1)*   Yes / No

   If yes, select the following types:

   ☐ Internal   ☐ Commercial Loan

   ☐ Venture Capital or Angel Funding   ☐ Foundations

   ☐ Grants   ☐ Other:_____

   ☐ Government Innovation Funds

6) Type(s) of information <u>currently used</u>*

7) How do you access this information? (Select all that apply)*

   ☐ Radio/TV   ☐ Social media   ☐ Other companies
   ☐ Newspaper   ☐ Personal networks   ☐ Scraping webpages
   ☐ Internet search   ☐ Professional networks   ☐ Other:_____
   ☐ Government websites   ☐ Internal data collection

Additional Information (Cost for the information? Format?)

8) What does your organization use information for? (Select all that apply)*
   ☐ Developing new products, services or applications   ☐ Pricing
   ☐ Identifying new customers   ☐ Research
   ☐ Organizational optimization (e.g. competitive   ☐ Other: _____
      advantage, benchmarking, market research)

9) Rate your organization's <u>technical capacity</u> to aggregate, analyze and manage data (Circle 1)*
   Poor   Average   Excellent
   1   2   3   4   5

10) Rate your organization's data <u>literacy and skills</u> (Circle 1)*
   Poor   Average   Excellent
   1   2   3   4   5

11) What capabilities are most interested in improving or increasing? (Select 1) *
   ☐ Hiring technical staff
   ☐ Technical skills training
   ☐ Data management and tools
   ☐ Other: _____

GOVERNMENT DATA

12) How aware are you of what government data is available in your country? (Circle 1)*
   Not aware   Average   Very aware
   1   2   3   4   5

13) Type of <u>government data</u> of greatest interest. (Select up to 3)*

- ☐ Agriculture
- ☐ Arts and Culture
- ☐ Business
- ☐ Consumer
- ☐ Demographics and Social
- ☐ Economics
- ☐ Education
- ☐ Energy
- ☐ Environment

- ☐ Finance
- ☐ Geospatial/Mapping
- ☐ Government Operations (budgets, spending, procurement, elections)
- ☐ Health/Healthcare
- ☐ Housing & real estate
- ☐ International/Global Development
- ☐ Legal

- ☐ Manufacturing
- ☐ Science and Research
- ☐ Public Safety
- ☐ Tourism
- ☐ Transportation
- ☐ Weather
- ☐ Other:_____

Additional Information (Specific datasets?)

14) How valuable is government data to your business? (Select 1)*

Not at all		Somewhat		Extremely
1	2	3	4	5

15) Select the <u>greatest</u> barriers to use of government data. (Select top 3)*

- ☐ Data is difficult to find
- ☐ High cost of data
- ☐ Lack of relevant data (i.e. topical)
- ☐ Data is not specific enough (i.e. aggregated)
- ☐ Data is not up-to-date
- ☐ Data is inaccurate or unreliable

- ☐ Data is in difficult-to-use formats (i.e. paper, PDF, images)
- ☐ Legal restrictions on commercial reuse
- ☐ Lack of data skills
- ☐ Other:_____

16) How do the above barriers impact your business?*

17) What are potential solutions to these barriers?*

ENGAGEMENT

18) How do you <u>currently</u> communicate with government about data? (Select 3)*

- ☐ Hand-written letter
- ☐ Visit government office
- ☐ Designated phone number
- ☐ Designated email
- ☐ Public Workshops/Roundtables

- ☐ Individual Meetings
- ☐ Surveys
- ☐ Online feedback forms
- ☐ Social media
- ☐ Other:_____

19) Rate the level of responsiveness of government to businesses about data (Select 1)*

Poor		Fair		Excellent
1	2	3	4	5

20) What are the <u>most effective ways</u> businesses can communicate with government about data? (Select 3)*

☐ Hand-written letter   ☐ Individual Meetings

☐ Visit government office   ☐ Surveys

☐ Designated phone number   ☐ Formal online feedback forms

☐ Designated email   ☐ Social media

☐ Public Workshops/Roundtables   ☐ Other:_____

☐ Hackathons/Competitions

21) Are you interested in <u>collaborating with the government</u> in any of the following ways? (Circle 1)*   Yes / No

If yes, select the following types:

☐ Provide advisory services to government on data

☐ Improve service delivery using government data

☐ Develop IT infrastructure for government data

☐ Develop web or mobile applications using government data

☐ Promote data literacy through events and outreach

☐ Other:_____

Additional Information (What types of public-private partnerships or specific projects you are interested in?)

Questionnaire results opt-out

☐ Select this box if you would NOT like your name and your organization to appear in the aggregated results of this questionnaire.

ANNEX 5

OPEN DATA FOR BUSINESS
FINAL REPORT TEMPLATE

Country:

Prepared by:

Date:

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.

EXECUTIVE SUMMARY

Participants:
- o Total number of participating organizations
- o Types of organizations
- o Industries/Sectors surveyed
- o Types of business models

Summary of findings:

ASSESSMENT AREA	KEY FINDINGS	CONTEXT/COMMENTS
High Value Data		
Current data use by private sector *Top 3 types*		
Government data of greatest interest *Top 3 types of data*		
Most important characteristics of government data		
Capabilities		
Technical infrastructure available *Average on 1 (low) - 5 (high) scale*		
Data literacy and skills *Average on 1 (low) - 5 (high) scale*		

Capabilities of greatest interest *Top 3*		
Available financing for data related activities *Top 3 types*		
Awareness of government data resources *Average on 1 (low) -5 (high) scale*		
Barriers		
Most significant barriers		
Impact on businesses		
Engagement		
Current government communications methods *Top 3*		
Level of government responsiveness to data requests		
Most effective outreach and feedback channels *Top 3*		
Greatest opportunity to increase business use of government data *Top 3*		

FINDINGS

Based on the interviews, questionnaire responses, discussions and the roundtable, and insights from the Local Partner, the findings summarize trends and observations across the four assessment areas – high value data, capabilities, barriers, and engagement. Each section demonstrates both the spectrum of responses and overall trends. Additionally, the information can be examined in the following groups:

- *Industries/sectors*
- *Types of organizations (e.g. Incubators/Startups, SMEs, Large, Multinationals, State-Owned/National)*

Areas for Assessment

1) <u>Capabilities</u> – A number of factors determine the private sector's ability to utilize government data, including organizations' technical and financial resources to access, manage, and analyze the data. The Tool measures the following capabilities:

- Awareness about government data resources
- Internal data literacy and skills
- Internal available technical infrastructure
- Availability of financial resources for data-related activities

2) <u>High Value Data</u> – 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. The Tool gathers information on:

- Data used by the private sector and associated cost, formats, and sources
- Data applications (e.g. development of a new product/service, organizational optimization)
- Demand for government data, including data types and datasets of greatest interest
- Key factors determining data's value, such as timeliness or completeness
- Current and/or potential impact of government data for business

3) <u>Barriers</u> – Private sector organizations may face a number of obstacles to use of government data. Barriers can include legal and regulatory constraints, as well as cost, quality, and accessibility issues. The Tool identifies:

- Key barriers to data use
- Impact of such barriers on business
- Potential solutions for addressing these barriers

4) <u>Engagement</u> – Government engagement with data users has proven to be an essential element in successful open data programs. The Tool assesses:

- Current and most effective methods for the private sector to request government data and provide feedback
- Responsiveness of government to data requests and feedback
- Potential for public-private collaborations to increase the business use of government data.

ACTION PLAN

Based on the findings from the OD4B engagement, this section describes recommended next steps to increase the business use of government data. This section should provide solutions that address the barriers identified with the Tool, and incorporate best practices from other countries as well. Where relevant, solutions should include a proposed timeline, key stakeholders, and desired impact. Below is a recommended outline for an Action Plan to be delivered to the government/client:

A. **Building private sector capabilities**

   I. Skills (e.g. addressing private sector skill gaps through trainings, education programs)

   II. Infrastructure (e.g. strategies to accommodate private sector technical infrastructure to utilize government data)

   III. Access to financing (e.g. providing additional financial resources for data-related initiatives through grants, competitions)

B. **Prioritize data with high commercial value**

   I. Recommended high-value datasets for release

   II. Recommended data improvements (i.e. addressing barriers related to formats, quality, timeliness for key datasets)

C. **Improving legal and regulatory frameworks**

   I. Access to government data (e.g. reduced cost of data)

   II. Commercial reuse of government data (i.e. licensing)

D. Proposed Private Sector Engagement Strategy

      I.   Awareness (e.g. data advisory councils, public outreach programs)

     II.   Data requests (e.g. online request forms, designated data stewards)

   III.   Data feedback (e.g. online feedback forms, roundtables)

E. PPP opportunities

      I.   Short-term

     II.   Long-term

ANNEX 6

Business and Economic Environment

- ICT Development Index (p.42): http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf
- Global Entrepreneurship Index (GEDI): http://thegedi.org/countries
- World Bank - Ease of doing business: http://www.doingbusiness.org/rankings
- Global Innovation Index: https://www.globalinnovationindex.org/content/page/GII-Hom
- World Bank - Foreign Direct Investment: http://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD

Open Data

- World Bank Open Government Data Toolkit: http://opendatatoolkit.worldbank.org/en/
- Open Data Index: http://index.okfn.org/
- Open Data Barometer: http://barometer.opendataresearch.org/
- Open Data Impact Map: http://www.opendataenterprise.org/map