IODC 16

INTERNATIONAL OPEN DATA ROADMAP

GLOBAL GOALS | LOCAL IMPACT

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OpenData for development

IODC16

GLOBAL GOALS LOCAL IMPACT

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EXECUTIVE SUMMARY

We have entered the next phase in the evolution of the open data movement. Just making data publicly available can no longer be the beginning and end of every conversation about open data. The focus of the movement is now shifting to building open data communities, and an increasingly sophisticated network of communities have begun to make data truly useful in addressing a myriad of problems facing citizens and their governments around the world:

▸ More than 40 national and local governments have already committed to implement the principles of the International Open Data Charter;

▸ Open data is central to many commitments made this year by world leaders, including the Sustainable Development Goals (SDGs), the Paris Climate Agreement, and the G20 Anti Corruption Data Principles; and

▸ Open data is also an increasingly local issue, as hundreds of cities and sub-national governments implement open data policies to drive transparency, economic growth, and service delivery in close collaboration with citizens.

To further accelerate collaboration and increase the impact of open data activities globally, the Government of Spain, the International Development Research Centre, the World Bank, and the Open Data for Development Network recently hosted the fourth International Open Data Conference (IODC) on October 6-7, 2106 in Madrid, Spain.

Under the theme of Global Goals, Local Impact, the fourth IODC reconvened an ever expanding open data community to showcase best practices, confront shared challenges, and deepen global and regional collaboration in an effort to maximize the impact of open data.

Supported by a full *online archive* of the 80+ sessions and 20+ special events held in Madrid during the first week of October 2016, this report reflects on the discussions and debates that took place, as well as the information shared on a wide range of vibrant global initiatives, in order to map out the road ahead, strengthen cohesion among existing efforts, and explore new ways to use open data to drive social and economic inclusion around the world.

THE ROAD AHEAD

Issues Shaping the Open Data Agenda

From the current backlash to openness initiatives still being experienced in many parts of the world to the emergence of regional efforts and the need to integrate open data activities more effectively into other major global initiatives, the IODC provides a key opportunity to bring the international open data community together to discuss key trends and issues that are shaping our collective vision of the future of open data.

Toward Greater Impact: Where Open Data is Working

IODC 2016 also showcased hundreds of examples of the innovative use of open data around the world. Discussions focused on how open data is effectively addressing sector specific issues, supporting better governance, facilitating global climate action, and much more. The rapid growth of international networks and communities of skilled civic entrepreneurs are helping to scale the kind of positive change needed in the daily lives of citizens.

The Second Action Plan for International Collaboration

Most importantly, the conference provided a key opportunity to bring together the open data community to establish a collective vision for the work ahead through the creation of an Action Plan to help focus collaboration and global efforts to advance open data, drive partnership development, stimulate research, and measure progress.

Building on the first International Open Data Roadmap which stemmed from discussions at IODC 2015, the Open Data for Development Network (OD4D) has worked to examine progress and discuss further collaboration based on a range of events and workshops which took place at IODC 2016. All of these discussions and consultations have resulted in a new Action Plan for International Collaboration which is presented in this report as a collective vision of the work to be undertaken from now until the next International Open Data Conference to be held in Argentina in 2018.

ACHIEVEMENTS SINCE THE FIRST ACTION PLAN
ENABLING THE DATA REVOLUTION

✓ The launch of the International Open Data Charter at the United Nations General Assembly (UNGA) with over 30 governments committed to implementation of its core open data principles;

✓ Openness on diverse sources of official and non-official data are recognized as key to commitments made this year by world leaders, including the Sustainable Development Goals (SDGs), the Paris Climate Agreement, and the G20 Anti-Corruption Data Principles;

✓ International networks to advance open data to address issues, such as agriculture (GODAN) and public procurement (Open Contracts), have made significant strides in linking global goals and local projects affecting citizens;

✓ Regional open data conferences, such as Condatos and the Africa Open Data Conference, are expanding with support from bottom-up multistakeholder processes;

✓ A more coordinated global network of researchers are working to jointly measure the state of open data in more than 90 countries.

THE SECOND ACTION PLAN
GLOBAL GOALS, LOCAL IMPACT

☐ Broaden political commitment to open data principles

☐ Identify and adopt user-centric open standards

☐ Build capacity to produce and effectively use open data

☐ Strengthen networks to address common challenges

☐ Make action on open data movement more evidence-based

☐ Use open data to support the sustainable development agenda

☐ Connect with local communities

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IODC16
A DATA SNAPSHOT

29.27% **392**
Europe

10.97% **147**
North America

45.70% **612**
Spain

4.10% **55**
Asia

5.52% **74**
Latin America and Caribbean

3.28% **44**
Africa

1.12% **15**
Oceania
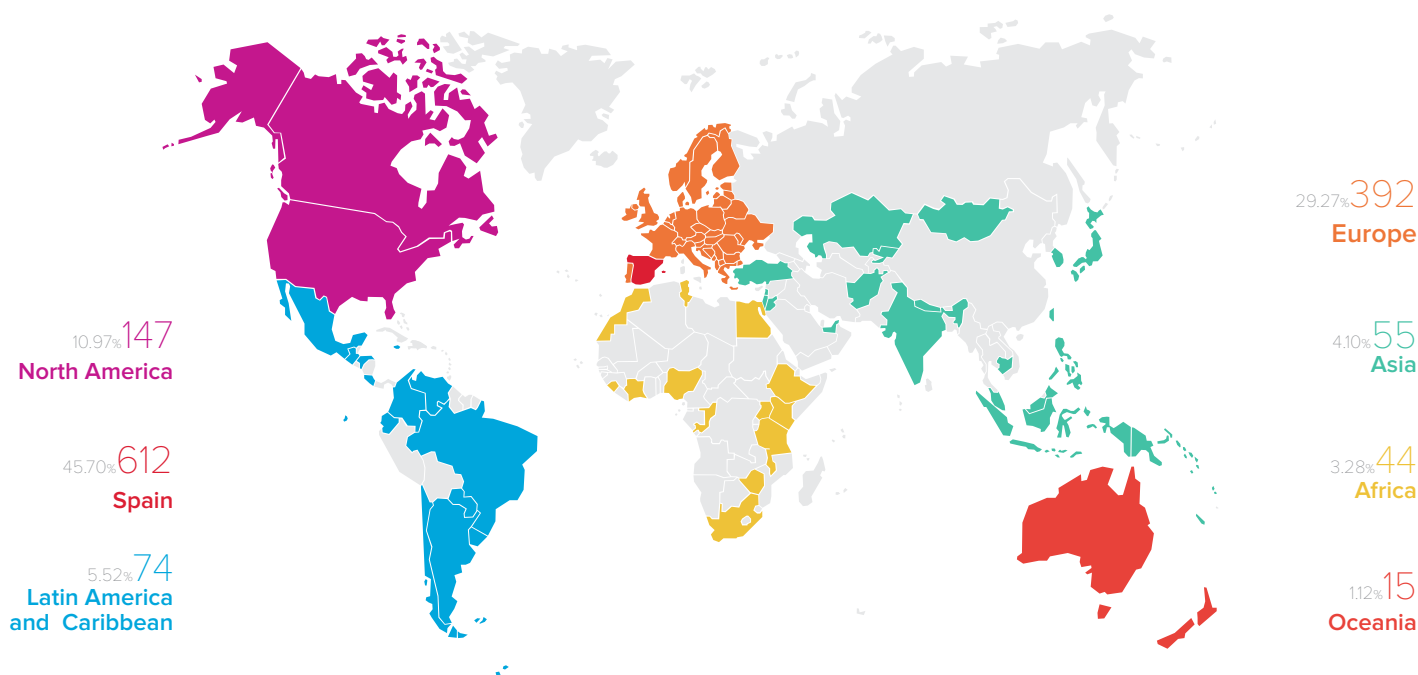
87	**28**	**1693**	**30k**
TALKS	PRE-EVENTS	ATTENDEES	TOTAL HOURS OF SHARED EXPERIENCES

38% **62%**

Media **16**

Multilateral Agency **35**

Student **36**

Other **53**

Independent **64**

Academia **106**

Private Sector **225**

NGO **233**

Government **279**

Affiliation unavailable **646**
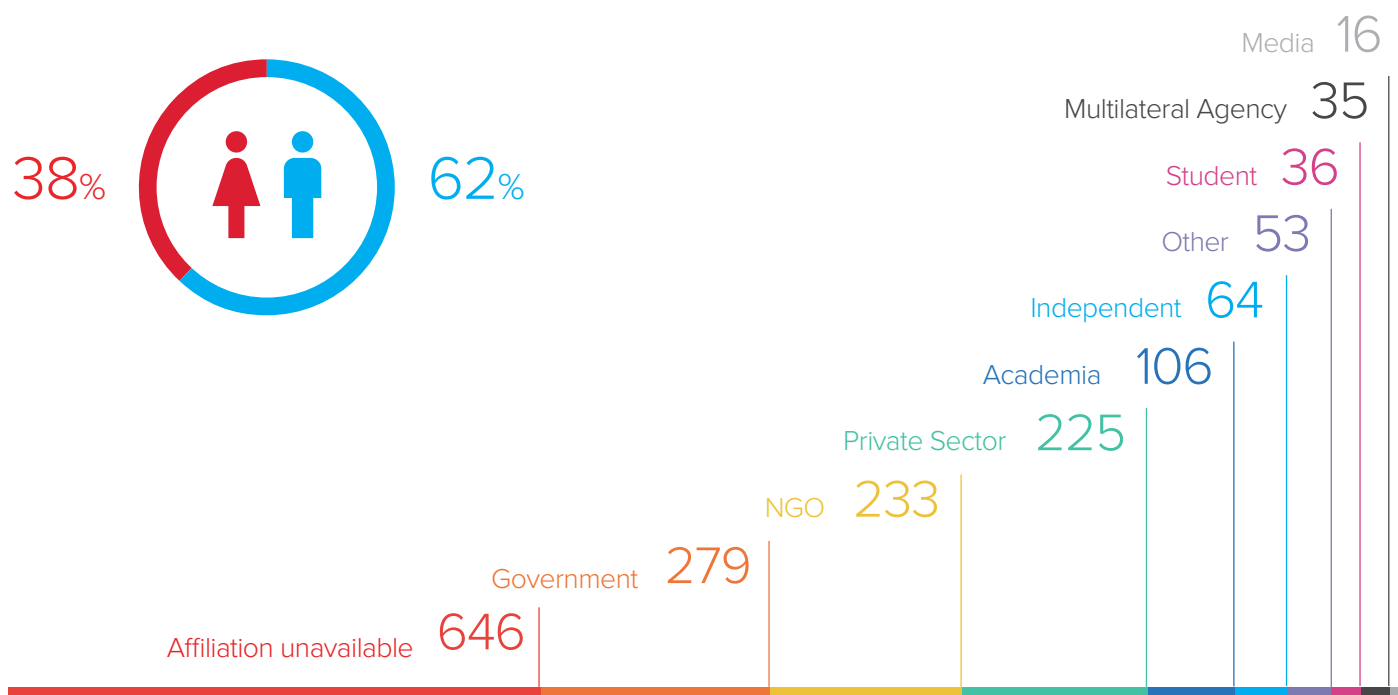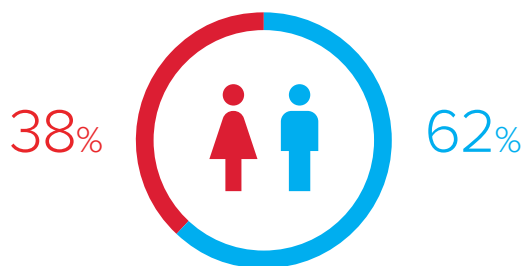
Extractives Data Drive

Visualizar '16

Unconference

Open Contracting: Progress, Challenges, Innovation

Open data for Disaster Response—Humanitarian OpenStreetMap Team

Open Data in Half a Day

Open Data Challenge Prize: Lessons learned innovation workshop

Open Data Standards Day

HIVOS Open Contracting training

Workshop on open data and language processing technologies: An opportunity not to be missed

Open Cities Summit

Open Data and Culture

My Best Open Data Fail

Openness and National Statistical Offices: A Review of Available Tools and Methods

Follow the Money and Open Data: Mapping Assets, Building Synergies

Spanish OD "Aporta" Event

Africa Open Data Day

CKAN Conference

OGP Natural Resources Peer Exchange

Finodex – ODINE

OD Leaders Summit: Getting to Impact

Indigenous Open Data Summit

> *Unless we tackle social challenges, open data is at risk of becoming an openness island in an increasingly authoritarian and closed world.*

ANNE JELLEMA
World Wide Web Foundation

Introduction

GLOBAL GOALS LOCAL IMPACT

We have entered the next phase in the evolution of the open data movement, when just making data publicly available can no longer be the beginning and end of the conversation. The focus of the movement is now shifting to building open data communities, and an increasingly sophisticated network of communities have begun to make data truly useful in addressing a myriad of problems facing societies around the world. These communities seek to advance public interests and impact the day-to-day lives of citizens both globally and locally, but realize that opening data is simply not enough. Data needs to be reusable, but more importantly, actually used. The overarching focus must now be on strengthening the relevance of specific data released to specific problems to be addressed.

Around the world, open data has clearly sparked a commitment to improving government transparency, empowering citizens, and responding to real world problems related to social and economic inclusiveness. To this end, collaboration has begun to emerge across a number of sectors, regions, and topics. As open data action matures, focus is shifting from the 'quick-wins' to longer-term change, where progress might be slower, but the potential impacts greater and long-lasting.

To further accelerate collaboration across open data communities, and to deepen a shared commitment to transforming governments and societies through open data, the Government of Spain, the International Development Research Centre (IDRC), the World Bank, and the Open Data for Development Network (OD4D), recently hosted the Fourth International Open Data Conference on October 6-7, 2016 in Madrid, Spain.

BUILDING ON THE INTERNATIONAL OPEN DATA ROADMAP

The third International Open Data Conference held in Ottawa, Canada in 2015 generated a collaborative International Open Data Roadmap, including the first Action Plan for International Collaboration. Over the past eighteen months, the international open data community has advanced along several lines of activity laid out in the first Action Plan, including a number of concrete milestones:

▸ The launch of the International Open Data Charter with over 41 governments committed to implementation of its core open data principles;

▸ Open data central to commitments made this year by world leaders, including the Sustainable Development Goals (SDGs), the Paris Climate Agreement, and the G20 Anti-Corruption Data Principles;

▸ Formal networks established to advance open data to address specific issue areas, such as agriculture and finances, have made significant strides in coordinating efforts to drive transparency; and

▸ Regional open data networks are maturing with support from multiple stakeholders.

The recent fourth International Open Data Conference (IODC) in Madrid reconvened an ever-expanding open data community to address shared challenges, take stock of progress, strengthen cohesion across a multitude of initiatives, and refocus the vision for collective action on open data, in order to realize social and economic value around the world. This edition of the IODC brought together around 1700 participants from 89 countries.

ABOUT THIS REPORT

Open Data for Development (OD4D), in collaboration with organizers of pre-events and action sessions at the conference, has developed a framework to explore the maturity of the international communities which have developed around specific open data sectors, regions, and action areas.

The content of this report is based on a synthesis of notes, videos, and blog posts stemming from the International Open Data Conference, and is meant to provide a curated record of discussions and debates that took place during the conference, an overview of current open data issues and challenges, and a roadmap to help focus future collaborative action by the global open data community. This version of the report includes selected references to IODC sessions and workshops; however, *a full interactive version* is available online, where the report includes additional links, embedded media, and other related content.

This report aims to be a starting point for many more conversations about the role and impact of open data around the world, and the collective action that must be undertaken to advance open data both globally and locally.

The report is divided into four main sections:

▸ **The Road Ahead:** "Issues Shaping the Open Data Movement", including opportunities and challenges for consideration in the development of the second Action Plan for International Collaboration.

▸ **Toward Greater Impact:** "Where Open Data is Making a Difference", and how individuals and organizations are making a difference with open data around the world.

▸ **Regional Updates:** Highlights of collaborative efforts to implement open data around the world.

▸ **Second Action Plan for International Collaboration:** a plan of action for future collective action.

The Road Ahead
ISSUES SHAPING THE OPEN DATA AGENDA

The International Open Data Conference 2016, the world's largest gathering of open data experts, practitioners, researchers, and enthusiasts, covered a broad range of issues relating to the current state of open data around the world.

Based on a review of the main sessions of the conference, this section highlights a selection of the issues and trends reshaping the open data movement since the last IODC. These issues and trends also shape the opportunities and challenges for consideration in developing the second *Action Plan for International Collaboration (section 5)*. These issues are not meant to be comprehensive, but rather a contextual reference designed to inform future activities to advance open data in the lead-up to IODC 2018.

REACHING THE NEXT LEVEL OF MATURITY

The International Open Data movement has clearly reached a new level of maturity. IODC 2016 saw an increased focus on regional and sector-specific discussions, including policies, standards and best practices in contracting, statistics, transport, and more. The growth and momentum is reflected in the record number of proposals received by the IODC organizers[1] and the high level of engagement in the debate during the conference[2]. Also, there is evidence that the open data agenda needs to be increasingly aligned with other important agendas, such as the Global Goals for Sustainable Development and the Open Government Partnership (OGP) national action plans. There was also noticeable interest in new business models for open

1 - IODC open call for proposals received more than 650 proposals–three times more than in IODC 2015.

2 - The conference assessments shows that 9 in 10 participants would recommend future editions to colleagues.

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data, and how to better focus open data to address specific challenges and constituencies. This maturity, however, is far from consistent across sectors, regions and issues.

EXPANDING ON POLITICAL WILL

Institutionalizing open data within larger sectoral initiatives requires ample political will. Both advocates and practitioners of open data need to understand what this means in terms of practical action by mapping where key decision-makers and stakeholders reside on a spectrum of support/opposition, and then by identifying strategic activities to achieve traction over time. Timing with respect to election cycles is important, as well as potential connections to policy implementation/reform initiatives, access to information (ATI) legislation, e-services, information management systems, procurement reforms, and the Open Government Partnership (OGP) national action plans. It will continue to be important to manage the expectations of political actors by trying to balance 'low-hanging fruit' and higher-visibility activities (e.g. open data platforms, app development, civic incubators, etc), with more medium to long-term initiatives that will drive lasting openness over time.

HARNESSING DIVERSITY AND PLURALISM

While IODC 2016 was well-attended, it was frequently noted that attendees primarily comprised the 'usual suspects', generating a concern that open data may be at risk of becoming a boutique issue for a specialized community of practice. With this in mind, it was emphasized that as the open data community grows in size and (hopefully) diversity, the extent to which the agendas and activities of the organizations and individuals within the community align should be a priority focus area. Presently, there are several views on the current state of the open data community — some voice frustration at fragmentation, others see disorganization, some see factionalism around particular approaches to open data engagement, some perceive efforts to crowd out competition for increasingly scarce resources, while others embrace competition to surface the best solutions or approaches, and still others are proud of successful efforts to coordinate on flagship initiatives. In short, a robust conversation about whether there *is* a discernable open data community might be useful in the lead-up to IODC 2018, and if so, whether and how it could practically and meaningfully align around shared priorities.

TAKING GENDER ISSUES SERIOUSLY

Gender was one of the new emerging topics of IODC 2016. There are two major gender related challenges: gender related data and effective representation within the open data community. There is still limited data available about women and gender, although dedicated *programs* or partnerships like *Data2x* try to promote the collection of gender data in order to increase gender equality. Within the open data community, women are still not fully represented—from *representation at conferences* to a place at the table to discuss how to use open data to solve issues that matter to women. IODC 2016 ignited the discussion about this topic, but there is still a lot of work to do, including improving the gender balance of the next IODC in 2018.

BROADENING EFFORTS TO BUILD CAPACITY

Recent analyses indicate that the majority of people around the world still can't or won't use open government data.[3] Realizing the potential of open data for decision-making means solving a broader 'capacity' problem. This includes making open data and civic technologies work for everyone, creating tools for a broader audience (including the most vulnerable groups), and more meaningful and coordinated efforts to address the root causes of human, financial, and technical challenges to effective open data use. There certainly are still ubiquitous capacity gaps in data literacy, but there are also inadequate salaries for data scientists/practitioners, insufficient resources to launch and maintain permanent open data platforms, as well as constraints on opening data in local languages, and maintaining standards and the squality of data. There is a need to look at capacity issues more holistically, as a range of issues to be addressed, starting with the need to identify actionable data to be opened based on larger efforts to improve the lives of targeted beneficiaries, including non-users, the poor, the marginalized, and the chronically underserved.

3 - **US example:** in 2015, the Pew Research Center analyzed levels of use of government data among Americans. Pew found that only a small minority of Americans report using government data sources for monitoring purposes: e.g. 20% have used government sources to find information about student or teacher performance; 17% have used government sources to examine the performance of health care providers; and 7% have used government sources to find out about government contracts.
Africa example: the *2015 report* from the 'Open Data Agenda-Setting for Africa' workshop in Addis found "a huge deficit in [data] literacy skills ... inhibits citizen use of open data" across the region, among other major inhibitors of use, including [non-aligned organizational] culture and a broad lack of political will.

FIGHTING AGAINST 'OPEN WASHING' AND 'OPEN WISHING'

IODC 2016 was an opportunity for the open data community to ask some tough questions related to a tendency of '*open washing*' or '*open wishing*'. Why is open data succeeding in some contexts and failing to achieve traction in others? How can we encourage meaningful progress toward open data, open government, freedom of information, and more, while serving as an accountability check on government actors who, absent evidence, claim progress.? The open data community needs to help identify the line between meaningful commitments and wishful thinking.
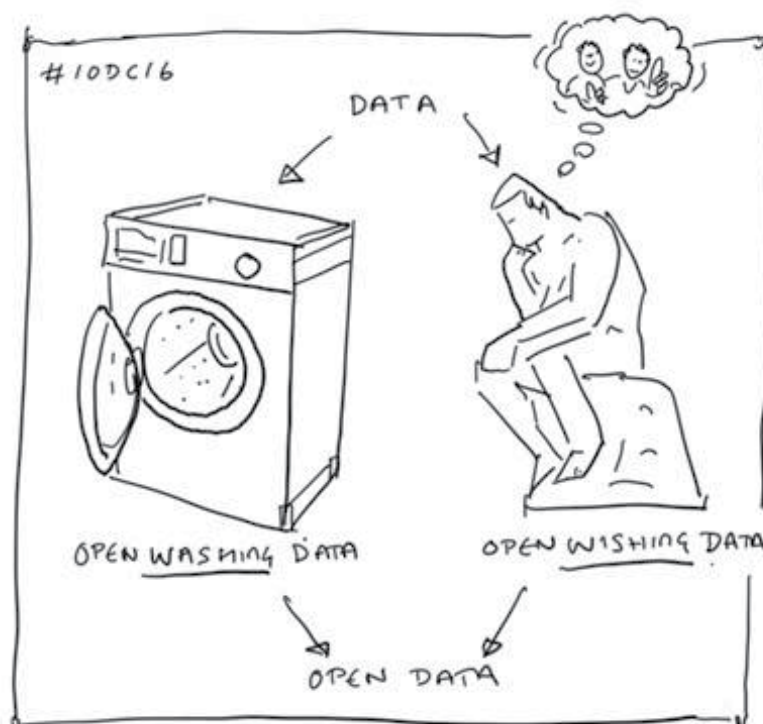

Image by Andy Dickinson

BALANCING PRIVACY AND ACCESSIBILITY

IODC 2016 saw a stronger focus on privacy and data security issues, where it was again pointed out that datasets that include microdata across sectors, such as healthcare, education, transportation, criminal justice, property registration/housing, and voter registration data, may include individual records that threaten individual privacy if released openly. The community is becoming more sophisticated in its approach to anonymization and considerations of the risk of data disclosure. At the same time, the recognized importance of whistleblowers in massive data disclosures, such as the leak of the Panama Papers, show that privacy cannot be discussed in absolute terms. Data is political. The open data community needs to be a part of, and push for, a larger conversation on the right balance between privacy and accessibility and the use of open data.

BRINGING NATIONAL STATISTICAL OFFICES ONBOARD

The National Statistical Office (NSO) is the administrative organization within a country's national government that collects, processes, and disseminates official statistics. The NSO plays a fundamental role in producing the data necessary to track and measure progress toward the 230 indicators of the Sustainable Development Goals (SDGs). As the indicators span a range of sectors from social to political and from technical to financial, it is critical that NSOs be key stakeholders in discussions with the open data community to ensure solutions are matched with national needs, and are efficient and effective.

The emergence of NSOs as a major stakeholder group at IODC 2016 is an important development, particularly for developing countries, where NSOs are often the primary (if not the only) source of high-quality, official data. Developing strong partnerships with NSOs across developing/developed countries is an immediate priority. NSOs will need the right combination of leadership and receptivity to new ideas, and will need to encourage and support innovation when opportunities arise to reform or update statistical legislation.

BUILDING BRIDGES WITH OPEN GOVERNMENT AND THE DATA REVOLUTION

Another key conclusion from discussions at IODC 2016 on how best to scale up and deepen the transformational impact of open data was that the 'open data' and 'open government' movements seem to be diverging somewhat in recent years. The same concern was often expressed around

> *There is a bright future as a result of the collaboration between National Statistical Offices and open data community experts*

HAISHAN FU
World Bank
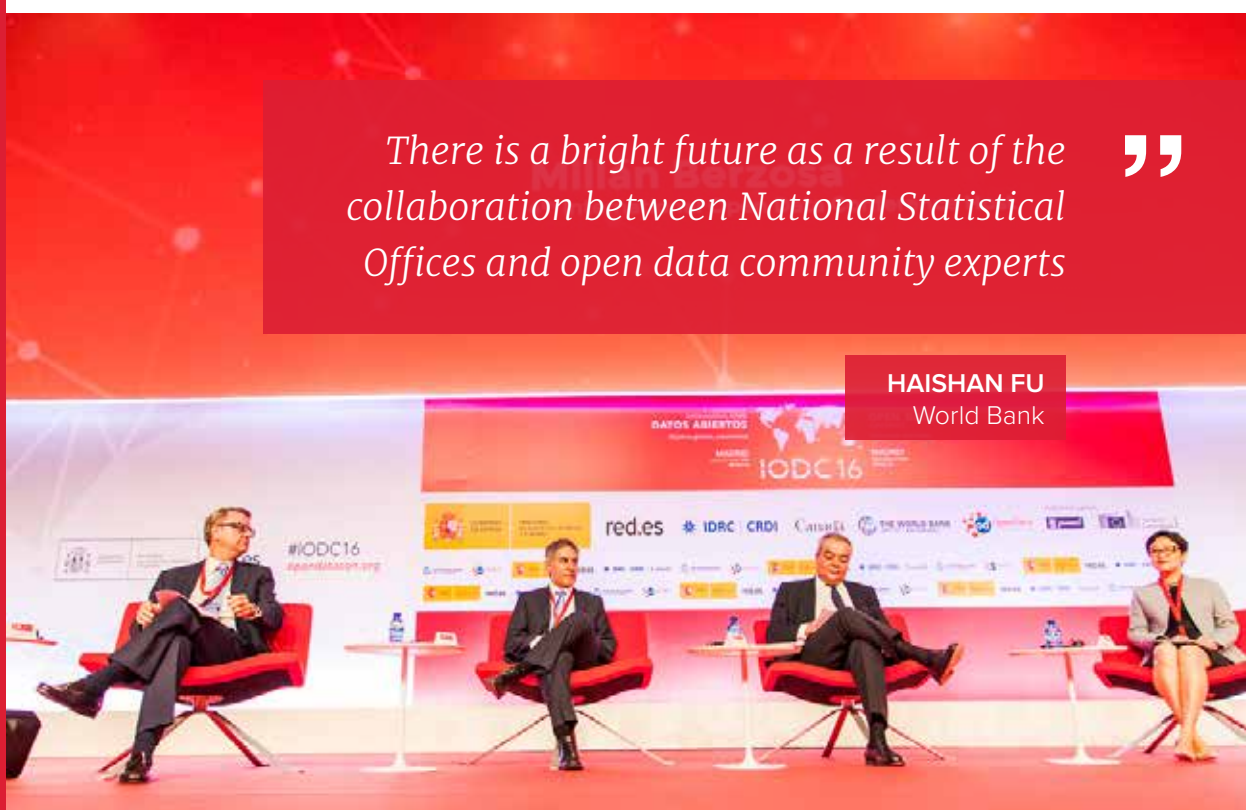
the insufficient integration of open data into the broader 'Data Revolution'. IODC 2016 featured an important reality check: open data and and its related benefits do not exist in a closed environment. Concerted action is needed for open data, open government, and country-level data initiatives, such as those connected with the Sustainable Development Goals, to be mutually reinforcing. to be mutually reinforcing. Open data is more useful and actionable when it is a strategic element of a larger development initiative and not pushed forward as a standalone issue.

STRENGTHENING LOCAL EFFORTS AROUND THE WORLD

> *Latin America is experiencing the use of open data that actually solves crucial issues that Latin America faces, such as corruption or gender inequality*

FABRIZIO SCROLLINI
Latin American Initiative for Open Data

While open data is showing signs of maturity in developed countries and some developing regions, success is still sparse and impact is hard to measure in most parts of the world. Advocates for grassroots open data initiatives in many developing countries need financial, material, and human support. The international community, including international aid agencies, are increasingly interested in the use of data for development, yet it is not always clear whether openness is also a priority of their agenda. Also, models for implementation that work in the developed world may need to be reconsidered, and merged with other approaches that recognize the very different circumstances that exist at the local level in developing countries. With this in mind, the business case for open data still needs to be be showcased wherever possible (e.g. efficiencies resulting from open data, contributions to economic growth, job creation, etc). At the same time, more support from the international community is needed to truly harness the potential of open data for sustainable development around the world.

MAIN SESSIONS

Official Welcome

Global Goals for Local Impact

Open Data and Business

Open Data and the Data Revolution
for Sustainable Development: Opportunities for Joint Action

Building an Inclusive Data Revolution

Data and Gender: Thinking Critically

Open Data and Public Procurement

Open Data and National Statistical Offices: Experiences and Opportunities

Breaking the Power of Closed

Scaling Up and Deepening Open Data's Transformative Impact
in Open Government

Open Data Charter: Bringing Principles to Practice

Open Data in Europe

Toward Greater Impact

WHERE OPEN DATA IS MAKING A DIFFERENCE

After three editions of the International Open Data Conference, the continuing global effort to increase the impact of open data has started to include milestones from a range of sector specific communities. Madrid presented itself as an opportunity to take stock of innovations in different fields and discuss new areas for collaboration in the use of open data. During both pre-events and conference sessions, people from around the globe came together to share best practices, success stories, and challenges to the use of open data to solve common problems. Building on the areas of impact identified in the Open Data Roadmap developed in IODC 2015, this section reflects on the different communities gathered at IODC 2016 and highlights the innovative use of open data across a variety of sectors.

OPEN DATA FOR CITIES

Subnational governments around the world face similar problems, requiring similar types of data in order to become "smarter" or more resilient. Open data is a key ingredient of how cities will be able to scale common solutions to address these issues. As a major pre-event of IODC 2016, the first *Open Cities Summit* brought together key actors to explore how cities and citizens are implementing open data solutions to improve the everyday lives of citizens. The objective is to connect city-level open data users and providers to build a community for continued learning. IODC illustrated a growing commitment to creating a network of cities using open data will accelerate innovation to address urban issues and build upon work to date.

Key examples of progressive open data initiatives working in cities include:

‣ *CityKeys*—European Performance Measurement Network for monitoring and comparing the implementation of Smart City Solutions;

‣ *MediaMill Project*—A consortium of partners that work in the local level as media producers, researchers, and others to create local impact; and

‣ *Mobility Labs Madrid*—An open platform to support urban mobility, allowing developers and data journalists to store and extract information.

OPEN DATA FOR TRANSPARENCY AND ACCOUNTABILITY

Government transparency is one of the tangible benefits of open data. For instance, fiscal transparency allows for better-informed debate by both policymakers and the public around the design and delivery of public services, and supports increased accountability for their delivery. Fiscal transparency is not limited to opening national and municipal budgets. Open data initiatives are helping citizens understand government fiscal behavior, and encouraging greater civic participation and oversight. Open data and transparency involves civic groups, researchers, NGOs, and public institutions in the fight against corruption.

Since the beginning of the open data movement, public sector accountability has been a key focus, and recent events continue to underscore the importance of open data for accountability. IODC 2016 included several pre-events focused on open data for accountability, including those organized by the *Follow the Money Network* and Open Contracting, which focused on new projects, approaches, and tools to advance public financial accountability and open contracting respectfully. Other sessions put a spotlight on other accountability issues, including anti-corruption, Open Budgets, and Data Journalism. Each of these issues are supported by strong communities with emerging practices on how to improve accountability for public and private institutions.

Several current projects highlight the impact of open data on accountability, including:

▸ *Civio*—A spanish organization that develops tools designed to promote transparency and accountability from knowing how the public budget is spent to mapping political actors and their interests;

▸ *BuyandSell.gc.ca*— A website that shares contracting data on all public procurement by the Government of Canada;

▸ *Prozorro*—A Ukrainian project that looks to launch a full-cycle electronic system of public procurement with the support of Transparency International; and

▸ *OpenCorporates*— An initiative that campaigns has taken an active role in the campaign for public beneficial ownership registries, and in partnership with the World Bank, maintains the Open Company Data Index, which benchmarks company registries based on data accessibility.

OPEN DATA FOR AGRICULTURE

How can we address the food security challenges the world will face in the future? The collective response will definitely include sharing data and best practices across countries. Open data in agriculture can benefit a wide array of stakeholders – from international organizations to small-scale farmers and end consumers. Open data is gaining significant traction in the agriculture sector, but there is an ongoing need to increase the coordination/cooperation between actors and apply the insights gained from open data to support sustainable development, especially in the poorest regions of the world.

For instance, the Global Open Data for Agriculture and Nutrition (GODAN) supports the proactive sharing of open data to make information about agriculture and nutrition available, accessible, and usable to deal with the urgent challenge of ensuring world food security. GODAN held its own *Summit* a month before IODC, which focused on building high-level support among governments, policymakers, international organizations, and business, and promoting collaboration to harness open data to solve long-standing problems to benefit farmers and the health of consumers.

OPEN DATA FOR THE ENVIRONMENT

Several discussions on the environment and climate change took place during IODC 2016, including the OGP Natural Resources Peer Exchange, which focused on the implementation of OGP commitments related to the release of open data and the visualization of data related to royalties and payments from natural resource revenues, beneficial ownership, and environmental disclosures. The Natural Resource Governance Institute hosted a two-day data dive into open data on extractives, including project level payment data, contracts, environmental information, and geospatial data.

The opening of resource and environmental data allows citizens, governments, students, and researchers to protect and defend the environment objectively. Platforms are being built to share this information more broadly among stakeholders, and to make environment analysis simpler and more timely. Discussions and projects at IODC 2016 focused on data-driven decision making related to important environmental questions that are an ever increasing focus of open data efforts around the world, including:

▸ *Global Forest Watch*—Seeks to manage and conserve forest landscapes;

▸ *Open Dev Mekong*—A shared network of open databases on this topic; and

▸ *CartoCrítica*—A mission to map projects with environmental repercussions and make them public.

OPEN DATA FOR INDIGENOUS COMMUNITIES

Sovereignty is a core principle of indigenous peoples around the world. Often articulated in terms of self-determination, the concept of sovereignty underpins indigenous aspirations across multiple elements of their development. The explicit assertion of data sovereignty is founded on the United Nations Declaration on the Rights of Indigenous Peoples. Alternative data sharing agreements are needed that acknowledge sovereignty over indigenous data.

This IODC hosted the *first Indigenous Open Data Summit*, bringing together the experiences of several indigenous communities that are working to share data, and implement initiatives to open information and learn from native populations. Initiatives, such as the International Indigenous Data Network, are working with indigenous data efforts based in settler nations (e.g., New Zealand, Australia, Sweden, United States, among others) to share ideas on indigenous data efforts worldwide.

OPEN DATA FOR HUMANITARIAN AID

IODC 2016 saw international aid discussed from many different perspectives, but humanitarian assistance and disaster management may have been the most prevalent. In both cases, impact can be slow to emerge, but as this community continues to grow and collaborate with the resources of international organizations, proven approaches are beginning to show real results. Highlighted projects include:

‣ *The Humanitarian Data Exchange*—The goal of HDX is to make humanitarian data easy to find and use for analysis;

‣ *Earthquake Response Open Nepal*—Project in charge of tracking national and international financial flows and the use of these funds for relief and reconstruction activities;

‣ *ThinkHazard!*—A web-based tool enabling non-specialists to consider the impacts of disasters on new development projects; and

‣ *ZOOM*—An open data platform for Data-Informed Strategy in Combating the Aids Epidemic;

OPEN DATA FOR ELECTIONS

Elections are the cornerstone of democracy. The electoral process is a key element in governance, and the process is full of data—census, candidates, parties, results, polling stations, etc. Data sharing and processing technologies enable the real-time management of results, and im-

prove the transparency of the process. There are already many examples of how these open data based technologies have helped to achieve these objectives, but still many challenges remain to be solved, especially in developing countries. Electoral data can play an important role in moving toward more advanced electoral campaigns, and as electoral candidates start to use big data analytics to understand the needs of citizens, open data will increasingly influence electoral results.

OPEN DATA FOR PARLIAMENTS

Opening parliaments through the release of open data broadens an understanding of how well government is representing the views of citizens, and informs on relations with other institutions. Discussions at IODC 2016 continued to push for the release of useful data about their activities in order to improve public trust in these institutions. Standardisation of open parliament data is a key element of making it actually reusable. Projects having an impact include:

▸ *Leaving no one behind*—An initiative that allows communities to go to the streets to collect data on a specific subject with the objective of showing it to the chief of the community, to support more informed decision making; and

▸ *JavnaRasprava.ba*—A web platform that allows Bosnian-Herzegovinan citizens to be part of the the decision making process.

OPEN DATA FOR SCIENCE

This year's IODC saw several discussions and examples of advances in open data to effectively share scientific research and discoveries in order to both broaden the benefits realized from completed research and to influence future research efforts. Following a pre-event on research open data, workshops during the conference also focused more than ever on innovative methods for opening scientific data and creating new tools to manipulate that data. Highlighted projects and initiatives included:

▸ *Spaghetti Open Data*—A community-led project that that seeks to better understand scientific project funding through open data; and

▸ *MareData*: A Spanish network that groups and consolidates research data in order to push collaboration between and across stakeholder groups.

OPEN DATA FOR JOURNALISM

Journalists face a special challenge when it comes to data. Emerging technologies opportunities and an increasing availability of open data enable new approaches to storytelling and journalism. As discussed in the first ever IODC pre-event on *Open Data Journalism*, the role of journalists uncovering and exposing stories has also evolved to include the use of data; but governments must take into account that protecting journalists is key to ensuring transparency as their processing and interpretation of data is rapidly emerging as one of the most relevant tools to expose illegal activities and corruption.

IODC 2016 highlighted the revelations created by Snowden, the Falciani list, and the Panama Papers, as examples of the impact of data on current journalism activities that have had a social and economic impact worldwide. Additional highlighted initiatives included:

▸ *The Migrants' Files*—A project launched in August 2013 by a group of European journalists who joined forces to accurately calculate and report the deaths of emigrants seeking refuge in Europe; and

▸ *Advocacy and Legal Advice Centres (ALACs)*—A service from Transparency International that provides free and confidential legal advice to witnesses and victims of corruption.

MORE IMPACT SESSIONS

Data + Accountability I
Data + Accountability II
Data + Open Performance
Data + Budget
Data + Journalism
Data + Anticorruption
Data + Business
Data + Business models
Data + Emerging economies
Data + Disaster Management
Data + Humanitarian issues
Data + International Aid I
Data + International Aid II
Data + Culture
Data + Hacking Data
Data + Language Processing Technologies
Data + Geospatial
Data + Agriculture
Data + Environment
Data + Extractives
Data + Parliaments
Data + Elections
Data + Inequality
Data + Indigenous
Data + Cities I
Data + Cities II
Data + Education
Data + Utilities
Data + Transport
Data + Science
Data + Platforms
Data + Open Data and National Statistical Offices: Experiences and Opportunities
Data + Scaling Up and Deepening Open Data's Transformative Impact in Open Government

> *At a regional level, open data has brought people together, having stimulating learning and sharing knowledge between them in order to overcome institutional hurdles*

LEJLA SADIKU
UNDP

REGIONAL UPDATES

For the first time, IODC 2016 hosted regional discussions with participants from Africa, Asia, North America, East Europe, the Middle East and North Africa (MENA), Latin America and the Caribbean, and Western Europe. Also,taking advantage of Madrid's favourable location, there was a specific pre-event focusing in *Africa*. Overall, there was a deliberate attempt to connect and expand the multi-stakeholder efforts emerging in these regions. This section provides some highlights of these regional efforts.
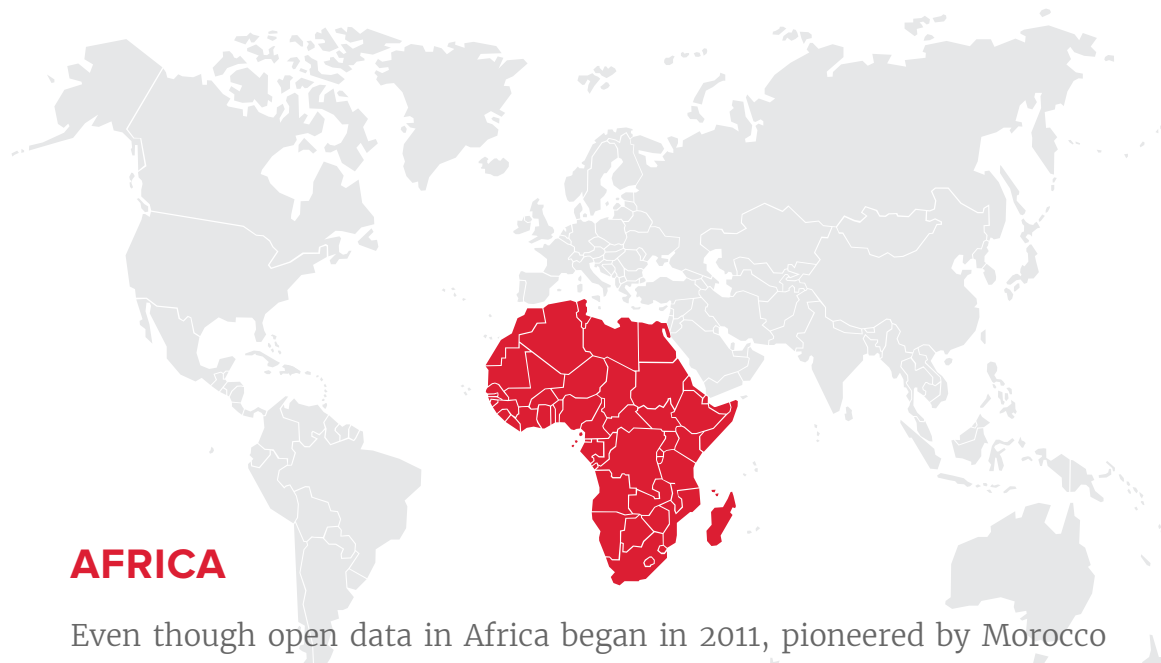
AFRICA

Even though open data in Africa began in 2011, pioneered by Morocco and Kenya respectively, progress in the region did not really start to flourish until 2015. Even by this point, out of a total of 54 countries in Africa, only ten countries had held open data events; however, recently an ever-increasing number of African countries have held open data events, including Liberia, Rwanda, Burkina Faso, Uganda, and Ghana.

Moving forward, it is vital to determine what is needed for countries in the region to replicate the progress made on open data activities in other countries. Using Kenya as an example, there is a core need for an open data champion to spearhead the open data initiatives in every country. Such a champion needs to hold a senior and influential position in government to create awareness and to sensitize government policy makers to the value of open data. These champions also need to be willing to collaborate and share experiences on open data implementation and institutionalization with other jurisdictions, so that when the champion moves on, the open data initiative may continue.

With leadership from a champion, there is still an ongoing need to have events that focus on awareness, sensitization, stakeholder buy-in, and training, even in countries that have already held a significant number of events. In addition, there is also need to empower, and collaborate with, NSOs in each country. For instance, Kenya has had several open data activities, but with very little participation from the Kenya National Bureau of Statistics, which has limited the impact to date. NSOs are, or should be, the major implementing partners of open data; their support and leadership are critical.

On the issue of sustainability and the growth of open data, most of the current implementing partners are not-for-profit organizations and are dependent on donor support to carry out their activities. There is a need to rethink this model and find ways to support new and upcoming for-profit organizations, such as Data Science Ltd in Kenya, to help create value through commercial products.

More at *Africa*

ASIA

Asia is fast becoming the centre of digital innovation for the world. The region accounts for half of the world's 2.8 billion Internet users, and is already the largest regional e-commerce market. Governments within Asia agree that open data is a critical element of the digital economy and the key to maintaining the required balance between economic growth and social equality.

Since 2010, many governments in Asia have developed national open data agendas. According to the 2015 Open Knowledge Foundation's global open data index, many Asian countries are ranked within the top one-third of the rankings (e.g., Taiwan (1), India (17), Korea and Singapore (23), Japan (31)).

In September of 2015, representatives from Taiwan, Japan, South Korea, Thailand, Philippines, and Indonesia gathered for the 1st Asia Pacific Open Data Summit (APODS) hosted by Taiwan to exchange information on open data and its applications. During the event the representatives announced the Asia Open Data Partnership (AODP) that will work to raise awareness of open data. This collaboration started with a multi-country hackathon in August 2016. Following the hackathon, members and global experts gathered again on September 7-8, 2016 for the 2nd APODSto further promote, support, and utilize open data in key areas, such as disaster mitigation strategies, environmental protection, agricultural development, and smart cities.

Over the past year, we have learned that while the potential of open data is well understood in Asia, there still exist regional challenges to be faced. In the future, we will look to strengthen collaboration between countries. Furthermore, efforts need to go beyond the promotion of awareness to focus more on solid joint initiatives, such as an open data index for the region. Most importantly, the open data community in this region must work to connect globally to better explore the value of open data through a multilateral, cross-cultural, and collaborative approach.

More at *Asia*
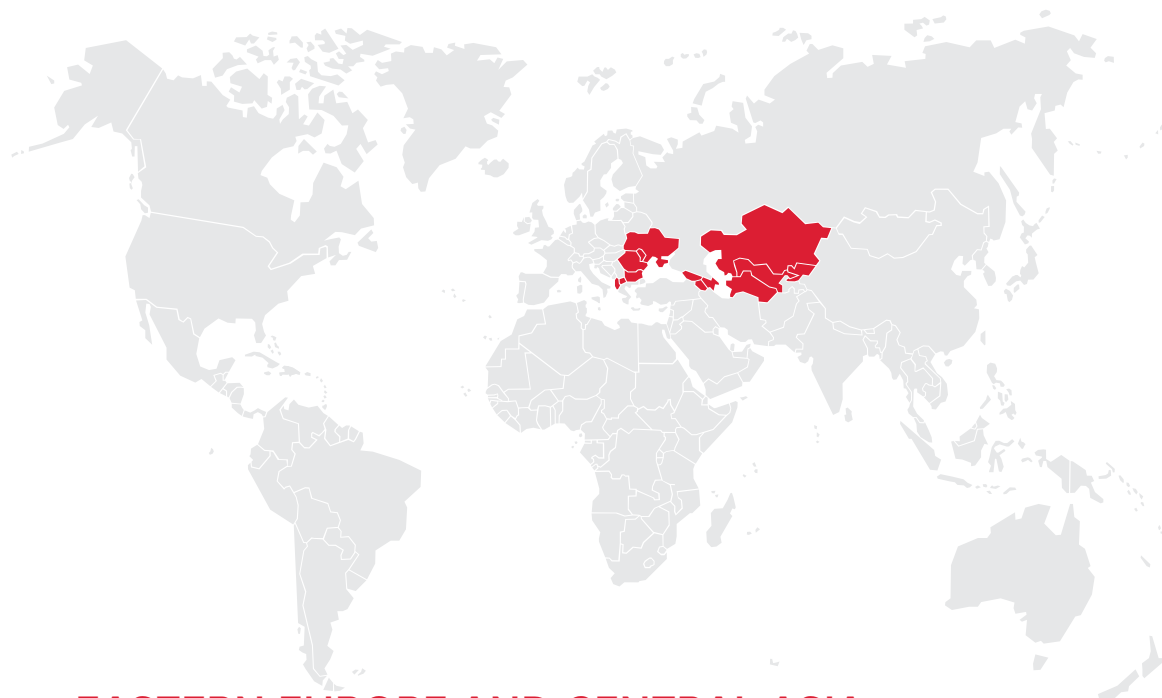
EASTERN EUROPE AND CENTRAL ASIA

Since IODC 2015, a lot has happened in Eastern Europe with regard to open data. Some countries have adopted the Open Data Charter, portals have proliferated, and communities are growing; however, the extent to which the movement has delivered on the potential for development and good governance remains debatable.

This year's IODC featured a big leap in the number of people coming from Eastern Europe and Central Asia, indicating how the region is taking up the open data agenda. While this region comprises countries of vastly different size, economic power, and political culture, what binds them together is the sense of being new to the game. The policy-makers, activists, researchers, and techies from these countries were met by a global open data community more mature and self-critical than would have been the case in the past. Indeed, the more gradual pace of progress in the region may suggest that a more thoughtful approach is being taken by these countries, in a large part, out of necessity. Challenges include even the existence of data, as well as data quality, unclear authorities, and a nascent administrative and political culture of evidence-based policy making.

In addition, the overwhelming aspiration of joining the EU, coupled with a deep fiscal crisis, leaves governments with little room to maneuver or mental space for further innovation. Yet, a first regional conference in June 2016, Serbia has already moved to hackathons and portal development in a little over a year, and other parts of the region are pursuing innovative ways of using data to address citizen needs. Among the reasons for this shift are the relative maturity of civil society, the readiness of policy makers to benefit from others' lessons learned, a willingness to explore how to measure impact, and the engagement of users early and often. Ongoing progress will depend on how strongly these factors can be sustained over time.

More at *East Europe*

LATIN AMERICA AND THE CARIBBEAN

Across the Latin America region, governments are releasing more open data. Research undertaken by the Latin American Open Data Initiative (ILDA) indicates that, even with limited government involvement, it is possible to build new standards and create new apps from open data; however, when governments are involved, the impact of these initiatives is significantly increased. Work completed by ILDA identifies the potential of open data to bring benefits to cities, public services, shared challenges (e.g., vector transmitted diseases), and good governance. Researchers and advocates are also promoting the idea of training people to use data to address key social challenges.

Looking back to 2010, it would have been difficult to predict governments in the region opening up data, engaging with the public, and co-creating services. Yet releasing open government data is not enough, and all countries need to consider the adoption of rules that establish which data is public and reusable. A few governments use their current right to information framework to address the release of open data, while others have included open formats as part of their pro-active transparency duty. In Latin America, a progressive group of countries, cities, and regions have already adopted the Charter as a guide for their open data policies. A common framework is also needed to assess progress and impact, and to address inconsistencies in the way open data related research is carried out.

Governments, civil society, and the private sector need to explore new ways to partner and foster collaboration. Co-production of public services offers great potential, yet it is still largely unexplored. If the revolution is going to deliver value in an inclusive and sustainable way, it will take a more holistic endeavour enabled by new expertise, specialization, and technologies.

More at *LAC*
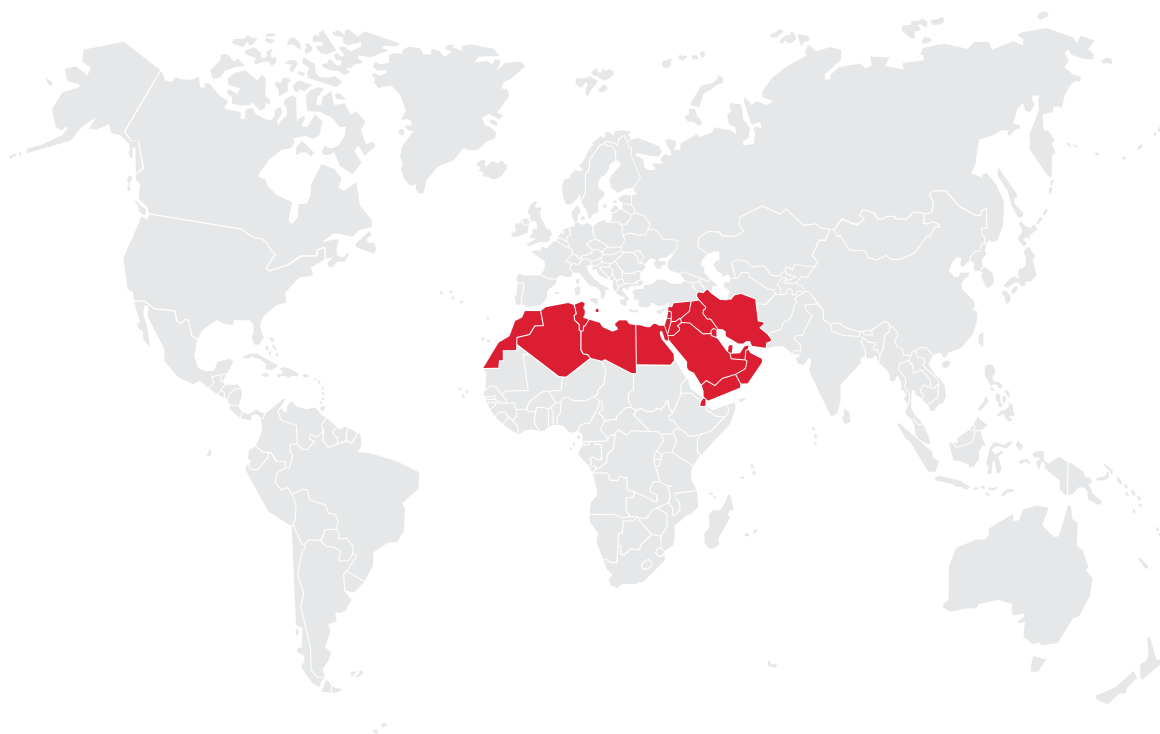
MIDDLE EAST AND NORTH AFRICA

This past February marked the first Data-Driven Innovation Week held in Cairo to bring together attendees from all over the region to showcase progress to date and create new opportunities for collaboration on innovative data projects. A growing community presented a number of data projects and partnerships during the week. The event, organized by the International Development Research Centre, identified several issues and challenges still to be overcome for open data to begin to fulfill its potential.

Discussions emphasized the need for more and better data in the region, paired with better access, usability, data literacy, and collaboration. This point was further highlighted by the Data Revolution project, lead by the American University in Cairo, which has been mapping out the larger ecosystem of data in the region. Building a multidisciplinary community is essential to this effort; however, there are examples of meaningful progress to date.

Building on the results of a pre-event of a network of stakeholders from the region, participants pointed to data-driven innovation taking place in the region in the form of a burgeoning entrepreneurial ecosystem, which is likely to be further fueled by youth and technology. Tunisia also showcased their specific progress on open data, where several ministries have launched open data portals, government budgets have been opened, and the constitution now ensures the right to access to information, the right to privacy, and defines open government principles.

More at *MENA Region*

NORTH AMERICA

For more than two decades North American countries, Canada, Mexico, and the United States, have acknowledged that it is only by working more effectively together that they will be able to meet the challenges of the future. With a combined population of close to half a billion people and a combined GDP of 20 trillion dollars, North America is one of the most dynamic and competitive regions of the world, focusing on such classic issues as trade, investment, migration, security, and energy. But in addition to these traditional sectors, there are increasingly more opportunities for these countries to partner on innovative transparency projects and programs, including the advancement of open data.

In the past few years, open data has continued to appear more and more in North American international, regional, and bilateral meetings, as a new and promising enabler of improved economic competitiveness and the means to ensure the social wellbeing of the region. At the international level, all three countries are promoting and championing open data through several multilateral platforms, including the G20, the Open Government Partnership, and the Global Partnership for Sustainable Development Data.

At the regional level at the last North American Leaders' Summit, the three countries pledged to support an increased openness agenda to strengthen development, and to work on the development of shared technical platforms and the development of data standards. These are just a few examples of how North America is collaborating to support open data agenda, but there is much more to do. Open data must be acknowledged at the highest political level as one of the keys to improving the lives of citizens, and moving forward, all three countries will need to expand collaboration with all levels of government, academia, and civil society to establish standards and best practices for data sharing and interoperability.

More at *North America*
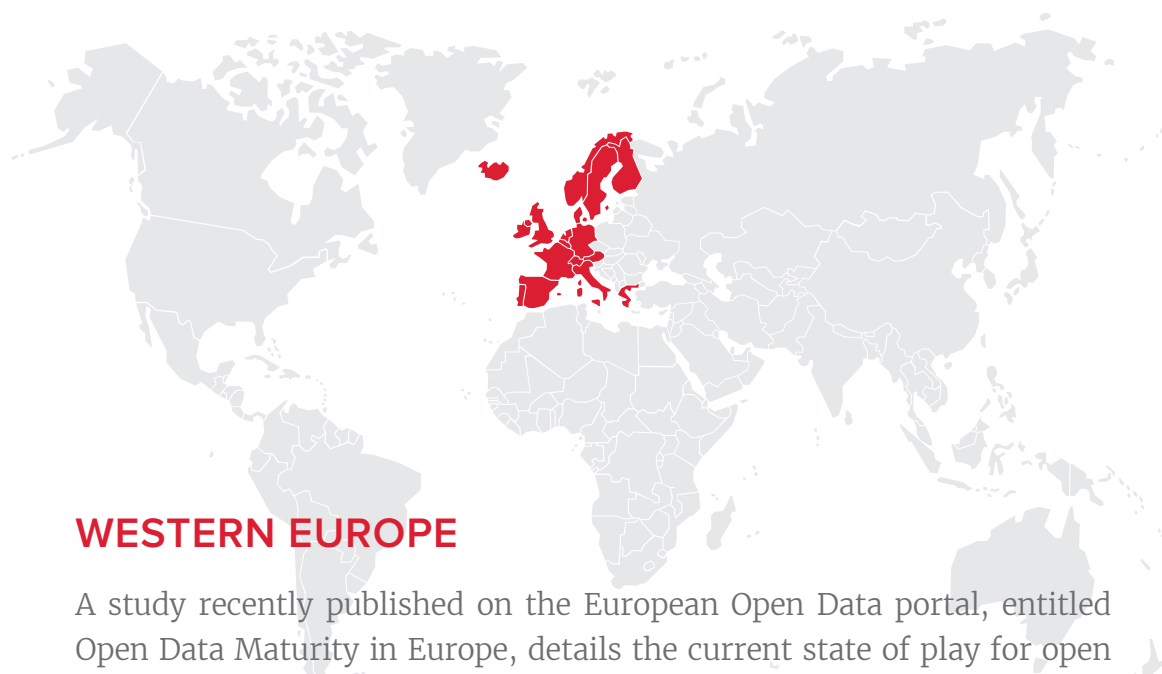
WESTERN EUROPE

A study recently published on the European Open Data portal, entitled Open Data Maturity in Europe, details the current state of play for open data in the 28+ countries of the EU, which indicates that the majority of countries are still struggling toward full maturity. Several challenges have been identified, including political, legal, and technical barriers, as well as ongoing issues associated with awareness and the availability of data.

Approximately one third of European countries are facing political barriers. Although most countries have an open data policy in place, the engagement of policy makers is still a significant challenge. Politicians are not generally aware of the benefits of open data and do not identify open data as a priority. Coordination between national and regional public sector bodies is also often a challenge many countries face when opening up data depending on the structure of the country. Norway and Germany for example contain regions that are highly independent, and therefore, are not included in the national programs related to open data. Many countries are also experiencing legal barriers, including issues related to licensing and privacy constraints.

One barrier indicated often by countries is data quality. When the quality of the data is poor, it prevents citizens or organisations from re-using the data. The quality of the data can be improved by setting up standards for the collection and publication of Open Data, but for several countries, this work remains to be done. Examples of best practices do exist though in Italy, where strong national guidelines are in the process of being set up to ensure data and metadata quality, and in Greece, where public administrations are being trained on how to consistently publish their data and upload it via a central national portal.

Awareness raising activities are still required to promote the availability and benefits of open data. Many entrepreneurs or other potential users of open data are still not aware of the data held by administrations; therefore, moving forward, it will be vital to ensure an expanded and continuous dialogue between data users and data holders to better stimulate the availability and reuse of data.

SECOND ACTION PLAN FOR INTERNATIONAL COLLABORATION

IODC 2015 resulted in the International Open Data Roadmap with the first Action Plan for International Collaboration. The Roadmap was an initial attempt to engage and galvanize the global open data community, including government, civil society, academia, and the private sector, around a set of core activities which must be advanced in order to unlock the full potential of open data.

Throughout the preparation for IODC 2016, the pre-events and the conference itself, the Open Data for Development Network worked with a range of organizations to reflect on the progress of the last two years in order to facilitate discussion at the conference on how to improve collaborative action by the open data community to address the challenges facing the open data movement. Discussions held throughout the International Open Data Conference in Madrid reaffirmed the need for greater collaboration in these areas, and identified key steps for the open data community to take in order for open data to deliver on its potential to address real world problems at the local level for the benefit of citizens regardless of where they live.

The areas laid out below in the second Action Plan for International Collaboration are meant to facilitate greater collaboration at both the global and regional level. Building on the 2015 Action Plan and the range of accomplishments and developments of the past two years, the new plan updates and defines seven specific lines of activity, and is meant to function as an ongoing reference, a working document, to guide new initiatives, research, and partnership development moving forward between now and IODC 2018.

ACTIVITY STREAMS	
1. Principles	Broaden political commitment to open data principles
2. Open Standards	Identify and adopt user-centric open standards
3. Capacity Building	Build capacity to produce and effectively use open data
4. Innovation Networks	Strengthen networks to address common challenges
5. Measurement and Evaluation	Make action on open data movement more evidence-based
6. Global Goals	Use open data to support the sustainable development agenda
7. Regional Dialogues	Connect with local communities

For each of these seven areas, the Action Plan for International Collaboration lays out recent developments, key remaining challenges, and specific actions to be considered by individuals, governments, and organizations in the run-up to IODC 2018. The primary overarching objective of the second IODC Plan is to create linkages, joint initiatives, and the strategic alignment of effort and investment across the global open data community. It will work closely with regional efforts in order to accelerate visible measurable progress over the next two years.

OPEN DATA PRINCIPLES

Broaden Political Commitment to Open Data Principles

The Open Data Charter was launched in September 2015 to provide governments with a common foundation upon which to realise the full potential of open data for their own jurisdiction. Over the past year, the Charter has been adopted by 41 national and sub-national governments.

At IODC, the Charter Stewards met to launch the Resource Centre and discuss the future of the initiative. The main challenges moving forward will be to:

‣ Move beyond political will to a stronger institutionalization of open data policies;

‣ Build greater synergy with other global agendas, including Open government and Sustainable Development Goals; and

‣ Address challenges to the successful implementation of open data principles across jurisdictions.

Recommended actions include:

▸ Increase high-level commitments from governments to improve the quality of their open data initiatives. The adoption of the principles of the Open Data Charter can be a key mechanism to show high-level political commitment to open data and increase the resilience of open data policies across transitions.

▸ Continue to include commitments to the common principles in global processes, such as the Open Government Partnership (OGP), the G20, the Sustainable Development Goals, and other global political agendas.

▸ Identify and address key challenges to implementation of open data principles. To ensure quality implementation and continuous learning, open data leaders in government should leverage the knowledge of global and regional peer networks, such as the OGP's Open Data Working Group, to enable a support environment and provide the tools necessary to facilitate implementation of the principles.

▸ Ensure that governments maintain a high bar in their commitments to the open data charter principles. As endorsements and adoption of the charter continue to proliferate, it is crucial that we are able to effectively assess adoption and ensure that rollbacks on commitments are prevented. The Open Data Barometer and the Open Data Index should be central to this effort by fully integrating the Charter's principles into their evaluation methodology. This would allow the publication of the Barometer rankings to better reflect an assessment of Charter implementation by national governments on an annual basis.

CHECK THESE SESSIONS FOR MORE DETAILS ON THE CHARTER TRACK:

▸ Balancing openness and privacy

▸ Creating sector packages to move from principle to impact

▸ Moving towards open data maturity

▸ Updates on government programmes from around the world

▸ From supply-driven to demand-driven open data strategies

OPEN STANDARDS
Develop and Adopt User-centric Open Standards

To realize open data's full potential, publishers must take steps to make data easier to use. Datasets should be published in a predictable and consistent manner to reduce the effort required to use the data they contain. Furthermore, published datasets should be comparable and interoperable with other datasets to reduce the effort required to combine data from different sources. To achieve these goals, publishers must adopt common *open standards* and *publication practices* for metadata, file formats, character encodings, identifiers, vocabularies, licensing and dedications, while preserving relevant differences across geographies and sectors.

Progress is being made, in particular within the areas of aid, contracting, and extractives; however, outstanding challenges include the need to answer basic questions such as what data standard to recommend when governments are preparing to publish a dataset. Few resources exist to answer this basic question. Consistent approaches to standards development across sectors are needed in order to improve interoperability.

Recommended actions drawn from Open Data Standards Day and discussions throughout the conference include:

▸ Adopt a common standard and methodology for organization identifiers. A *collaborative venture* will help data publishers and users discover sources of unique, high-quality open data for all forms of legal entities, including companies, charities, government agencies.

▸ Expand the Global Beneficial Ownership Registry, and establish an *open beneficial ownership data standard*, so that the true owners of companies can be properly identified, eliminating the ability to use anonymous shell companies to hide illegal or corrupt activities.

▸ Develop a more comprehensive map of the standards that exist using common methods, and evaluate the quality, governance, and popularity of different open data standards.

▸ Build capacity to develop standards and to support early adopters and implementers of open data standards. This may involve supporting expansion of 'help desk' services that support publishers in the implementation of standards, and building the field of maintainers working to build and update inclusive standards. Funders should acknowledge the need to co-invest in the development of this infrastructure, and to support the emergence of sustainability strategies for data standards, including membership models, paid support, and other new business models.

▸ Measure and research the adoption and implementation of standards in order to better assess progress, understand challenges, and design solutions.

CHECK THESE SESSIONS FOR MORE DETAILS ON THE STANDARDS TRACK:

▸ Empowering infomediaries: Translating Open Contracting Data into actionable information

▸ Joined-up data standards: evidence of need and emerging solutions

▸ The OjoAlData100 iniative for harmonising datasets in Smart City open data portals

CAPACITY BUILDING
Build Capacity to Use Open Data

Building the capacity of both data publishers and data users has been and remains a cornerstone of the open data movement. Open data trainers and education professionals came together at IODC 2016 to discuss effective methodologies for developing local open data leaders with the requisite technical expertise to push forward a sustainable open data agenda.

The main challenges include:

▸ The lack of capacity of many governments to disclosure data in a proactive and responsible manner;

▸ The need to respond to the backlash on openness in many places with the formal and informal provision of data literacy education to media and civil society groups; and

▸ The many inequities in the global open data movement, including particularly differences by geography, language, and gender.

Following pre-events for the School of Data, the Open Data Leaders Summit, and Data Journalism, recommended actions include:

▸ Map the technical competencies and relevant skills required to advance the production and use of open data. Work should take advantage of existing regional events and the next IODC, and include a survey of the open data community to inform capacity building discussions.

▸ Expand the current peer-support networks to be more inclusive of different regions, topics, and languages. While there are growing examples of successful practices for sharing knowledge among peers, there is a need to build new networks that address the diversity of skills and contexts. For instance, an African Open Data Leaders Network could build on experiences in Latin America and East Europe to support emerging leaders with greater local context, and the School of Data needs to develop greater geographic and linguistic diversity.

▸ Move toward a problem-centred approach to capacity building. It is paramount to develop hands-on programs with new tools to enable analysis, offer data guidance/mentoring, and develop a more robust set of resources for data collection and data collection training, in particular for public servants.

▸ Further advance a network of practice among capacity building initiatives where knowledge sharing and cooperation can be done more smoothly.

SEE MORE AT

▸ Understanding Your Data User

▸ Train the trainers: sharing methodologies for teaching how to use open data

▸ Leveraging Data visualization and partnerships for environmental action

▸ GODAN Action. Capacity development for open data users in agriculture and nutrition security

INNOVATION NETWORKS
Strengthen Networks to Address Common Challenges

IODC 2016 had plenty of examples demonstrating the use of open data in solving real world problems. As dozens of "Impact sessions" highlighted, the open data community is very focused on the use a problem solving approach to promote innovation and to connect open data to social impact. Open data innovation can not only help to solve important societal issues, but also to provide jobs and help to boost economies. Thinking of different ways to promote innovation not only helping us in the data use, but also in data publishing.

In this action track we look at different uses of open data to solve problems, building on pre-events such as the Open Cities Summit and FInodex-ODINE, which focused on results of and insights from existing open data accelerators and incubators. These uses can be technological, like creating apps; companies and start-ups, or policy based for example creating better evidence based policies in government. This track also examine different ways to create sustainable business models based on open data. In order to scale the impact of open data, there is a need to continue to advance focused collaboration and innovation in the fields of health, agriculture, environment, education, infrastructure, or finance, and many others.

Some of the emerging actions discussed include:

▸ To strengthen knowledge sharing among initiatives for acceleration and incubation of open data around the world, showcase the best startups and identifying future areas for global collaboration.

▸ Building on the successful Open Cities Summit, and the focus of the conference around local impact, engagement with an peer-to-peer network of at least 10 participating cities in a global cities challenge.

▸ A common problem definition framework and engagement package to systematize learning from more mature communities present at IODC. This could build on the experiences around the Anti-corruption and Agriculture Data Packages, and include specific open data standards recommendations based on existing and potential collaborative initiatives.

▸ Explore ways to further support communities in emerging topics discussed in IODC, including Sports, Culture and building a more learning across different IODC editions.

SEE MORE AT

▸ Connecting the dots: Aligning local initiatives with national open data programmes and global goals (OCDE/WB)

▸ A global marketplace for city data

▸ Learnings from open data incubator for Europe (ODINE)

▸ FIWARE: unleashing the potential of real-time open data

▸ Building a thriving open data ecosystem for economic growth and innovation

MEASUREMENT AND EVALUATION
Make Action on Open Data More Evidence-based

IODC 2016 offered open data researchers an opportunity to reflect critically on the findings of completed research and the need to create cohesion within the research community and the future challenges for research in support of open data.

As we move forward, research will continue to be crucial to determine what is working and what is not working. Challenges moving forward will include:

▸ Better understanding how different communities are really using open data, fighting against "open washing" and "open wishing";

▸ Insufficient information exchange and collaboration among the researchers, leading to a weak collective work to answer core common questions; and

▸ No common framework for impact analysis to capture the plurality and diversity of the community.

At the Research Symposium and during the the track, some of the actions proposed by the academic community include:

▸ Strengthen an user-centric research agenda. Much of the focus to date has been on the supply-side of open data, but to providers need to be more responsive to the demand side and/or user needs. Build on initiatives, such as the OD4D Open Data Impact Map and the GovLab Open Data's Impact, to develop better mapping tools to analyze the open data ecosystem to better understand the needs, interests, and relationships between stakeholders, users, and non-users.

▸ Evaluate progress to date by governments in publishing data to enable policy and decision makers to prioritize data for release. Develop decision trees that integrate evidence on the demand, benefits, and risks of specific data, and provide guidance to National Statistical Offices on the value of certain data-sets.

▸ Support greater networking among open data researchers to help to identify gaps in existing knowledge, and to develop common research methods and frameworks. There is a need to understand how different platforms, such as the Open Data Research Network and the Open Knowledge Forum for Research and Policy can more effectively support collaboration on research. First steps could include a network analysis of the open data research universe to identify gaps and hubs of expertise, a common hub to disseminate research and information to the open data researcher community, and regional research events in collaboration with OD4D regional hubs.

▸ Given the embryonic and iterative nature of many open data efforts, signals of impact are limited and often preliminary. In addition, different types of impact (such as enhancing transparency versus generating innovation and economic growth) require different indicators and methods. Moving forward, more work is needed in sector specific impact studies. Also, a conceptual impact framework that can evaluate data as an infrastructure or "commons" (similar to other public interest resources such as green spaces or air quality) needs to be developed.

SEE MORE AT

▸ Evidence-based training for open data practitioners? Lessons from open data impact case studies

▸ From open data research to policy: influencing global, national and local agenda

▸ Measuring Open Data together

▸ Strengthening Data Ecosystems for Greater Development Impact by Closing the Citizen Feedback Loop: Strategies from Around the Globe

GLOBAL GOALS

Use Open Data to Support Sustainable Development

Following the adoption of the Sustainable Development Goals in 2015, IODC added a specific activity stream to support the implementation and monitoring of the Global Goals for Sustainable Development. This activity stream stems directly from the idea that open data is a catalyst to achieve the SDGs and to measure progress toward meeting them. At IODC 2016, a major goal of the conference, as well as a pre-event on Openness and National Statistical Offices, was to strengthen a strategic alignment between the open data agenda, the production of official statistics, and the activities of the broader sustainable development data community. Current challenges include:

▸ Inconsistent integration of open data into the broader agenda to implement the Global Goals for Sustainable Development; and

▸ Implementing and supporting open data to support the Global Goals is a complex challenge for NSOs.

Among the key actions moving forward:

▸ Better articulate the need for integrating open data principles within the SDG data ecosystem. A mapping of best practices should be developed to help assist countries with an understanding of which data should be open, shared, or closed.

▸ The IODC 2016 sessions on the intersection of open data and work of NSOs sought to foster and strengthen linkages between these two critical actors to create a shared dialogue, and to better meet the demand for open data at the government level in support of the Global Goals. The conversations started at the IODC 2016 must continue. Looking ahead, there are several upcoming opportunities: the UN World Data Forum in January 2017, the UN Statistical Commission in March 2017, and other venues which gather together key players and provide opportunities for improved collaboration. Using these gatherings, the community needs to work toward establishing practical steps to strengthen coordination and collaboration of existing global efforts as well as plan new activities and showcase new tools and methods.

▸ Demonstrate the benefits of closer coordination, including financial and technical efficiency gains. There is a need to actively bring together the open data and NSO communities to bridge the resource divide. As the Sustainable Development Goals calls for a global action to revamp the global data ecosystem, new and more efficient funding is needed to support countries around data standards, accessibility, and data openness. New partnerships, such as the Global Partnership for Sustainable Development Data (GPSDD) can play an important role in building bridges with the open data community and strengthening mechanisms to catalyse innovation and better allocate resources, particularly toward developing countries.

SEE MORE AT

▸ The open algorithms (OPAL) project: unleashing the power of private sector data for public good

▸ Open agricultural funding: breaking down Silos

▸ Open data and distributed ledger (aka Blockchain).

▸ Open Mapping Mapathon!

MOVING FORWARD

Connect with local communities

For the first time, IODC 2016 hosted regional discussions with participants from Africa, Asia, North America, East Europe, the Middle East and North Africa (MENA), Latin America and the Caribbean, and Western Europe. Also, taking advantage of Madrid's favourable location, there was a specific pre-event focusing on open data in Africa.

During the preparation for IODC 2016, the Open Data for Development Network made a deliberate attempt to connect and expand the multi-stakeholder efforts emerging in these regions. In order to further strengthen the link between regional open data activities and the international community, it will be important to leverage grounded multi-stakeholder initiatives and regional events, such as Condatos, Developing the Caribbean, and the first African Open Data Conference, which will provide key opportunities for sharing of experiences and reflect on the progress across regions. This will also provide an opportunity to share what is working to solve challenges in developing countries and coordinate strategies to mobilize resources from the international community to advance bottom-up efforts around the world.

This edition of the Roadmap and Action Plan for International Collaboration will be used specifically to engage new communities to help shape an inclusive global agenda. IODC 2016, the first outside North America was a very successful experience, building new connections with the Spanish and European open data movements in particular. IODC 2018 in Argentina, the first IODC to be held in a developing country, will be a very important opportunity to build and strengthen linkages the Latin American open data community.

The records of government are the foundation of our social, political, and economic reality. They should be freely available and easily accessible to all who participate in the reality these records create in a way that doesn't privilege the access of one group over another, allowing each of us to help shape the reality in which we live.

RUMINATIONS ON OPEN DATA FROM IODC 2016
Datapolitan

TAKE ACTION

This report sets out a number of core areas for action and describes various specific activities in which members of the IODC community are engaged. To move this agenda forward many more individuals and organizations will need to be involved in action. Go to the IODC website to discuss this report and engage on the conversation on how to get involved in collaborative initiatives that can support delivery of this agenda.

We intend to take stock on progress on these efforts in key open data events, including regional open data conferences and the next Open Knowledge Festival. We hope that many of you will add your voices and your efforts as we look toward IODC 2018 and beyond. Through strong dedication and collaboration, we can ensure that we harness open data to connect global aspirations and drive local positive impact in people's lives.

ACKNOWLEDGEMENTS

The community maturity model is a framework that was adapted from The Community Round–table, a community that supports community managers. We have changed the competencies to match the IODC sectors, regions and actions areas and defined each stage. By looking at each competency and assessing where are we now and where we want to aim in two years time we can plan better actions for the future of the global open data community. Our plan is the use this model in the next two year to shape the different action tracks with the community.

STAGE 1	
GENERIC COMMUNITY MATURITY	Emerging topic, ad-hoc discussions, independent initiatives, not/poorly funded
SECTOR IMPACT AREAS + RELATED PRE-EVENTS	First time introduced at IODC or recurrent, but no systematic learning
REGIONS REGIONAL DIALOGUES + RELATED REGIONAL PROCESSES	Topic included in other Fora, but no recurrent regional mechanism
ACTION AREAS ACTION SESSIONS + RELATED PRE-EVENTS AND NETWORKS	New Action area for international collaboration – scoping process / problem definition

STAGE 2	
GENERIC COMMUNITY MATURITY	Recurrent topic, some social capital, some sharing of experiences, poorly/irregular funding
SECTOR IMPACT AREAS + RELATED PRE-EVENTS	Recurrent discussion, with some dissemination of good practices (e.g. pre-event focused on training)
REGIONS REGIONAL DIALOGUES + RELATED REGIONAL PROCESSES	Commonly agreed/recurrent regional forum
ACTION AREAS ACTION SESSIONS + RELATED PRE-EVENTS AND NETWORKS	Number of relatively independent initiatives, which are still relatively centralized/hierarchical

STAGE 3	
GENERIC COMMUNITY MATURITY	Explicitly chartered, community initiatives aiming at measurable outcomes, diverse/regular funding
SECTOR IMPACT AREAS + RELATED PRE-EVENTS	Established international network Recurrent pre-event to advance action-oriented agenda
REGIONS REGIONAL DIALOGUES + RELATED REGIONAL PROCESSES	Agreement on coherent regional priorities + some coordination with with global agenda
ACTION AREAS ACTION SESSIONS + RELATED PRE-EVENTS AND NETWORKS	Community-driven and coordinated global effort, with clear/measurable objectives

STAGE 4	
GENERIC COMMUNITY MATURITY	A strategy driven by a networked perspective, coordinated implementation, optimizing funding
SECTOR IMPACT AREAS + RELATED PRE-EVENTS	Community with advanced coordination and implementation mechanism–reporting on significant global impact
REGIONS REGIONAL DIALOGUES + RELATED REGIONAL PROCESSES	Advanced implementation of the regional agenda Strong coordination/learning from international processes
ACTION AREAS ACTION SESSIONS + RELATED PRE-EVENTS AND NETWORKS	Decentralized/networked leadership, Strong coordination, Global reach

OPEN DATA FOR DEVELOPMENT

WHAT IS OD4D?

Open Data for Development (OD4D) is the leading global partnership to advance the creation of locally- driven and sustainable open data ecosystems around the world. OD4D works with leading open data organizations and regional hubs in developing countries to create knowledge and inform policies, standards, innovation and research.

The Open Data for Development Network established a multi-donor program in 2015, building and consolidating on a number of open data projects that date back to 2010. OD4D uses an ecosystem approach to build the local supply of quality open data, and improve its use by leaders and innovators in government, civil society, the media and business. As a global data collaborative, OD4D is scaling open data approaches that work, improving transparency and accountability, service delivery, and the well-being of the poorest and most marginalized.

OD4D AT WORK

OD4D supports the International Open Data Roadmap, coordinating the global efforts to harness open data for sustainable development, while regional hubs work to enhance the development of bottom-up open data agendas in developing countries and supported regional initiatives such as the Latin America Open Data Initiative (ILDA), the Caribbean Open Institute, the Africa Open Data Network and the Open Data in East Europe and Central Asia.

OD4D has supported multiple global open data efforts and the inclusion of developing countries in those efforts, such as the Open Government Partnership and the Open Data Working Group, and the creation of the International Open Data Charter.

OD4D supports open data innovation in LAC, Africa, and Asia in multiple areas, such as health, agriculture, cities, anti-corruption, education, and budget. Recent efforts include:

Burkina Faso's first election since the uprising enhanced trust using Open Data to communicate real-time election results.

▸ Enhancing the tools available for policy makers and civil society to tackle corruption through the launch of an Anti-Corruption Data Package at the 2015 G20 Summit in Turkey.

▸ OD4D partners provided significant technical support in releasing and using open data to 10 countries in 2015, including governments of Tanzania, Macedonia, Burkina Faso, Indonesia and Peru.

▸ *Atuservicio.uy*, a health app in Uruguay visualizing hospital data for citizens users, received an OGP 2015 Award for innovative use of data.

▸ Data training and capacity building on using and innovating with data to create social change to 1000+ people from government, media and civil society.

▸ OD4D supported 22 School of Data fellowships in Asia, Africa, Latin America and the Caribbean, enabling data experts to provide training and data-driven change to their local communities.

▸ The 3rd Open Data Barometer was released in early 2016 maps the supply, use, and impact of open data in over 90 countries, and the Open Data Index investigates the data quality of 97 governments, including many cities.

▸ An Impact Map with 1500 cases of how people are using open data, including data solutions for all 17 of the Sustainable Development Goals

OD4D is hosted at the International Development Research Centre, and has invested $8 million in grants to date. Building on its global network, OD4D is committed to achieve the following by 2020:

▸ Completing 10 "game-changing" multi-stakeholder regional initiatives that sustain transformative improvements in national and regional open data ecosystems;

▸ Scaling open data innovations in four important domains: cities, governance, health and education, including 10 new global solution platforms with large-scale impact;

▸ Supporting 50 national and subnational governments to implement open data;

▸ Providing online and offline training to 5,000 public servants and 10,000 members from civil society and business to enable effective reuse of open data; and

▸ Tracking the supply and use of open data in 100 countries and 200 cities, generating reliable evidence on the impact of the Open Data Revolution.

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GLOBAL GOALS
LOCAL IMPACT