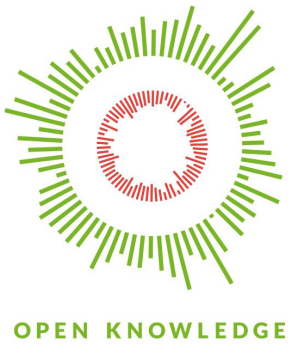
Final Technical Report
Global Partnership of Open Data for Development 2015



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Author: Katelyn Rogers, Open Data for Development Project Manager

Executive Summary

Open Knowledge International (OKI) through our work on the Global Partnership of Open Data for Development, a continuation of the Partnership for Open Data, has accomplished the following:

- We recruited School of Data fellows in Nepal, the Philippines, Ghana and Nigeria who have delivered over 15 in person trainings in their countries and regions, produced new courses and skillshares, and have each completed a data driven project on subjects such as data collection and disaster preparedness.
- We launched the third annual Global Open Data Index, which evaluated the release of open data in 122 countries in thirteen data categories
- We launched the Problems and Solutions bank with examples of how open data is being used to solve challenges in areas such as housing, international aid & transparency, ride-sharing & public transit, tracking global warfare, unveiling incarceration rates and the delivery of health services
- We are working in collaboration with local partners to pilot two distinct "Follow the Money" projects designed help citizens better understand how public money is being spent when budget and expenditure data is not made readily available by government
- We used the open data census to track the release of open data in cities, the compliance of South African municipalities in regards to the publication of key information and the disaster preparedness of local authorities in the Philippines.
- We developed a data model and platform to help communities and civil society organisations understand who own oil contracts in Namibia
- We formed a partnership with the Datashift project and are supporting a citizen generated data project in Kenya and Tanzania to monitor citizen perception regarding the provision of services for disabled citizens.
- We are researching the emerging impacts of open data in cities around the world in order to provide more in-depth understanding of engagement opportunities at the sub-national level.
- We worked in collaboration with other Open Data for Development network partners to form the Africa Data Co-Lab

A number of important lessons have been learned and substantial progress has been made towards increasing local ownership over the Open Data for Development programme. Through the support of the Open Data for Development grant, we have effectively been able to transition ownership of the School of Data network to its members (a number of whom are from the Global South) and are beginning the process of developing the Africa Data Co-Lab to lead the open data agenda in Africa.

The research problem

This year, drawing on the lessons from the implementation of year one of the Partnership for Open Data, Open Knowledge International focused on three core activities - tracking the state of open data, improving data literacy and data capacity within civil society and the deploying innovative data-driven solutions to global challenges. Open Knowledge International (OKI) first began our work with the Open Data for Development network in September of 2013 and over the past two years, while the core objectives of the programme have remained the same and continue to drive the work of OKI, important lessons have been learned, which helped us to fine tune our activities to better address the data realities of the local communities we seek to serve. For the past two years we have been working on the assumptions that through the increased release of high quality data coupled with its uptake and use by civil society, we can have profound impacts on achieving development outcomes. Open Data, and in particular Open Government Data, is argued to facilitate citizen engagement in government, increase transparency & accountability, improve government decision-making and strengthen trust and collaboration between governments and citizens.

However, while we have seen data be released by government as well as an increasing number of examples of data being taken up and used by citizens to draw insights and develop applications, the transformative impact of open data remains limited. As such, we have shifted our focus to go beyond transparency, disclosure and the openness of public information, to think about the data infrastructure itself and the role that civil society groups

can have in shaping the data that impacts our lives. While it remains true that for open data to have an impact, we must continue to encourage the release of high quality, pertinent, timely data in open and machine readable formats, we also must interrogate this data to better understand what is being measured and why. Finally, we must understand the data ecosystems that we are working in and develop new ways of pairing open data with citizen generated data, scraped data and other unofficial data sources to develop a richer and more accurate understanding of the problems that we are working to solve. As a result, while we have worked to monitor the release of open government data through tools like the open data census, we have also

Through important policy achievements such as the adoption of Africa Data Consensus and the the Sustainable Development Goals, we have a framework to operate within and it is the goal of Open Knowledge International to work with civil society organisations, journalists and OD4D network partners to democratise the data revolution and ensure that the benefits are felt by all.

Objectives

The primary objective of Open Knowledge International's contribution to the OD4D network has been to scale innovative approaches to the use of open data to ensure the benefits of the open data revolution are felt by all communities in the Global South. We set out to deliver this objective through the development and deployment of data-driven projects, the continuation of our flagship data capacity building programme and by tracking the supply of open data being made available by countries in the Global South. While the core objectives of the programme have remained the same, key lessons from the first year of the Partnership for Open Data and the first six months of participation in the Open Data for Development network have taught us that it is often necessary to focus on alternative forms of data (such as scrapped or citizen generated data) as open data is not being made available at the speed required. As such, OKI has also began exploring alternative methodologies for approaching data challenges.

Furthermore, a core objective of the OD4D programme and network is to increase southern ownership of the local open data agenda and activities. As such, Open Knowledge International, in collaboration with IDRC and the OD4D partners have worked to transition leadership to southern organisations and networks.

Project Activities & Outputs

Global Open Data Index

On December 9th, 2015, OKI launched the 2015 Global Open Data Index, which ranked 122 countries on their release of open data in thirteen key categories. The Global Open Data Index is the result of civil society collaboration to track the state of open data in countries and places around the world. Over the year, we have seen that the tool is used by governments to set their open data priorities as well as by civil society actors as an advocacy

mechanism to encourage governments to improve their performance in releasing key datasets.

The Index ranks countries based on the availability and accessibility of the following key datasets: spending, budget, procurement, election results, weather forecast, pollution levels, water quality, location datasets, national statistics, national map, legislation, company register and land ownership. This year's datasets were determined by a public consultation, which saw contributions from individuals within the open data community as well as from key civil society organisations across an array of sectors. As a result of this, we expanded the 2015 Index to include procurement data, water quality data, land ownership data and weather data.

During the data collection process, we also collected data on health performance and transport timetables; however, upon review, we determined that the samples collected were too different to serve as a useful comparison and ultimately they were both omitted from the final ranking. This was not entirely surprising. Transport timetables have proven difficult to compare over the past two years due to the significant differences in both transport systems and their management globally. Likewise, as this was the first year that we attempted to include health performance data in the Index, we were immediately concerned about the lack of consensus within the open data community in regards to what data we should be measuring as a useful health performance indicator. We decided to use the following measure "Geo location of public hospitals and health facilities with opening hours and infectious diseases rate, updated at least once a year. Data submitted in this category must include the following: Location of public hospitals and clinics & Data on infectious diseases rates in a country.[1]" Unfortunately, as these tend to be two separate datasets, the submissions that we received varied greatly and we determined that it would not serve as an effective measure of the release of open data on health performance globally. While health performance and transport timetables were not included in the 2015 Index, this is not to say that they will be omitted going forward. We will continue to work with health and transport experts within government, civil society and the open data community to fine tune our definitions to ensure that what we measure is both useful and relevant.

Another key change to this year's index is that we partnered with topical experts (both individuals and organisations) to improve the definition of the datasets that we measure and to improve the dataset review process. This was particularly significant for election results, which, after having discussed extensively with the National Democratic Institute, Google and other election data and monitoring experts, we decided to require poll station level data in this category as election fraud becomes easier to conceal when data is not published at this level of granularity. However, in certain countries such as Ireland and the UK, election laws stipulate that data should be collected at constituency level and therefore we were faced with a challenge in which governments were publishing the most granular data that they collect but received zero points on the Index for this category. This served as a useful example of how the data that we have is shaped by an array of socio-technical factors (in this

[1] http://global.census.okfn.org/dataset/health

case the law), where publishing the data that has been collected is not actually sufficient for communities to use that data to hold government to account, or in this case monitor elections effectively. As we see it, the Global Open Data Index, as a civil society audit of the data revolution, must measure that the data that we need rather than simply the data we have and continue to advocate for governments to collect data that will serve both the needs of government and civil society.

For more details on the methodology : http://index.okfn.org/methodology/

Some key findings of the Global Open Data Index 2015 are:

- Taiwan topped the Index for the first time this year becoming the first non-European country to place in the top three. Nevertheless, significant progress is still to be made as Taiwan's overall score reveals that their data is only 78% open. Crucial datasets such as government spending, postcodes & land ownership are still closed and inaccessible to citizens.
- The UK fell to second place for the first time in this year's ranking with an overall score of 76%, down from 96% last year. This year's fall in score is due largely to the 2015 dataset definitions in categories such as election results requiring more granular data and the inclusion of data on water quality and land ownership, both of which are closed in the UK.
- While the top rankings in the Index remained dominated by OECD countries, for the first time three non-OECD countries placed were able to break into the top ten with Taiwan placing first, Colombia placing fourth and Uruguay placing seventh.
- For the third year running, the most open dataset globally is national statistics and the least open is government spending, with Greece being the only country to publish 100% open data for transactional government spending.I
- Overall, whilst there was meaningful improvement in the number of open datasets (from 124 to 154), the percentage of open datasets across all the surveyed countries fell from 11% in 2014 to 9% in 2015. Furthermore, as the scope of the Index increased significantly, surveying 122 rather than 97 countries across 13 rather than 10 dataset categories, it is clear that little progress has been made at the global level.

This year, we also were able to make progress towards our goal of convergence with the Open Data Barometer through the addition of datasets, such as land ownership, that had previously not been included in the Open Data Index. In early 2016, our two teams are planning to get together to discuss the outcomes of both projects and determine a timeline for our synchronised 2016 effort.

Tracking Government Using the Open Data Census:

In addition to using the open data census software to track the state of open data globally through the Global Open Data Index, at the national level, we used the software to benchmark and track the release of open data at the subnational level as well as the performance of municipalities in complying with other important laws and regulation.

Municipality Compliance South Africa

In South Africa, municipalities are required by law to publish all service delivery agreements and all publicly available tenders on their websites. Ndifuna Ukwazi (NU) recently did a sweep of all municipality websites to determine the extent to which local municipalities are complying. In collaboration with the engine Room, NU and Code for South Africa we used the open data census software to score and rank municipalities in regards to how much data was made available on their websites, with a particular focus on service delivery agreements and public tenders.

The initial data sweep was conducted by NU in November 2014. Based on this, we built a data model[2] that would better structure the data in a way that would link municipality information to their compliance data. This process helped to sort and segment the data into pieces that would make it easier for developers to work with. The resulting spreadsheet of data was broken down by province and unique identifiers were given to each municipality. An unexpected result of this process was that certain inconsistent information was identified and highlighted for further review within the data model. These inconsistencies mainly comprised of municipality records that were either misspelled or were not available on the official list of municipalities in South Africa.

Code for South Africa adapted the open data census code to create a customised platform that met the requirements of the project. The required indicators were added to the home page and the individual municipality pages. This included a ranking of all municipalities based on their compliance with the law. The ranking was determined by the availability of information for 10 indicators:

- Physical Address
- Postal Address
- Website
- Information Officer phone number
- Information Officer email
- Provision of access to information
- Public documents
- Service delivery agreements
- Public tenders

The information on this website can be updated and approved to be publicly viewable at any point. The municipality compliance tracker website is available here http://muni.compliancetracker.org.za/ . The github repository for the source code is available here:https://github.com/Code4SA/opendatacensus-muni

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2 https://docs.google.com/spreadsheets/d/1amtFjxA2JaGO6cvgw1_f6Q2A4gLONqfNXwSLt74FJI4/view#gid=0

Tracking Sub National Open Data Release

While the release of open data at the national level is important, often the data of most interest to citizens is far more local. As such, we have been working with communities in Chile, Mexico, Argentina, the Caribbean and Nepal[3] to track how well subnational governments (regions and cities) are doing on open data. For local governments to adopt openness, they need to be clear about why openness matters, how to publish open data and what data they need to be publishing. One of the many benefits to a local open data census, is the data that is measured can be tailored to suit the needs of the given local community. The five new local Open Data Indexes will be published in January 2015 to compliment a research paper we will be publishing on open data and cities.

Disaster Preparedness in the Philippines

In addition to numerous trainings across the Philippines and a very successful Open Data & Open Government event, the OD4D School of Data fellow has also nearly completed an Emergency Data Dashboard, which tracks local government disaster preparedness. Local governments in the Philippines are primarily responsible for preparation and response before, during and after emergencies but they often decide arbitrarily of the type of measures that they take. While there is data at their disposition that could help local government teams make more effective decisions, low levels of data literacy and a lack of easy to use tools for decision making have prevented this from happening.The goal of Emergency Data Dashboard project was to produce a public information dashboard to help in emergency preparedness that would double as a tool for comparing data quality of the 8 regions in the Philippines.

The project will not only help the work of information managers and local governments in the Philippines, it will potentially improve the life of the people affected by the natural disasters thanks to a better emergency response by authorities. It is our goal to make sure that the lessons we learn are properly documented so that the project could be replicated in other countries facing the same issues than the Philippines.

The primary objectives of the dashboard are as follows:

1. To make the data on disaster preparedness available in both downloadable and printable formats as well as in a data visualisation.
2. To create a customisable list of indicators that can visualised on the platform according to the emergency and relevant data needs
3. To deliver a tool that allow local governments to take evidence-based decisions
4. To improve the data quality and collection of some regions by showing the best practices of other regions

At the time of this report, final development is taking place on the Emergency Data Dashboard, which will we published before December 31st, 2015.

[3] http://np-city.census.okfn.org/

Innovation & Replication

One of our primary objectives has been to work with local organisations and communities to develop methodologies, processes and technologies that address specific local challenges and that can ideally be used by other communities to address similar challenges.

Data Modeling Oli Contracts in Namibia:

We provided support to the engine room and the Institute of Public Policy Research (IPPR) in order to map the trends in the allocation of Petroleum Exploration Licences (PELS) in Namibia. The mapping of details, trends and links in this sector will help to open up a system that is currently opaque and vulnerable to corruption. This project was designed to help IPPR structure, digitise, and systematise the way that contract data is managed and analyzed by the organization for its advocacy. We worked to make this methodology was replicable, and once this concept has demonstrated feasibility, to share it regionally to include other sectors within the extractives industry such as licensing and allocation of mining rights.

At the beginning of the project we decided that a data model was necessary to complete the task of collecting the required data that was necessary to show the trends that needed to be highlighted. A custom data model[4] was created, which would be used for data collection. The process of creating the designs for the user interface (UI) was interactive and required four rounds of feedback from both the partner and industry experts. The final designs now include four main views with multiple visualizations that include:

- A map linking licenses with oil concessions and the companies that operate them
- A timeline of ownership of the license and changes in ownership over time
- A global map of the companies and the jurisdictions in which they are registered and highlighting any tax havens they also operate in
- A view of the company's' ownership and if they are operated by larger corporations

At the time of writing this report, the project is in its final stages. The data model is complete and the partners are finalising the work on the platform described above, work is expected to be complete by December 31st, 2015. All tools and raw materials will be shared and accessible for others doing similar work. Other reusable components of this project, such the contract concession data model, will be shared openly and documented so that others interested in similar projects can benefit from the efforts here.

Tools & Approaches to Follow the Money in the Global South

It is fundamentally important for public trust and good governance that citizens are able to understand how public money is being spent. Nevertheless, the Global Open Data Index shows us that while more and more governments are opening up their budgets, there is only one government that publishes truly open transactional spending data. As such, through OD4D we worked with communities in Nepal and Malaysia to explore citizen driven methodologies for monitoring government spending in environments when little to no machine-readable data is available.

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4 https://docs.google.com/spreadsheets/d/1iN9iLz6RFdPZfwnLeR5iUJNOvmKE2NXuw-t6qwEUmPk/edit#gid=812747643

Open Spending in Constrained Environments

In Malaysia, not unlike many developing countries, there is lack of budget and spending data being made publicly available (often at all three levels of government - federal, state and municipality). Based on international evaluations of open data performance such as the Open Data Barometer and the Global Open Data Index, Malaysia is ranked low due to the absence of open data policies as well as Freedom of Information legislation at federal level. While, there is some budget data being published at Federal level and Freedom of Information Enactments (FOIE) in two states; Selangor and Penang, there are many gaps and it is essential to find alternative approaches if citizens want to understand how public money is being spent in Malaysia. As such, OKI, in collaboration with the Sinar Project in Malaysia, have decide to take the case public housing spending in Selangor as an opportunity to explore how citizens in constrained open data environments can use an array of tools to follow the money in their local communities.

We started this process in Malaysia knowing that the vast majority of the government budget is not accessible to the public and government expenditure is not published at all. Furthermore, the little public data that is available, is not made available as open data and is therefore difficult to analyse, visualise or examine.This lack of transparency creates an environment for potential mismanagement of funds and corruption. Finally, with so little information available, there is lack of public participation in decision making processes and little to no public accountability.

In order to address these challenges and get citizens more involved, we are conducting a social audit of public housing in Selangor. A social audit is a process by which the community collects and publicly reports issues, which are then mapped against government budgets to try to provide a more complete picture of the spending landscape and to allow communities to monitor whether budget was appropriately spent even without spending data being published. Finally, OKI is working with the team in Malaysia to ensure that the data collected is able to be cleaned, standardised and uploaded to OpenSpending in order to allow citizens working in more challenging data ecosystems to still benefit from data visualisations and tool made possible through open spending.

Nepal Follow the Money

Through Datashift, OKI has provided support for the Local Interventions Group's Follow the Money Nepal Initiative. Follow the Money Nepal is an initiative that was initially developed as a response to the April 2015 earthquake in Nepal. It is an effort to track government spending on the relief and reconstruction effort, from the central government, the district governments and the VDC (Village Development Committee) level. Nepal currently does not have the government capacity to spend the full budget in a non-disaster-relief context – in the past few years an average of 60% of the budget remains unspent at the end of fiscal year. There is a great risk of this trend disrupting the disaster relief and reconstruction efforts, especially in rural districts. The preliminary findings of the Follow the Money initiative found that between 10% and 55% of the funds allocated by the central government to the district government remains unaccounted for.

However, these findings were, to this point, only at the district level, and to take this project further, we need to expand the capacity for managing the information collection and workflow. We are now working to track the government spending to the VDC level and will eventually include the work of donors and NGOs, in order to provide a more complete picture of disaster relief money flows that will ensure fair distribution of reconstruction aid. Our goal is not only to ensure that earthquake relief efforts are fair and transparent but that all Nepalis, now and in the future, are listened to by those that choose to serve them.

Citizen Perception of Services for Disabled Persons in Kenya & Tanzania

The objective of this citizen generate data project is to **s**cale up investigation in citizen perception of implementation of services for disabled persons in both Kenya & Tanzania. The governments of both Kenya and Tanzania have made commitments to provide a number of basic services to disabled citizens. The objective of this project is to design and implement a survey to better understand citizens perceptions of the implementation of these services. At present, there is not sufficient data available to understand whether the government is effectively delivering on its commit. Through the design of the survey, offline data collection process and the final advocacy effort, documentation of the process will be produced to provide a framework for others to use citizen generated data to address critical data gaps and monitor service delivery in government.

Research: Open Data & Cities

In this forthcoming paper we introduce the idea of open data and examine the opportunity it represents for cities around the world. In particular, we focus on its role in improving public service delivery as well as its potential social, cultural, democratic and environmental value. We conclude with some thoughts on the role of data intermediaries as well as on going beyond the release of datasets towards making city data infrastructures more responsive to the interests, needs and concerns of their citizens.

Through our research, we have we have confirmed that cities currently publish a wide variety of datasets, reflecting the diversity and heterogeneity of the information systems used in local governance, policy-making, decision making and service delivery – from georeferenced data about the locations of public facilities to information about environmental conditions, from local election data to information about local revenues, expenditures and public sector contracts. There are also new forms of digital traces (or transactional metadata) being generated as a byproduct of digital platforms, services and infrastructures. Moreover, in recent years there has been an explosion of city-level initiatives to use this data in the service of a wide range of different goals. City open data initiatives have the potential to engage new publics and articulate new public spaces and forms of public participation around the use of official information – facilitating new kinds of relationships between citizens and public institutions.

The final paper is due to be published in the first quarter of 2016. It is our intention to use the outputs of this paper to not only inform our work as part of the Open Data Charter Sub National Working Group but will also be an important resource for our community as they determine what datasets they should be measuring through the Local Open Data Index.

Open Data Handbook Problems & Solution Bank

The problems and solution bank is our last edition to the Open Data Handbook, Open Knowledge main fundamental resource to Open Data. The handbook includes a guide, a glossary, a value stories section and a resource library. The new solutions section will complete the handbook and will make the it an end to end product that covers open data from basics to implementation.

The new solutions section is different from other application repositories in the open data ecosystem. Firstly, the solutions bank is focused on more that a single use case for open data but rather is interested in exploring the use of open data to build applications, conduct research, develop infographic and even its use in a supreme court appeals. In this way, it offers a spectrum of use cases demonstrating the versatility of open data for an array of stakeholders. Secondly, it record only solutions that used open data. Scrapped or crowdsourced data is only acceptable if the resulting solution also made use of open data. While this limits the solution bank to examples from places where data is open, it also give best practices and allow to have a place to share and learn. Finally, the idea is not merely to link to an application that was developed but also to provide any necessary contextual information that might help members of the open data community learn from both the process of of developing the solution and the solution itself.

Currently, the solution bank allows filtering by theme, problem or solution. It is covering six problems areas - Influx Of Housing Price Increases, International Aid & Transparency, Ride-Sharing And Public Transit, Tracking Global Warfare, Unveiling Incarceration Rates and Health Service. Each problem can have more than one solution associated to it. Over the course of the first quarter of 2016, we will be reaching out to our community to add both problems and solutions to the database.

Capacity Building

In April of 2015, the School of Data programme selected seven fellows, from a total of 563 applications, to participate in the 2015 fellowship programme. David Selassie Opoku from Ghana, Sheena Carmel Opulencia-Calub from the Philippines, Nkechi Okwuone from the Nigeria and Nirab Pudasaini from Nepal were selected as part of the Open Data for Development programme. They are joined by Goran Rizaov from Macedonia, Julio Lopez Pena from Ecuador and Camila Salazar Mayorga from Costa Rica to form the School of Data Fellowship Class of 2015.

Below is a list of highlights that the Open Data for Development supported fellows achieved during their fellowship programme.

1. Open Data Awareness Raising and Data Training Journalism in Nigeria: Nkechi planned to work closely with Connected Development in Nigeria to deliver a number of trainings in her home state of Edo. Over the course of the 9 months, Nkechi and the Connected Development team ran a total of five open data training events for civil society and journalists in Nigeria. In December of 2015, Nkechi organised the first Open Data Party in Benin City in which 80 participants from across the state and

the country came to learn about the work Edo State has been doing on open data and to participate in a waste management hackathon. The winner, selected on December 12th, 2015 received funding to develop and deploy an application that allows citizens to report illegal dumping sites to the local council. The application will be deployed in both Kano and Benin City where local teams are on the ground and working with the government and citizens to ensure that the citizens are reporting illegal dumping sites and that the government is in turn responsive to the citizen reports and takes action.

2. Nirab organised four events using OpenStreetMap to map roads and improve transportation management for civil engineers who worked in the field of road maintenance. The 78 attendees were from 36 different cities across Nepal. Furthermore, he is working to produce a guide (or a best practices white paper) for individuals just starting data collection on data projects in the field of urban planning. With the digital tools currently available, data collection has been made significantly easier. However, a lot of mistakes are still being made by beginners to data collection when creating forms, collecting the data and analysing it. The objectives of the guide are as follows: Round up the best practices around data collection, produce a user friendly online guide that will be useful for beginners and seasoned users alike. The guide will be complete in early January 2015.
3. David has carried out seven training events, 5 of which have been data training workshops and the other two skillshares. The data training workshops included doing data scraping workshop with Code for Ghana, two training events at the Africa Open Data Conference and two training events in collaboration with the Natural Governance Resource Institute for journalists working on extractives in Ghana. Furthermore, he has presented two video skillshares on Data Scraping and the R programming language via Google Hangouts which received a lot of views and positive responses. Finally, David is finalising his effort to create a platform that allows journalists, civil society and citizens to easily fact check points and information that are published in the media. This platform is intended to be used for the following purposes: by individuals and organisations building a story that requires fact-checking before publication, on the spot checking of quotes and statements made by guests or authors on radio, television, newspapers and websites, ranking fact history of politicians and organisations that quote information to public.
4. Sheena produced a four-part module on Offline Data Collection (Creating Your ODK Data Collection Using Excel, Uploading and Testing your forms using Kobo Toolbox, Setting up and using your Kobo collect forms on your Android device, Managing your Kobo Toolbox Database), organised a Forum on Open Government Data in Manila, and lead a number of trainings including two data skills trainings in Northern Mindanao (June 2015) and Leyte (July 2015), training a total of 74 individuals of whom 31 were female and 33 male. Finally, Sheena has produce a Emergency Data Dashboard (discussed above) that will be available in December 2015.

Outputs

Finalised Outputs:

- The Global Open Data Index was published in December 2016
- Five Online Data Modules and Two Online Skillshares have been produced:
    - Creating Your ODK Data Collection Using Excel[5]
    - Uploading and Testing your forms using Kobo Toolbox[6]
    - Setting up and using your Kobo collect forms on your Android device[7]
    - Managing your Kobo Toolbox Database[8]
    - Extracting Data from PDFs[9]
- A Municipality Data Tracker (Data Model and Corresponding Website) were developed[10]
- We launched a BETA version of the Problems and Solutions bank, which we will be working with the community to populate over the first quarter of 2016[11]

Forthcoming Outputs:
Due to the late start of this project, there are a number of deliverables that will be finalised in the first quarter of 2016. All the projects have been described above in detail and a list of the expected outputs can be found below:

- Research Paper on the Emerging Impacts of Open Data in Cities, due January 2016
- Research on the release of data at the subnational level in Chile, Argentina, the Caribbean, Nepal[12] and Mexico will be published and visualised through the Local Open Data Index, due January 2016
- The Philippines Disaster Preparedness Data Dashboard (including data model, methodology and platform, Due December 31st, 2016
- Follow the Money Nepal Research Project, Due February 2016
- Social Audit & OpenSpending Malaysia, Due February 2016
- Survey & Analysis of Disabilities Services in Kenya & Tanzania, Due February 2016
- Ghana Fact-Checker Dashboard, Due January 2016
- Guide to Data Collection, Due January 2016

Outcomes

Global South Leadership of School of Data

After nearly 3 years of growth, School of Data has come to formally recognise the growing array of School of Data partners and stakeholders and has determined that it is imperative for the future sustainability of the network, that ownership and decision making of School of Data is shared with them. As such, School of Data has started to transition ownership of the School of Data to its members and taken steps towards establishing a network governance

[5] http://schoolofdata.org/creating-your-odk-data-collection-form-excel/
[6] http://schoolofdata.org/uploading-and-testing-your-forms-using-kobo-toolbox/#sthash.1fisyuq2.dpuf
[7] http://schoolofdata.org/28684-2/#sthash.Ao3INbr9.dpuf
[8] http://schoolofdata.org/managing-your-kobo-toolbox-database/
[9] http://schoolofdata.org/extracting-data-from-pdfs/
[10] http://muni.compliancetracker.org.za/about/
[11] http://opendatahandbook.org/solutions/en/

[12] http://np-city.census.okfn.org/

structure. After intensive meetings, debates and voting at the School of Data Summer Camp in Ottawa, the School of Data members elected a Steering Group and empowered them to represent the entire network as well as manage shared assets such as the School of Data brand.

The newly elected Steering Committee members[13] are:

- Juan Manuel Casanueva, Director of Social TIC
- Bardhyl Jashari, Director of Metamorphosis, Macedonia
- Natalia Mazotte, Programme Manager of School of Data Brazil
- Sander van der Waal, Projects Director at Open Knowledge International
- Antonio Cucho Gamboa, Senior School of Data fellow and Open Data Activist in Peru

Open Knowledge will remain a key stakeholder in School of Data as well as its legal and fiscal home. However, it will be the School of Data Steering Committee, of which Open Knowledge is a member, to make decisions around the strategic priorities for the network. The primary objective of this transition to a network governance structure is to empower School of Data members by giving them increased ownership of the project and network that they have contributed to building. By ensuring that the learnings, experiences and local knowledge of each of School of Data member contribute to shaping the objectives of the programme going forward, we believe that we will be better able to deliver data literacy trainings and develop a curriculum that meet the needs of local communities.

Global Open Data Index Impact on Government

Over the years, the Global Open Data Index has proven to be an effective advocacy tool, encouraging governments to open up crucial datasets. It is challenging compare datasets across countries for the simple reason that the data that we have is a produce of complex and diverse socio-technical systems, which vary greatly from country to country. As such, it is imperative that we work with the wider civil society organisations, governments and open data advocates to ensure that the benchmarks that we are setting both encourage the release of data actually required by and useful for citizens while also being fair measures internationally.

However, despite these challenges, the Index has proven to be an effective tool for encouraging the release of more and better data. This year, after having fallen from the top spot for the first time, the UK government offered the following response:

> "For instance, the Index does highlight things that we can do rather more quickly. There are a couple of measures - for example on government spending - where we have lost points versus previous years. This is not acceptable, and it's an important spur to action on our part to keep on top of timely, accessible publication of data like this. And there are other criteria where the index highlights areas of opportunity - land ownership, water quality and pollutant emissions, for example - where we can

[13] School of Data transition and steering committee announcement - http://schoolofdata.org/2015/06/15/the-future-of-school-of-data/

> use these results in conversations with data owners to explore ways we can open up further.
>
> So we're grateful to Open Knowledge - and the formidable team of volunteers that help create the Index each year - for providing us with a means for checking our progress and highlighting opportunities to develop further. Having tasted success at the very top of the table in previous years, we're all the more determined to do so again; and as our new Government Data Programme develops momentum - not just opening datasets but tackling the core data infrastructure that is necessary to drive data use and quality - we're confident we have a strong foundation to accelerate our progress. Roll on 2016."[14]

This clear engagement on the part of the UK government demonstrates the important role rankings such as the Index can and must play. It is essential that annual assessments of government data release are in place in order to ensure that governments continue to release high quality data. However, there is also work to be done, in collaboration with the wider open data community, to ensure that we are able to better assess data quality, accessibility and other key indicators, which, at present, we have no agreed measure.

Formation of the Africa Data Co-Lab

In partnership with the other members of the OD4D network, one of the most exciting outcomes of the work that was done this year, is that there is now a framework in place to increase African ownership over the local open data agenda. Through work Open Data Consensus and successful events such as the Africa Open Data Conference, it had become increasingly obvious that an effective and impactful open data agenda will necessarily need to take into account the data realities of the continent. As such, Open Knowledge International has helped to design a cross organisational body responsible for designing interventions and strategies that localise open data for the African context. The first major initiative of the Africa Data Co-Lab will be to incubate and mentor the recipients of the Africa Open Data Collaboration Fund. The winners, announced in December 2015, will receive mentorship and support from the Africa Data Co-Lab and their partners as they seek to implement innovative projects and data literacy programmes in seven different African countries.

Overall Assessment and Recommendations

We determined through research conducted in late 2015, that progress still needs to be made towards moving our capacity building initiatives beyond impact at the individual towards the organisational level. At present, through School of Data and other like initiatives, we are effectively able to improve the capacity of individuals to both use data and teach others to use data in their research and advocacy efforts. However, if we want our training programmes to have long-term impact, it is necessary that we move beyond individual change towards organisational change. As such, in 2016, the focus of School of

[14] https://data.blog.gov.uk/2015/12/15/open-data-the-race-to-the-top/

Data's activities in Africa will be split between the individual international fellowship programme, designed to develop & support local data leaders, and the embedded fellowship programme. The objective of the embedded fellowship programme will be to work in collaboration with the Africa Data Co-Lab to identify at least three organisations to receive support from senior School of Data trainers with the goal of the engagement being to improve the organisation's capacity to implement data-driven projects.

The Global Open Data Index is another project that we have been able to improve through past experiences but which there is still work to be done to ensure that its an effective, fair and impactful measure of the state of open data globally. As mentioned elsewhere in this report, determining the datasets and their respective definitions that can best be used to benchmark progress on open data presents a number of significant challenges. One primary challenge has been that datasets are the product of socio-technical systems that are far from standardised, and therefore difficult to compare, globally. In previous iterations of the Index, the submitted datasets were reviewed by country experts and as such, it was difficult to determine whether the data was being assessed on the same criteria and even whether we were truly comparing the same data.. This year, in order to improve consistency in the review process, we conducted a topical review, which helped to ensure that we were applying the same criteria to all countries, a process which helped us determine that our samples for transport timetable and health performance data were too diverse to serve as a useful comparison. While the topical review has helped to improve the consistency of the results, more work stands to be done. Going forward, by collaborating more effectively with the World Wide Web Foundation on the Open Data Barometer, we intend to continue the topical review while drawing on the Barometer's team of local researchers to conduct an additional county level review. This is particularly important in assessing the licence, for example, of a dataset, for which knowledge of the local laws and language is imperative.

Finally, one of the key lessons from the past two years of the Open Data for Development programme has been that our open data project implementation strategies require a better understanding of the context and the users that we are seeking to serve. A major challenge that open government, open data and ICT4D movements have faced has been that with the introduction of technology, best practice in development has a tendency to be overlooked. However, substantial progress has been made in the OD4D network with all network partners committed to ensuring that the conceptualisation and implementation of open data projects are more firmly rooted in the communities they are intending to serve. Through the transition of School of Data to a network driven project and the forming of the African Data Co-Lab, progress has been made towards ensuring that open data solutions are locally lead. Furthermore, work on the Local Open Data Index has allowed us to explore using alternative and more locally relevant datasets to benchmark progress on open data at the sub-national level. These efforts, in addition to the research conducted on open data innovation at the city level, should inform the work of the Open Data Charter Sub-National working group.