ODI **method report**

Lessons on supporting public sector open data leadership

Open Data Institute

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Authors: Fiona Smith and Liz Carolan (Open Data Institute)

1. Executive summary

As open data initiatives mature, we need a generation of entrepreneurial public sector leaders who are able to successfully navigate through reform, from early adoption to wide-scale implementation.

This paper presents a summary of the lessons learned from the Open Data Institute's experience supporting open data leaders around the world. We aim to help practitioners and researchers working in good governance and open data to understand effective techniques for building leadership capacity, particularly for implementing transformational reforms within government.

The lessons in this paper are drawn from testing different methods of delivering capacity building and advice to leaders through peer networks, training and strategic assessments.

From our research, we found:

1. **Peer networks help boost personal and professional development, but more research is required to understand how to scale their impact**. A peer network (the 'Open Data Leaders Network') benefited the personal development of individual members, in particular through enhancing their social capital and challenging their thinking. More time and research is required to understand whether this will translate to impact at the institutional or national level.

2. **Training programmes for civil servants are one component of a broader process of capacity building**. Face-to-face and virtual training methods worked well for increasing knowledge especially on technical subjects such as licensing. But affecting long-term behavioural and culture change may require a long-term form of multi-faceted engagement, built on a relationship of trust between trainees and training partners.

3. **Strategic assessments should be reframed in participatory terms to promote ownership of results and follow-up actions**. The assessment tool we piloted provided rigorous guidelines for structuring a review of a team's ongoing progress implementing their open data initiative. Using the tool to promote dialogue, reflection, and to generate a list of collectively agreed priorities – as opposed to a one-off event – could deepen the outcomes.

4. **Leadership programmes should incorporate a degree of flexibility, and plans should be adapted as external circumstances change**. Prior country scoping in the form of desk research, stakeholder

interviews and learning needs assessment was crucial in tailoring the design of leadership support programmes. An adaptive and responsive approach is especially important in more fragile operating contexts.

5.   Teams providing leadership support or training activities should conduct ongoing reviews of their own effectiveness. Reflecting on our own practice throughout the cycle of design and implementation was beneficial to promote continuous learning about how effective methods were. In future, we should standardise this approach and ensure feedback flows between participants and our own delivery team.

Throughout the year, we also observed external trends that impact on sustainable open data implementation. These included fragile governance conditions, weak feedback loops with data users and uncertainty around data ownership and use. These challenges are complex and cannot be solved by one leader alone, but are important to consider in shaping appropriate leadership support programmes.

We also gained general insights into managing leadership support programmes in developing countries. For example, we learned the need to combine careful risk assessment with an adaptive, flexible approach, and the value of taking a partnership approach towards delivering support. These lessons are not specific to open data, and could be transferrable to other sectors.

Finally, we identified ongoing challenges and research questions which will need to be addressed in the next phase of open data's development and widespread adoption. These include how to embed early changes catalysed by dynamic leaders into broader systems, and how to strengthen feedback loops between governments and data users, to promote greater use and adoption of open data.

2. Introduction

Background

Around the world, governments of all levels – city, regional and national – are adopting open data policies and portals. Open data is data that anyone can access, use and share. It is increasingly seen as a tool to help promote transparency, boost innovation and business development, and solve social challenges such as pollution, transportation and disaster management.

In 2015, the ODI embarked on an set of projects to understand what works in supporting leaders to implement transformational open data reforms. We sought to answer the question: '*How do you unlock a sustainable supply of open data in developing countries?'*

This builds upon our experience engaging with over 30 country governments for bespoke open data training, and our previous research into navigating open data and organisational change. We observed that leaders of open data initiatives often feel isolated, as vanguards who are disrupting the status quo. They share many characteristics of what Everett Rogers refers to as 'innovators' in his famous model of how new technologies and ideas spread through cultures.[1] As policy innovators, they are entrepreneurial thought leaders who are willing to take risks, but can find themselves struggling to gain broader traction during the implementation phase of a reform.

Supporting leaders to shift open data from being a fringe innovation project to embedding it into routine systems and culture will be essential if we are to realise data's potential for driving sustainable and inclusive global development.

Our theory of change was that a **supply of open data can be sustained by empowered, local leaders overseeing and driving culture change**. Based on our experience, we believed that some of the best ways to support leaders were to connect them with peers and experts, promote strategy review processes, and challenge leaders to think more innovatively and to amplify their successes by communicating stories of impact. Central to our theory of change was a locally-driven approach, where governments and citizens define their own goals for social and economic transformation.

To test our hypothesis we piloted three different **methods of providing leadership support**: 1) peer-leadership networks; 2) training civil servants (in person, and remotely); and 3) strategic assessments. We sought to 'learn through doing', and to regularly reflect on and adapt our practice.

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1 Rogers, E. M. (1962). *Diffusion of innovations*. Glencoe: Free Press.

Our implementation approach involved hand-picking dynamic individuals to be part of an **Open Data Leaders Network** (ODLN). The network brings together high-potential leaders from all over the world to engage in peer-learning, professional development, and to exchange promising practices.

For the training and strategic assessments, we designed a scoping process to select three focus countries we felt had the right enabling conditions for open data to mature. These conditions included demand for technical assistance, the presence of an open data champion in government, political commitment to open data, and prospects of high impact. Ultimately, we wanted to understand whether having a strong leader was enough to achieve transformation, even against challenging conditions such as a closed political culture or nascent civil society.

After selecting Burkina Faso, Tanzania and Macedonia as our focus countries, we collaborated with their open data teams to co-design a package of support activities over the following six to nine months. Over the course of the year, we delivered:

- Training to over 650 civil servants
- Six open data leaders trained to become trainers
- Two in-depth strategic assessments in Tanzania and Burkina Faso

Research methodology

Using rapid appraisal methods such as surveys, participant observation and focus group discussions after each major intervention – whether training, assessments or strategic support – we collected feedback on the content, quality of delivery and evidence of meeting learning outcomes. We also held retrospectives with trainers and partners to improve our curriculum and methods.

For the purposes of this paper, we invited an external consultant (Icarus) to help evaluate our methods, and analyse the data we had collected over the year. The evaluation involved a combination of desk review, participant surveys, interviews with trainers and partners, and a focus group discussion with the ODI team. The lessons and recommendations distilled from that process are summarised below. See the Appendix for more details about the research methodology.

We acknowledge that there are several limitations in our research approach. Given the programme's short 12-month timeframe, we were only able to assess effectiveness up to the level of knowledge and skill acquisition.[2] Given more time, we would follow up with participants to track longer-term changes in attitudes, behaviour and institutions. We also note the small sample size of three countries with diverse contexts. We intentionally chose different social and political contexts in order to understand whether approaches were transferrable. Repeating the piloted methods in more locations would strengthen the validity of our results.

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2 Kirkpatrick, D. L. (1998). *Evaluating training programs: The four levels*. 2nd ed. San Francisco: Berrett-Koehler Publishers.

3. Evaluating different methods to support open data leadership

Peer leadership networks

What are peer leadership networks?

Peer networks are horizontal organisational structures that distribute resources and support to members ('nodes') via social bonds and joint activities ('links'). They support professional development by sharing and building upon knowledge held by individual members to achieve greater collective impact. Increasingly, peer networks are emerging in the public sector as a way of connecting policy innovators and diffusing promising practices within various areas relevant to good governance, including open data.[3]

One of the greatest perceived benefits of a peer network is enhancing the social capital of members. Social capital, as an asset, is the collection of networks and bonds that enable a person to work with others effectively. It is built upon shared norms, values and understandings which can facilitate co-operation, exchange and innovation.[4]

How the ODI used peer networks

With this in mind, we developed the Open Data Leaders Network (ODLN), a programme that aims to promote peer-learning and to enhance the social capital of civil servants responsible for implementing open data initiatives within different levels of government around the world. It was developed in response to global demand for capacity building, training and support for leaders in order to increase the sustainable supply and use of datasets across government.[5]

About the participants

Leaders were engaged to join the ODLN through the ODI – selected from within our existing networks, through invitation to apply, or by recommendation from other open data leaders. This selection process was intentional, in order to provide geographic and gender diversity, but also to provide the conditions for respectful group dynamics. Each of the selected candidates was reviewed against criteria including a strong mandate within their government for reform, high leadership potential, and a collaborative and collegiate

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3 Gerry, W., Harvey, B., and Smith, F. (2015). *How to create and sustain peer networks for open data leaders*. London: Open Data Institute.

4 Keely, B. (2007). Human Capital: How what you know shapes your life. *OECD Insights*, Paris, OECD Publishing.

5 See, for example, findings of The World Wide Web Foundation, (2015). *The Open Data Barometer Global Report*. 2nd ed. Available online at: http://www.opendatabarometer.org/assets/downloads/Open%20Data%20Barometer%20-%20Global%20Report%20-%202nd%20Edition%20-%20PRINT.pdf [Accessed 2016-04-14].

leadership style. They were also selected based on their bold aspirations for open data in their context, as the following quotes from participants about their goals indicate.

> *"[We want to] become leaders in the publication and use of open data for evidence-based policy making, economic growth and transparency."*
>
> *"I want to see open data being released as business as usual and (perhaps more importantly) innovative reuse of the data leading to a multitude of social and economic impacts and better participation by citizens, communities and business in government."*
>
> – ODLN survey respondents

Despite being at different stages in their open data journeys, the leaders in the ODLN shared several common traits. All participants were dynamic individuals playing a leading role in driving open data initiatives in their local contexts, actively participating in international or regional open data communities. They also showed traits of 'network-thinking', such as a willingness to share knowledge and contribute to the advancement of the sector as a whole. They also experienced common challenges in their day-to-day jobs, such as managing political transitions, engaging the private sector, measuring the impact and value of open data, and applying open data towards solving policy challenges.

A key consideration while forming the ODLN was to ensure a mix of participants from both developed and developing countries. From previous experience, we observed that the challenges being faced by open data leaders in different contexts were relatively similar, and that exciting data innovation happening in one context could inspire solutions to challenges in another.

Participants represented a range of countries – Mexico, Ecuador, the Philippines, Moldova, New Zealand, Morocco, Argentina, Tanzania, Nigeria, Macedonia, the UK, Chile and Malaysia – and a variety of institutional structures, including the President's office, the city mayor's office, planning commission, e-governance department and a semi-privatised innovation agency.

About the programme

The overall design of the ODLN programme was based on ODI research on network building and insights gained from its other support programmes, including startup incubation.[6] We realised the importance of allowing time for the group to build relationships of trust in-person, and providing them with enough space to be able to determine the shape of the network they wanted.

Network activities included an inception week in London for training, relationship building and knowledge sharing, followed by ongoing communication. In 2015 we conducted two inception weeks for cohorts of seven individuals at a time. We adapted the curriculum for the second cohort based on an assessment of learning needs and feedback from the first cohort, which revealed a high demand for more challenging content on innovation.

While the learning objectives differed slightly between cohorts, the outcome of the programme remained to develop strong social and professional links between the participants. This was to enable the sharing of ideas, inspiration and moral support to help them in their leadership roles, while creating the foundations for a peer network that could scale.

The training week incorporated reflection and co-working based on current trends in open data theory and practice, managing organisational change, private sector innovation, communication skills and strategy planning. It was delivered through a number of facilitation methods, including group discussion, abstract thinking and problem-solving (eg business canvasses), role play, individual coaching, action learning sets, off-site visits (including to a startup incubator), and lecture-style presentations. The training week also exposed participants to experts representing diverse perspectives, from startups, global institutions and the UK Government.

6 Gerry et al (2015) as above; Carolan, L. (2015). *Small teams, big ideas*. [Blog] World Bank Data Blog. Available at: http://blogs. worldbank.org/opendata/small-teams-big-ideas-open-data-ambition-runs-start-ups-governments [Accessed 2016-04-14].

The Open Data Leaders Network peer network model: key findings

Overall we found positive results from the ODLN peer network model. Members of the network scored the usefulness of their participation highly against three criteria: for their own personal development, for their open data initiative, and for promoting their work and open data more generally.

Our findings below are based on participant feedback surveys, ODI team reflections and interviews with trainers. They reinforce what the wider literature suggests: that effective network-building requires careful participant selection, the employment of an adaptive, flexible model and the promotion of network-thinking from the outset.[7]

We have organised our findings according to the key components of a peer network: understanding impacts; selecting members; connecting members; balancing diversity; managing membership turnover; and network evolution and governance.

Understanding network impacts

Reported impacts of peer networks typically include members forming professional relationships, improved professional approaches within a sector, enhanced organisational capacity, and better government policies within a sector as a result of network member engagement and advocacy.[8]

During our research we asked network members about their key 'take-home message' from the inception week training, as well as the aspects that have been most useful in their work.

Three themes emerged:

- Appreciating the crucial role of culture change in the process of implementing open data policies
- Understanding how innovation approaches can be relevant and useful in their work
- Establishing links with a group of people, with shared interests and enthusiasm, who are experiencing similar challenges

These themes aligned with the actions that members said they would undertake, having attended the training. This suggests that elements of the training matched participants' needs and expectations. Members' follow-up actions were wide-ranging:

7 Smith et al (2015). As above.

8 Ibid.

"Pursue long-term structural changes and law reform, ask for reasonable budget and resources to kick-start things."

"I have to take the time to be able to strategise more, and to focus more open data-driven innovation."

"Innovate (at a policy level, at project level and with team's creative problem solving). Implement a more effective change management approach."

– ODLN training feedback

While it might be premature to see evidence of organisational change, members have identified ways in which their teams, departments or governments have benefited from their participation in the ODLN. Many members said the network had given them new ideas. Many also said that participating in the network had helped them to acquire new insights into how their own open data initiatives were progressing, and to generate increased support or awareness. Together these findings suggest that peer networks have the potential to contribute to mid- to long-term capacity building.

"ODLN is like a small think tank with [rapidly] responsive people and plenty of diverse experience at one place."

– ODLN survey respondent

Selecting participants

Selecting the right kinds of participants is key to the success of a peer network, since the rationale for connecting peers is to access mutual support and information from others at similar positions. The ODLN participant selection approach appears to have been effective, as feedback from participants suggests that the network reflects the original aspiration of investing in individuals with high potential to affect change. Participants' diverse experience and knowledge of working with open data created rich opportunities for leaders to learn from each other.

"I felt I found a group of people who shared the same enthusiasm and the same shortcomings in the daily work with open data."

– ODLN survey respondent

Participant feedback from the first ODLN cohort exposed a need to increase diversity of perspectives. For the second cohort, therefore, we invited participants from cities, regions, and varied institutions. As the network grows and original members are promoted to new positions, we need to continually review our approach to membership and ongoing governance.

Connecting members and offering face-to-face training

A critical component of convening a peer network is connecting people. Bringing people together for an intensive week of training and building relationships of trust is a resource-heavy approach, both for the organiser and in terms of the amount of time attendees have to take out of their professional lives to attend. It therefore needs to be impactful in order to justify the investment.

During the inception training week we used a number of activities to promote bonding, including group problem-solving, action-learning sets in pairs, excursions to other startup incubators, and social activities. Small group and pair selection was directed by ODI facilitators in order to ensure a balance of personality types and learning styles. Open social time (like getting lost in the city together), and space for problem-solving independent from trainers helped to create a sense of closeness and solidarity.

After each training session or presentation, we also dedicated time to group reflection. This allowed for pattern recognition, and helped members to develop a sense of 'tribe' or common endeavour. It was also important to create a safe space for members to have private conversations and brainstorm joint actions independently.

Overall, the training week appears to be a worthwhile investment, although adaptations could be made to content and resourcing to increase effectiveness and resource efficiency (see learning on 'project governance and management' below). The training week contributes to several factors that are pivotal in building a peer network: making connections where none otherwise exist; developing relationships of trust and respect; leveraging collective expertise and resources; cultivating communities of learning; and promoting network thinking.[9]

> *"It was an amazing bonding experience, that created a network where you can openly ask questions on your everyday decisions that you make as a practitioner [...] That helps a lot, because we do have challenges: everyone working on an open data national strategy has common challenges (like Creative Commons licensing)."*
>
> – ODLN member

Face-to-face time is also crucial to laying the foundations of ongoing communication. Members have remained active in the network, engaging with each other through various mediums including Twitter, Whatsapp and email. An early attempt to develop a customised ICT platform for document-sharing and discussion quickly gave way to more informal

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9 Ibid.

modes of communication, such as email. This suggests the need to allow members to self-select and manage their own tools for collaboration, as opposed to introducing an externally-led solution.

Balancing member diversity

An important consideration when convening a peer network is managing member diversity to enable group cohesion. We found the following aspects to be helpful when balancing members' capacities and cultural backgrounds.

- **Ensure members can relate to the experiences of others in the room.** One trainer observed an interesting dynamic was created by the heavy involvement of UK open data representatives (generally regarded as being at the forefront of open data): "There is potential for this to create a barrier because participants can be threatened by hearing from a country that is so much further ahead than they are." It is important, therefore, that varying levels of experience are handled sensitively so that all members feel comfortable and supported, rather than isolated. Including more than one person from each of the four Open Data Barometer groups (High Capacity; Advancing; Capacity Constrained; One-Sided Initiatives)[10] could help people to feel at ease and identify with the experience of others in the room.

- **Offer members experiences that are relevant to their level of understanding around open data.** For example, a visit to a UK startup initiative may not be relevant to those countries that are 'Capacity Constrained'. When engaging network members, it is important to use stories that inform and inspire all of them, regardless of their position in the Open Data Barometer. Ideally, draw upon the pool of stories from members' own contexts; this will expand as membership grows.

- **Offer a programme that can accommodate different learning styles and facilitate joint working.** One trainer noted that the level of participants' involvement depended somewhat on their background: "One of the biggest challenges was the mixture of learning styles and how to address that in the room so that everyone felt equally confident and involved." For example, some participants appreciated discussing formal theory about organisational change management. One of the most well-received training sessions combined classroom-style delivery

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10 The World Wide Web Foundation, (2015). The Open Data Barometer Global Report. 2nd ed, pp.8–9. Available online at: http://www.opendatabarometer.org/assets/downloads/Open%20Data%20Barometer%20-%20Global%20Report%20-%202nd%20Edition%20-%20PRINT.pdf [Accessed 2016-04-14].

with the opportunity for members to share their experiences in a practical way.

"The afternoon session [...] was an opportunity for the participants to work together and see how beneficial that is. It gave some of the participants the opportunity to speak in their mother tongue and get creative. Many participants apparently went away with the intention to use this style of participative teaching within their own countries – this was an unexpected product of the training session."

– ODI team member

Managing membership turnover and job change

The literature suggests peer networks often have high member turnover rates due to individuals changing jobs, which can be challenging for continuity. However, job change can also positively help to expand a network's influence.[11]

Those ODLN members who changed jobs (four of fourteen original members at the time of writing) went on to occupy positions where they can influence open data policies while remaining engaged with the network. In this instance, high turnover enriches the network. However, it could pose a challenge if members' new roles diverge away from open data, to the point where the majority are no longer in a similar field.

Fostering network evolution through structures and norms

Constructing an effective network is an iterative task, which involves developing formal structures, informal norms and defining tasks to guide collective action and accomplish shared goals.[12] It requires a coordinator or facilitator, with a good understanding of the 'science' of networks, to consolidate the network through preparing, convening and sustaining it.

For the ODLN, the ODI has taken on the coordination role. After the training week, we avoided using a top-down approach, as the literature suggests continuing engagement needs to develop organically. Although we joined in conversations via Whatsapp, Twitter and Skype, we did not instigate structured engagement. This proved effective as members

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11 Smith et al (2015). As above.

12 Ibid.

remain in regular contact, and have not requested a larger coordination role from the ODI. Indeed, ODI staff are described as "remarkable co-ordinators and [the] leader of leaders" (ODLN survey respondent).

The involvement of members from the similar regions has helped to promote ODLN's organic evolution. They can communicate and establish dual-country programmes relatively easily given their similar timezones and cultures. In South America, an effective coalition has formed between some of the ODLN member countries, and there are a group of individuals who partner together regularly on regional initiatives. A broader network of people connected to the leaders is coming together, supported through other ODI initiatives such as 'Train the Trainer' and regional open data events, such as the Africa Open Data Conference.

Mapping future membership and network governance
There is an appetite for the ODLN to continue: 75% (n:6) of survey respondents stated that they would like more engagement with the network, for example, through further opportunities for face-to-face engagement; 25% (n:2) said they would like about the same level of involvement in the future. Seven members offered to support the ongoing work of the network.

> *"Continue sharing what we've learned and enable other practitioners to gain confidence in doing open data work and navigating the uncharted."*
> – ODLN survey respondents

There have been a number of ideas from network participants about how the ODLN can be grown in the future. These include:

- Hosting in-country, regional, global or inter-cohort meetups
- Facilitating continued ongoing connections through Skype calls, webinars, etc
- Members producing and sharing one-page briefing papers, or hosting thematic discussions
- Pursuing further opportunities for training

Ultimately, the ODLN is still an experiment in network-building. We encourage members to develop their own local chapters, and to connect with ODLN with their existing network.

Peer leadership networks: recommendations

1.   **Select initial members of the peer network carefully**. Committed and energetic members are key to establishing strong networks in their formative stages. These might be national, city-level or sector leaders. Prior personal contact proved key in identifying people with the right kinds of qualities for membership (including the 'network-thinking' mindset). As networks grow and experience turnover, this approach to membership should adapt to incorporate new members recommended by existing members, and fresh applicants.

2.   **Manage different levels of member experience and backgrounds within the group sensitively**. While the diversity of experience brings a certain richness, it is important to balance differences. The Open Data Barometer could be used to classify and understand members' capacities in their respective contexts, for example. Accommodate varied learning styles by including a mixture of theory and practice, and include examples relevant to different contexts. Participants should be provided with ample opportunities to reflect, and to apply fresh insights through abstract thinking and problem-solving.

3.   **Build strong foundations for a new network with an intensive training week**. With clear objectives and careful design, intensive training weeks can help to facilitate trust, collaboration and network-thinking between members. They can also provide actions for participants to take back to their countries and implement immediately. Training courses are, however, costly, and must be well constructed to justify the investment in time and resources. They also need to be appropriately paced so that members have time to attend to their day jobs where necessary.

4.   **Monitor how network membership evolves**. Network membership will inevitably change over time, as members' roles and positions shift. Members should share comparable functions such that they consider each other 'peers', and consider the network relevant to their professional development. As networks grow, coordinators should check that the membership base continues to fulfil their original brief, and address significant levels of divergence should this occur.

5.   **Collaborate with members in managing the network and making future plans**. For the Open Data Leaders Network, we are planning for a future where the ODI becomes one partner amongst supporting local and regional institutions. We will encourage network members to self-organise, engage, and take ownership over the future development of network priorities, expansion and activities.

Open data training for civil servants

What is open data training?

Open data training – in standards, publishing, change management, licensing, use, and policy – can help build the capacity of civil servants to proactively publish open government data and implement impactful open data initiatives.[13]

At the ODI, we train civil servants from many country contexts. This takes the form of face-to-face, 'classroom-style' training and remote or online training, which have varying benefits and weaknesses, depending on how they are delivered and the relationship we have with participants.

Building on our experience in designing open data training courses, we experimented with different models for conducting training. These included face-to-face classroom sessions, remote or virtual sessions, skills-focused workshops, and coaching.

Training topics included the basic principles of open data, how to operationalise and employ open data as a tool for addressing policy challenges, case studies on benefits and business models, data science skills and practical aspects of discovery, publication, law and licensing.

Learning outcomes varied from basic understanding of open data, to acquiring specific skills for people responsible for publication, to overcoming specific technical challenges such as licensing.

We developed our training methods, content and desired learning outcomes on the basis of a training needs assessment. This typically involved conducting an onsite scoping visit,

13 See, for example, 'Recommendations for training' in *The Open Data Barometer Global Report*, 2nd ed; and Enabling the data revolution: An International Open Data Roadmap (2015). Conference Report. In: *3rd International Open Data Conference*. [Online] Ottawa. Available at: http://1a9vrva76sx19qtvg1ddvt6f.wpengine.netdna-cdn.com/wp-content/uploads/2015/11/opendatacon-report-en-web.pdf [Accessed 2016-04-12].

a pre-training teleconference call, and a short introductory workshop before delivering a package of different activities over the course of 6-12 months.

In **Macedonia**, we delivered an introductory workshop on open data basics and principles for senior officials and new data publishers ('Open data in a day'), a skills-based workshop including data users, civil society, and developers ('Telling stories with data'), and technical coaching on laws and licensing, delivered remotely.

In **Tanzania**, we conducted an introductory workshop remotely via webinar, an offsite workshop on communicating open data and change management for the cross-departmental implementation team (the 'Open Data Task Force'), and strategic coaching sessions with a small group of senior civil servants to identify future priorities for their open data initiative.

In **Burkina Faso**, we delivered remote technical coaching on laws and licensing, and as in Tanzania, provided strategic coaching sessions to a core team in country on change management.

Open data training for civil servants: key findings

Overall we found a high demand for training programmes of all types. Where specific training needs were identified, remote or online training methods are effective and less costly than face-to-face formats. However, remote training alone may not be sufficient to build relationships of trust between trainees and trainers, which is important for transforming knowledge into action and behavioural change.

Our findings below are based on participant feedback surveys, ODI team reflections and interviews with trainers. They are consistent with the literature on public sector change management, which suggests that training is an important (but not sufficient) component of the capacity building process.[14]

We have organised our findings to reflect key phases of designing and delivering training, including: understanding learner needs; selecting delivery formats; ongoing support; and assessing outcomes.

14 Broad, E. et al (2015). *Open data in government: how to bring about change*. London: Open Data Institute.

Understanding learner needs

The training programmes offered to civil servants were tailored to reflect the status of their open data initiatives, learning needs, country contexts (such as dynamics between government and civil society), and the available scale of resources. Solid prior understanding of the open data issue at hand, the country situation, and the participants' experience and knowledge, along with sufficient resources to develop, deliver and follow up after the training, were key to the success of training according to country team surveys.

Selecting training delivery formats

Open data training took place out of country, in-country and virtually. From participant feedback surveys, each option worked effectively. Country teams have reflected that the training was fully or partially successful in meeting their needs and delivering what it set out to do.

> *"The trainings were well designed and carried out. The trainers engaged the group effectively thus increasing the efficiency of the trainings through active participation and real life examples."*
>
> – Country team survey respondent

Remote training used relatively less programme resources in terms of trainer costs and time. Trainers and participants state that it worked well, and is particularly well-suited to technical subjects (such as open licensing) where there is information to impart in a didactic fashion, rather than in more participative processes to develop behaviours. No technical problems were encountered in our experience, but it is foreseeable that this could be an issue in some contexts where internet connection is less reliable. There was a sense of 'charisma gap' at the start of one session, but this quickly dissipated, and there were good levels of interaction between participants and everyone was able to participate fully.

> *"As the training progressed they were brainstorming ideas together."* –
> ODI Trainer

Offering ongoing support

Those teams who underwent training received access to support both before and after their sessions. However, follow-up support happened mostly on an ad hoc as opposed to a regular structured basis, with questions and requests posed to the training team as and when needed.

Ongoing engagement with participants is an area that could receive more focus in future. One of our insights is that investing in leaders requires more than sporadic contact. A process that engages leaders and their teams over a longer timescale is required to measure progress and shifting learning needs.

> *"We should continue working together to improve [...] Maybe periodical meetings might help, to keep everyone on track."*
>
> – Country team survey respondent

Assessing training outcomes

It is difficult to assess the long-term outcomes of the ODI's open data training for civil servants given its relatively short timescale. However, some short to mid-term reported impacts are as follows.

- Macedonian civil servants made design changes to their open data portal to make it more accessible, and applied a Creative Commons licence to their datasets to improve data reusability.

- Tanzanian civil servants are reviewing their data policy framework and strategy, with concrete plans to develop a specific open data policy over the next 12 months.

- The Burkina Open Data Initiative gained recognition as an official project of the Burkina Faso government, and has applied a Creative Commons licence to some of its published datasets.

As a stand alone intervention, there was low confidence among the ODI team that training programmes can bring about an open data culture in government. While training might form an initial step in the process, it was felt that prolonged and multi-faceted engagement between teams of civil servants, peers, and experts is required in order to affect behaviour change. Nonetheless bringing people together in a training setting has other benefits: it unites teams who are not usually co-located, promotes collaborative work, and imparts technical information.

Open data training for civil servants: recommendations

1.   **Conduct a training needs assessment, but also adapt as circumstances change.** Opportunities for interaction should be made available to participants before sessions to develop a baseline of training needs. It is also useful for the trainer to be available for follow-up after the training.

2.   **Secure senior sponsorship to ensure outcomes of training achieve capacity building goals.** Secure the involvement of senior staff from within the participant's government to ensure that learning can be embedded into team plans, and have a greater chance of being successfully implemented. Try to avoid transitional or busy periods such as elections, as this can affect the momentum to take forward actions agreed through training.

3.   **Frame training activities to respond to professional development goals.** Training is a familiar concept and an offer that people are likely to accept; they may be less likely to attend events described as workshops or information sharing, for example. Because it is familiar, people feel valued if they are offered training opportunities, particularly if they see it will contribute to their professional development and/or lead to some form of certification or accreditation.

4.   **Combine hard and soft skill development.** Vary theoretical frameworks and content with practical elements to build soft skills, for example communication techniques to equip civil servants to explain open data to different audiences. Using stories and relatable use cases from similar contexts is also well received, and helps to inspire new ideas and actions.

5.   **Deliver ongoing support following a flexible, yet structured pathway.** Investing in individuals requires the trainers to remain in contact, with periodic reviews of progress and ongoing needs. This can be delivered in low-cost ways, such as WebEx online meeting software, or periodic one-on-one/small group coaching sessions.

Strategic assessments for open data

What are strategic assessments for open data?

'Assessment tools' are a method for documenting, usually in measurable terms, an organisation's level of knowledge, skills, capacity or performance against predetermined criteria. Strategic assessment tools are typically applied mid-process (that is, during implementation) to reveal a team's progress towards achieving desired objectives, and highlight opportunities, weaknesses and roadblocks in current approaches.

As open data initiatives have expanded around the world, various assessment tools have been developed to evaluate capabilities to initiate open data policies, legislation, the release and quality of open datasets, surrounding technology and technical capacity.

Currently, most open data initiatives in developing countries follow the World Bank's Open Data Readiness Assessment (ODRA) process. Although ODRA provides an initial analysis of the policy environment and current capacities to define first steps towards releasing open data (such as portal design), there is no mechanism for countries to have ongoing progress checks.[15]

While the Open Data Barometer and Open Data Index provide helpful comparative analyses of impact at a country-level, they do not necessarily assess the level of operational detail that leaders require to overcome implementation barriers. What is missing is a method for helping open data leaders take stock of achievements to date, diagnose ongoing capacity or technical gaps, review their project management systems, and refresh their approach in response to current opportunities.

With this in mind, we piloted a new strategic assessment tool for gathering feedback and advice to leaders on the status of their open data initiative. The aim was to equip leaders with useful information to guide internal decision making and planning, but also to help them to identify stories of progress for external communication.

The strategic assessment tool[16] encompasses multiple dimensions of an open data initiative, including internal capacities, leadership and strategy, team roles and structure, external engagement and data management systems.

We experimented with different modes of delivering the tool in Burkina Faso and Tanzania. In Burkina Faso we followed a highly structured approach, using interviews and small-group meetings with internal and external stakeholders to gather information, followed by a

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15 Shekhar, S. and Padmanabhan, V. (2016). *How to apply assessment tools for shaping successful public sector open data initiatives*. London: Open Data Institute

16 The Open Data Strategic Assessment Tool was developed by the ODI.

presentation and discussion of our initial findings with the open data team. In Tanzania we followed a much more fluid approach of informal meetings, small workshops incorporating strategic advice, and a larger discussion forum involving civil society, academic and private sector representatives.

In both cases the process took approximately five to seven days. This includes planning time with the core open data team, and writing up the results with advice for next steps into a brief report.

Strategic assessments for open data: key findings

Overall, we found the design of the assessment tool itself was comprehensive. Trainers and country teams alike reported that it introduced a rigorous approach to exploring multiple dimensions of an open data initiative. The value was not so much in the technical design of the tool in itself, but within the journey of planning the next steps flowing out of the assessment with the open data team.

Our findings are based on participant feedback surveys, ODI team reflections, and interviews with trainers. For ease, we have organised our findings to reflect key phases of the strategic assessment process, including: framing the assessment; developing the assessment tool; preparing for in-country engagement; and implementing the assessment tool.

Framing the strategic assessment

Within global development and governance, the term 'assessment' is used routinely. However, the term 'assessment' can infer an extractive element. It implies that the country is being subjected to a form of testing to see how well they are performing, and that an external agency is judging them. This can suggest a form of paternalism that may not be compatible with building local leadership.

In practice this means that, while rigorous in approach, the assessment tool faces a number of challenges. Based on ODI team reflection and a literature review of open data assessment processes, we observed:

- Countries can see it as something that is being 'done to them' and as a result may have little ownership of or interest in the findings.

- The assessment report can be lengthy and give little in the way of a steer to address priority needs – being faced with a long list of issues can be overwhelming and a barrier to implementation.

- The lack of a follow-up action planning process aligned to the report leaves the responsibility for action primarily with the country and may not lead to significant levels of implementation.

"Assessment of needs is set with mutual understanding of both parties."
– Country survey respondent

This suggests a need to review how the method is framed (from 'assessment' to 'review and refresh'), and to ensure that there is scope for follow-up support.

Developing the assessment tool

From the start we set out to ensure the process of developing the assessment tool itself was iterative, allowing time to deliver, reflect and then adapt the tool based on varied experience. We found sufficient time (4–6 months) was needed to develop the tool, including thorough background research and working it through with colleagues.

"It should not be taken as a template, but more as guidelines. You have to adapt to what is found on the ground and develop some specific areas that are relevant to the context. Globally it is a great tool to ensure that no key dimensions of an (open data) initiative are forgotten."
– ODI facilitator

Preparing for in-country engagement

To be most effective, there should be good knowledge within the team running the assessment of the country, current dynamics, policy priorities, and identity of key stakeholders. This can be acquired through extensive desk research and through speaking with experts with previous experience of open data in that country.

Ideally there is also a pre-existing relationship with the open data team. One of the key challenges we experienced was gaining access to key stakeholders for meetings where the relationship was quite new. A combination of prior planning, flexibility and opportunism to construct the in-country engagement is therefore important.

"When undertaking the assessment there is a balance to be struck between making sure that you have identified the key stakeholders in advance so that you are sure you get the right level of input, but there is also a need to adapt when you are there and respond to opportunities that arise to talk to other people."
– ODI team member

When the in-country engagement worked best, it incorporated a combination of some or all of the following elements:

- Pre-visit, desk-based research

- Pre-visit engagement with key individuals, preferably face to face to plan meetings

- At least one week of in-country engagement (combination of meetings and workshops)

- Allow free days to allow time for additional interviews and meetings to be set up with key individuals and organisations

Implementing the assessment tool
Expertise in open data (both technical and policy elements) is critical for delivering a successful assessment. On the ground support is needed to help countries work through the multiple dimensions of the tool, and adapt it to their context. A skilled and experienced facilitator is important to help the team identify the areas that require focus, and work with them to identify achievable actions to take those forward.

> *"It's not about filling in a questionnaire – the assessment tool is a prompt that highlights the areas that need further discussion."*
> – ODI facilitator

However, there is a risk the strategic assessment output report itself will be underutilised if too lengthy or technical. Making the process more of a dialogue, and narrowing down a smaller list of collectively agreed priorities (eg 2–3) also appears to be more actionable based on our experience in Burkina Faso.

Strategic assessments for open data: recommendations

1.   **Organise the assessment in close co-operation with someone who has sufficient leverage within the government**, and secure commitment and interest from high-level officials early. Meetings should be organised as a joint activity with the government team, and there should be a clear mandate from a high level official. This helps to ensure greater participation, and it is more likely actions coming out of the process will be implemented.

2. **Invest in scoping to establish a good prior understanding of the local context**. Spending sufficient time in building relationships and background research is essential to build trust between the experts facilitating the assessment and the country team, and to deepen understanding of needs and challenges. Where possible, do at least some of this work face-to-face with the open data leader and other actors, in country. Scoping has been less successful where it relied on the intelligence of third party organisations.

3. **Incorporate joint prioritisation and action planning, involving experts and the open data leads**. Such a joint process of analysis and forward planning promotes more ownership of results and action plans. The strategic assessment should become a methodology that co-produces a summary of needs and refines broad strategic direction. This will require a re-branding of the tool to describe it as a review or refresh of the open data initiative.

4. **Be flexible to delivery style based on level of engagement and maturity level**. Employ the tool as a framework, not a template. Not all dimensions are relevant to a given country and so flexible application is very important. For instance, capacity constrained countries could be encouraged to focus on a smaller number of high-priority areas. However there is an argument for at least some standardisation in terms of process – involving scoping, assessment/review in country, then follow-up support – to ensure rigour and to help countries develop a clear pathway.

5. **Facilitate a participatory process including opportunities for user engagement.** Workshop-style meetings provide the opportunity for open data leaders and their teams to pause and reflect on their progress, or be exposed to different outside perspectives. There is value in providing the space and support for teams to experience this kind of semi-structured dialogue. This can help to unearth roadblocks, or unlock innovative new solutions to feed into their strategy.

4. Learning about cross-cutting issues

Beyond learning about the effectiveness of individual methods for supporting open data leadership, we observed other cross-cutting issues which impact open data initiatives related to **external context and constraints** and **project management and governance**. These are important to consider when designing any open data capacity-building project, especially in developing country contexts.

External context and constraints

1.   **The foundations of many open data initiatives remain fragile**. Open data portals are now widespread, even in resource-constrained contexts such as Burkina Faso. However, open data initiatives in developing countries are frequently located on the fringe of government activity, not yet entrenched in core budgets, and are often perceived as being externally led. All it takes is an election, the loss of a dynamic leader, or the withdrawal of external support and initiatives risk collapse. Bringing open data initiatives into the central business of government by connecting it to solving policy problems – for example in sectors such as agriculture, health and education – is needed to solidify these early foundations.

2.   **An empowered local leader driving internal change is necessary, but not enough to embed change**. An encouraging six of the eight respondents who completed the ODLN survey say that they have been able to partially implement the actions they committed to at the end of the inception training. However we have also observed several barriers which inhibit an individual leader's capacity to make deeper inroads. These barriers are significant and include change of government, altered government spending priorities, and a lack of funding for the initiative. This suggests the need to support a wider group of stakeholders to embrace open data such as senior policymakers, finance teams, and Ministers.

3.   **Many open data initiatives lack feedback loops between users, intermediaries and producers**. Engagement process can be difficult in country contexts where there is an absence of trust between government, civil society and intermediaries. There is a need to find the right local narrative to motivate open data adoption and use in a way that is appropriate for the given context eg innovation, or solving development challenges. Future leadership training should focus on developing

appropriate business models, narratives, and adapting external engagement processes.

4.   **Clarifying the national data infrastructure is required to manage uncertainty**. There is widespread uncertainty regarding who 'owns' data, how to pay for data, and how to collect and share data internally as well as externally to meet the nation's competing development needs. In many countries the ODI works with, there are multiple data collection processes operating in isolation, with little overview of the totality of data being collected, and how the systems could be integrated. A strong open data policy could help to bring clarity and greater confidence around data publication and use, both internally and externally. More work to support governments through the process of strategic assessment and policy development is required going forward.

Project management and governance

1.   **Careful country selection, and managing expectations is key.** Working in capacity-constrained countries can be challenging. The fact that this was an action research project, testing out different approaches, meant that there was an intrinsic level of uncertainty. To maximise prospects of success, we followed a careful country selection process which considered commitment to open data reforms, gaps in open data support, the presence of an open data leader or champion/s in a position to effect change, and significant potential to have a transformative impact on the open data initiative. Where a programme is intended to be experimental in its approach, designed to invest in pivotal individuals and teams, the degree of risk should be recognised and flexibility permitted to adapt plans as required.

2.   **Background research helps minimise risks, but 'expect the unexpected'**. Although risk assessment was part of the country selection process, we could not anticipate all of the changes that were to happen during the lifetime of the programme (such as coups, and civic unrest). Undertaking spot risk checks on an ongoing basis was helpful, to monitor the impact of in-country changes on both delivery of the programme and the safety of staff. At times this required decisions to be taken about whether specific activities will continue, and on what timeline.

3.   **Look for alternative ways of delivering support which maximise expertise and resources**. There is a sense that the overall scale of the programme was about right – that three countries gave sufficient scope to test different approaches in varied situations and contexts, without spreading resources too thinly. Approaches that minimised costs proved effective, such as delivering training remotely and undertaking as much of the assessment preparation that is possible before country visits.

4.   **Draw on a network of partners and experts, including local or regionally-based partners, to deliver support**. In future there is potential to deliver support through harnessing a broader range of expertise inside and outside the ODI, for example in injecting new ODLN content, introducing the business perspective, or offering legal expertise. Where there is scope to do this, a diversity of voices can benefit open data leaders by offering different approaches to resolving challenges.

5.   **Streamline accountability, learning and evaluation processes**. As this was an action research project, throughout the year we built in reflective activities with participants and trainers after each core training activity, so that we could adapt activities to follow. This approach proved effective, but could be formalised in future by ensuring participant feedback is shared with future trainers providing support, and by communicating back to participants the results of their feedback. Having a monitoring, evaluation and learning plan from the start of the programme can help. The plan should be reviewed and updated frequently to make sure it remains useful.

5. Conclusion

The future of supporting open data leadership

As an increasing number of institutions actively publish open data, we need a generation of leaders who have a vision for how open data can benefit their country or city, and are empowered with the right kinds of skills and social capital to innovate and manage organisational change.

In 2015 the Open Data Institute sought to explore the idea that a local empowered leader can drive change, by providing three different types of support: access to a peer network, training, and strategic assessment.

Looking back at our original theory of change, a dynamic leader can certainly be instrumental in driving open data forward. Yet momentum can be lost if they leave their post, if there is an external disruption such as an election, or if the policy and institutional foundations of the open data initiative are not secure.

Supporting leaders and their teams throughout the change management process is key to embedding open data as 'business as usual'. This requires the development of soft skills, not just technical skills. It also involves developing an internal culture that encourages risk taking and innovation within government. A clearly defined policy and understanding of the broader data infrastructure is also needed to provide a sense of clarity and certainty.

From our overall experience piloting these different methods, we found:

> 1.   **Peer networks help boost personal and professional development, but more research is required to understand how to scale their impact**. A peer network (the 'Open Data Leaders Network') benefited the personal development of individual members, in particular through enhancing their social capital and challenging their thinking. More time and research is required to understand whether this will translate to impact at the institutional or national level.

> 2.   **Training programmes for civil servants are one component of a broader process of capacity building**. Face-to-face and virtual training methods worked well for increasing knowledge especially on technical subjects such as licensing. But affecting long-term behavioural and culture change may require a longer term form of multi-faceted engagement built on a relationship of trust between trainees and training partners.

3.   **Strategic assessments should be reframed in participatory terms to promote ownership of results and follow-up actions**. The assessment tool we piloted provided rigorous guidelines for structuring a review of a team's ongoing progress implementing their open data initiative. Using the tool to promote dialogue, reflection, and to generate a list of collectively agreed priorities – as opposed to a one-off event – could deepen the outcomes.

4.   **Support programmes should incorporate a degree of flexibility, and plans should be adapted as external circumstances change**. Prior country scoping in the form of desk research, stakeholder interviews, and learning needs assessment was crucial in tailoring the design of support programmes. An adaptive and responsive approach is especially important in more fragile operating contexts.

5.   **Teams providing leadership support or training activities should conduct ongoing reviews of their own effectiveness**. Reflecting on our own practice throughout the cycle of design and implementation was beneficial to promote continuous learning about how effective methods were. In future, we should standardise this approach, and ensure feedback flows between participants and the delivery team.

Several questions emerge from our review which requires further exploration:

- What is the relationship between policy change or culture change (and what comes first)?

- How to evolve from charismatic leadership, so that open data is integrated into systems and can withstand political transitions?

- How to build on the early successes of the ODLN and scale peer networks organically?

- What are most effective user engagement strategies which can strengthen the feedback loop to motivate greater adoption and use of open data to solve problems?

These are some of the issues we will be investigating in 2016, as we continue to explore different methods of building open data leadership around the world.

If you have an idea for network building, are part of a successful peer network, or are interested in finding out more about the ODLN we would love to hear from you. Get in touch with fiona.smith@theodi.org or tweet us at @ODIHQ.

6. About this report

The Open Data Institute (ODI) connects, equips and inspires people around the world to innovate with data. It is independent, nonprofit and nonpartisan, founded in 2012 by Sir Tim Berners-Lee and Sir Nigel Shadbolt. From its headquarters in London and via its global network of startups, members and nodes, the ODI offers training, research and strategic advice for organisations around the world looking to explore the possibilities of open data.

A partnership funded by

7. Acknowledgements

With thanks to the members of the Open Data Leaders Network, the open data teams from Tanzania, Macedonia, and Burkina Faso, and the ODI team of trainers and consultants (Liz Carolan, Richard Stirling, Dawn Duhaney, William Gerry, Emma Truswell, Briony Phillips, Leigh Dodds, Stephane Boyera, Pierre Chrzanowski) for their invaluable feedback.

Special thanks to Helen Bovey and Nicola Stenberg from Icarus for their evaluation support. Icarus is an evaluation, research and facilitation company with a key focus on participation. They designed and facilitated an end of year reflection process to help the ODI synthesise the lessons learned contained in this report.

8. Appendix

Research methodology note

Research approach

We used a mixed method research approach to assess our activities over the course of the year. This involved a combination of evaluation forms (distributed in person directly after activities, and online), participant observation, interviews, and focus group discussions to facilitate reflection.

To conduct the final evaluation, we engaged an external consultant, Icarus, to help us collect and analyse results. Icarus employed two surveys: one to ODLN members, and one to country team members who had participated in training and/or a strategic assessment. Icarus also conducted telephone interviews with ODI trainers and consultants, and facilitated a focus group discussion with the core ODI team responsible for implementing the support programme.

Research questions

The survey of ODLN members asked:

- What was your role with regards to open data at the time you attended the ODLN training? Are you still in the same role?

- What was your experience engaging with the ODI as a whole?

- What was the most notable point/take-away from participating in the ODLN?

- What aspects of the ODLN, if any, have been most helpful to you in doing your job?

- To what extent have you been able to implement the action/s you committed to at the end of the training?

- To what extent have you been able to implement the action/s you committed to at the end of the training?

- To what extent have you taken part in the network since attending the training?

- To what extent have you found membership of and ongoing

engagement with the ODLN useful?

- Overall, what have been the personal benefits to you of being involved in the ODLN?

- Overall, what have been the benefits for your team/department/government as a result of you being involved in the ODLN?

The survey of country team members who participated in training and/or strategic assessments asked:

- How accurate or otherwise do you think the assessment of needs produced by the ODI was?

- To what extent do you think there was a good alignment between the assessment of needs and the training and/or support you received from the ODI?

- How closely did the training you received from the ODI meet the needs of your team/department/government?

- To what extent was the training provided by the ODI successful in delivering what we expected it to do?

- Overall, what have been the personal benefits to you of being involved in this programme with the ODI?

- What significant changes around open data, if any, have happened as a direct result of your engagement with the ODI?

- How confident are you that engaging the programme will make a lasting difference to your team/department/country?

The interviews with ODI trainers and consultants addressed:

- How effective was the format of the training provided (virtual, face to face etc)?

- To what extent do you think the training met the local needs?

- Were there sufficient resources to design and deliver the training effectively?

- What worked well about the training you delivered?

- Were there any aspects of the training that, in retrospect, you would

have changed? What are the optimal conditions for facilitating training to public servants?

- What worked well about the strategic assessment tool – how effective was it in capturing a full picture of the country's needs?

- What improvements would make the assessment tool more useable and/or effective?

- What are the optimal conditions for conducting open data strategic assessments?

- Was the country scoping/selection process effective? Did it result in the right kinds of countries receiving the support package?

- To what extent did in country issues (eg staff changes, elections) and instability impact on the delivery of the programme? How could these have been mitigated against, if at all?

- Were there sufficient/appropriate governance arrangements in place for the programme as a whole?

Research methodology note

Profile of respondents to ODLN survey
We received 10 surveys responses (out of 14 invitations sent) from Nigeria, Tanzania, Macedonia, Mexico, Argentina, Moldova, Romania, New Zealand, and one not specified. From the ODLN survey respondents:

70% (n:7) describe themselves as leading the open data initiative at country level

20% (n:2) describe themselves as leading the open data initiative at city level

10% (n:1) describe themselves as open data initiative co-ordinator

80% (n:8) are still in the same role as when they joined the ODLN

20% (n:2) are no longer in the same role but both still have open data responsibilities in their new position

Profile of respondents to country programme surveys
We received five survey responses from the core open data teams in Macedonia (2) and Burkina Faso (3), but no country team survey responses were received from Tanzania.

These survey responses were supplemented by a desk review of:

- participant evaluation forms from ODLN cohorts (1 and 2), submitted directly after the inception training week
- notes from ODI team retrospectives on ODLN, training and strategic assessment, conducted within one month of implementing activities
- training evaluation forms from Macedonia, Tanzania and Burkina Faso, submitted directly after training activities

Profile of respondents to trainer interviews

We conducted semi-structured telephone interviews with trainers David Tarrant, Leigh Dodds, Melanie Dulong, Briony Phillips. Written feedback against the interview questions was received from Pierre Chrzanowski. Lastly, a focus group was held with five members of the core ODI team.

Limitations

The mixed methods were designed to be robust, and were undertaken by Icarus to provide an independent perspective on the findings. The advantages of this approach include an independent perspective, working with experienced evaluators and analysts, while fitting within an overall framework to provide a consistent approach.

However, limitations include: the independent research was summative rather than formative (happening at the end of the programme rather than throughout), the programme team from Tanzania did not participate in the online survey, the small sample sizes from the countries may mean that the results are partial and as a result there is little scope for triangulation of the data where opinions differ.

Furthermore, our research only focused on the ODI's direct inputs. Given that country programmes and individual leaders typically receive support from multiple sources, it is difficult to directly attribute results or isolate the ODI's contribution from other inputs.

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