Retrospective assessment – Open Data

External report draft

Please Note: This is a modification of Dalberg's report, which was created and intended for Omidyar Network's Governance & Citizen Engagement initiative's internal use. Several sections and slides have been removed for brevity and confidentiality. Therefore, some content about particular organizations and strategies is not included in this deck.

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The field of open data grew worldwide within a decade

Pre-2008 — **2018**

Inception (Pre-2008)	**Systematization** (2009-2010)	**Expansion** (2011-2015)	**Reevaluation** (2016-2018)
Beginning of open data efforts in the US and UK with grassroots and govt action at all levels	*Broader uptake and adoption of open data efforts via support of high-level government officials*	*Growth of the open data field into new geographies and sectors*	*Uncertainty due to increased awareness of data privacy and use issues and political climate*
2004 – US & UK: initial open data (OD) advocacy and government data release and reuse[1] **2007** – Advocates develop eight open government data principles[2] **2008** – Obama wins the US election with an open govt agenda	**2009/10** – US & UK launch open data repositories **2011** – Open Government Partnership (OGP) is launched by Obama & seven other heads of state[3] **2011** – Open Data for Development (OD4D) is launched	**2011-16** – OGP: 59 governments make >450 open data commitments[4] **2012** – The World Bank launches its OD initiative **2012** – Open Data Institute (ODI) is created **2013** – Snowden leaks **2013/15** – G8 leaders sign the G8 Open Data Charter (ODC)	**2016/17** – Leadership from early champions (e.g., US, UK) decreases, new open data leaders emerge (e.g., France) **2017/18** – Facebook Cambridge Analytica scandal puts privacy concerns front and center

Notes: 1. In the UK it was TheyWorkForYou.com and in the US it was GovTrack.us. 2. Sunlight Foundation, "Ten Principles for Opening up Government Information," 2017. 3. Brazil, Indonesia, Mexico, Norway, the Philippines, South Africa, the United Kingdom, and the United States. 4. Open Government Partnership, "The OGP Explorer," 2018.

Sources: Becky Hogge, "Open Data Study," 2010; Sunlight Foundation, "Ten Principles for Opening up Government Information," 2017; Open Government Partnership, "The OGP Explorer," 2018; Stakeholder interviews, 2018

Efforts to date have driven concrete results across many issue areas

Improving government

- In 2014 the Ukrainian government created **ProZorro, an open source and open data e-procurement system**
- **ProZorro is estimated to have cost the government USD ~4.7 million**[1]
- ProZorro estimated **savings over $350 million on planned government spending** and **increased the number of companies bidding for contracts by 50%**[2]

Empowering citizens

- **A Tu Servicio**—a Uruguayan website that provides easy to use government health data –helps citizens make **data-based decisions about their health service providers**
- Within one month, the website received **35,000 visits—~1% of Uruguay's population**—compared to <500 downloads in 2014 before the launch[3]

Creating opportunities

- **Transport for London (TfL)**—the local govt body responsible for transport—**decided to release 63 key datasets**[4] in large part as an experiment without a strong business case supporting this decision[5]
- This has unlocked **£130 million for the London economy**[4] via growth of businesses using TfL data, better transport services, and commute time saved
- **Over 600 applications use TfL data**—reaching four million people[5]

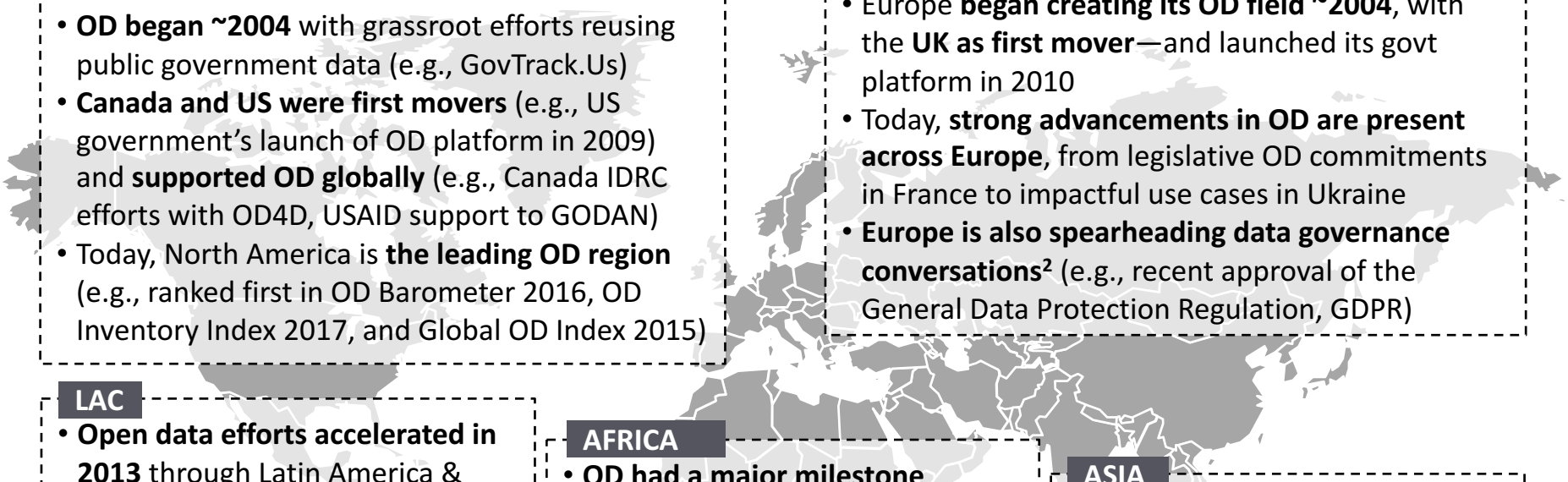
Solving public problems

- Following earthquakes in Nepal in 2015, crowdsourcing and use of open data helped to **identify urgent citizen needs, target relief efforts, and ensure aid money reached targets**
- As one example, QuakeMap.org received 2,035 reports – which were then verified by volunteers to identify **551 reports that required action**[6]

Notes: 1. R4D, "OPEN GOVERNMENT CASE STUDY: Costing the ProZorro e-Procurement Program," 2017. 2. Open Data Charter "Open Up Guide: Using Open Data to Combat Corruption," 2018. 3. The GovLab "Uruguay's A Tu Servicio," 2016. 4. Deloitte, "Assessing the value of TfL's open data and digital partnerships," 2017. 5. Hogge B. & The GovLab, "United Kingdom's Transport For London: Get Set, Go!," 2016. 6.The GovLab "Nepal Earthquake Recovery," 2016.

Sources: Stakeholder interviews, 2018

Early momentum from North America and Europe spread to all regions



NORTH AMERICA

- **OD began ~2004** with grassroot efforts reusing public government data (e.g., GovTrack.Us)
- **Canada and US were first movers** (e.g., US government's launch of OD platform in 2009) and **supported OD globally** (e.g., Canada IDRC efforts with OD4D, USAID support to GODAN)
- Today, North America is **the leading OD region** (e.g., ranked first in OD Barometer 2016, OD Inventory Index 2017, and Global OD Index 2015)

EUROPE

- Europe **began creating its OD field ~2004**, with the **UK as first mover**—and launched its govt platform in 2010
- Today, **strong advancements in OD are present across Europe**, from legislative OD commitments in France to impactful use cases in Ukraine
- **Europe is also spearheading data governance conversations**[2] (e.g., recent approval of the General Data Protection Regulation, GDPR)

LAC

- **Open data efforts accelerated in 2013** through Latin America & Caribbean OD Conference—ConDatos—in Uruguay
- **Strong open data impact cases exist** (e.g., Mejora tu Escuela in Mexico, A tu servicio in Uruguay)
- **Strong commitments and policies** exist (e.g., LAC has the most signees to the OD Charter; OD kit published by Argentina's govt as govt data publishing guidelines)

AFRICA

- **OD had a major milestone in~2011** when Kenya launched Africa's first open data portal
- **Some "first mover" countries have backtracked** due to limited political commitment (e.g., Burkina Faso, Kenya)
- **New region leaders** are creating impact cases (e.g., South Africa, Nigeria)—in large part via infomediary work[3]

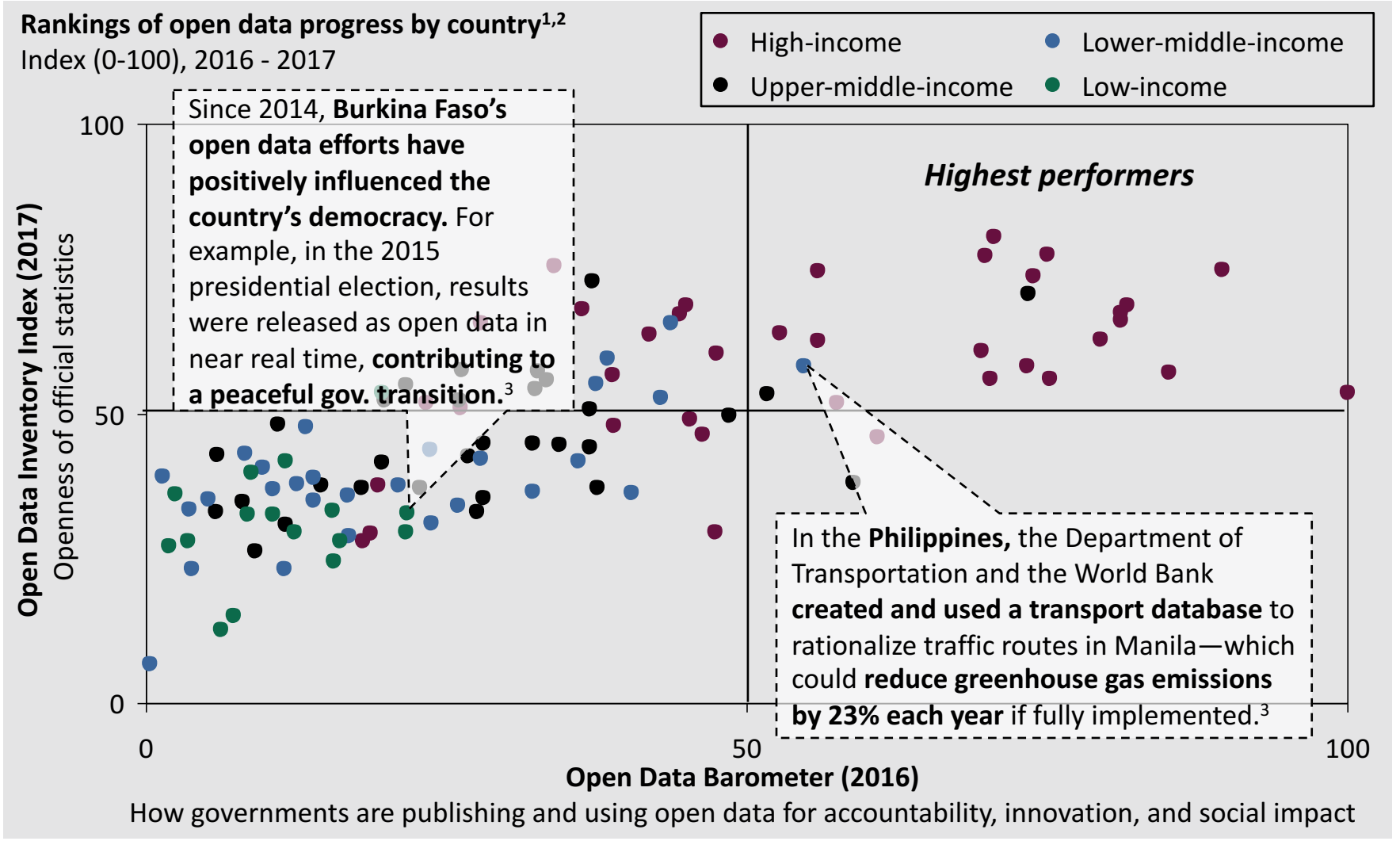
ASIA

- **Early supporters of OD and govt openness came from Asia** (e.g., Philippines was one of the eight founders of OGP in 2011)
- **Today, OD use and availability vary by country income** in the region; East Asia has a strong data release and use, while Southeast, West, and South Asia all have more nascent OD efforts

Notes: 1. GODAN is Global Open Data for Agriculture and Nutrition. IDRC is Canada's International Development Research Centre. 2. Definition of data governance: the overall management of the availability, usability, integrity, and security of data. 3. Infomediaries: actors who have taken published data and transformed data—interviewees noted this is common in many African countries as few impact cases come from civilians using data. Stakeholder interviews, 2018.

Sources: OD4D, "The State of Open Data - WIP," 2018; WWWF, "Open Data Barometer, 4th Edition," 2016; Open Data Watch, "Open Data Inventory," 2017; Open Knowledge International, "Global Open Data Index," 2015; Stakeholder interviews, 2018 and Dalberg analysis

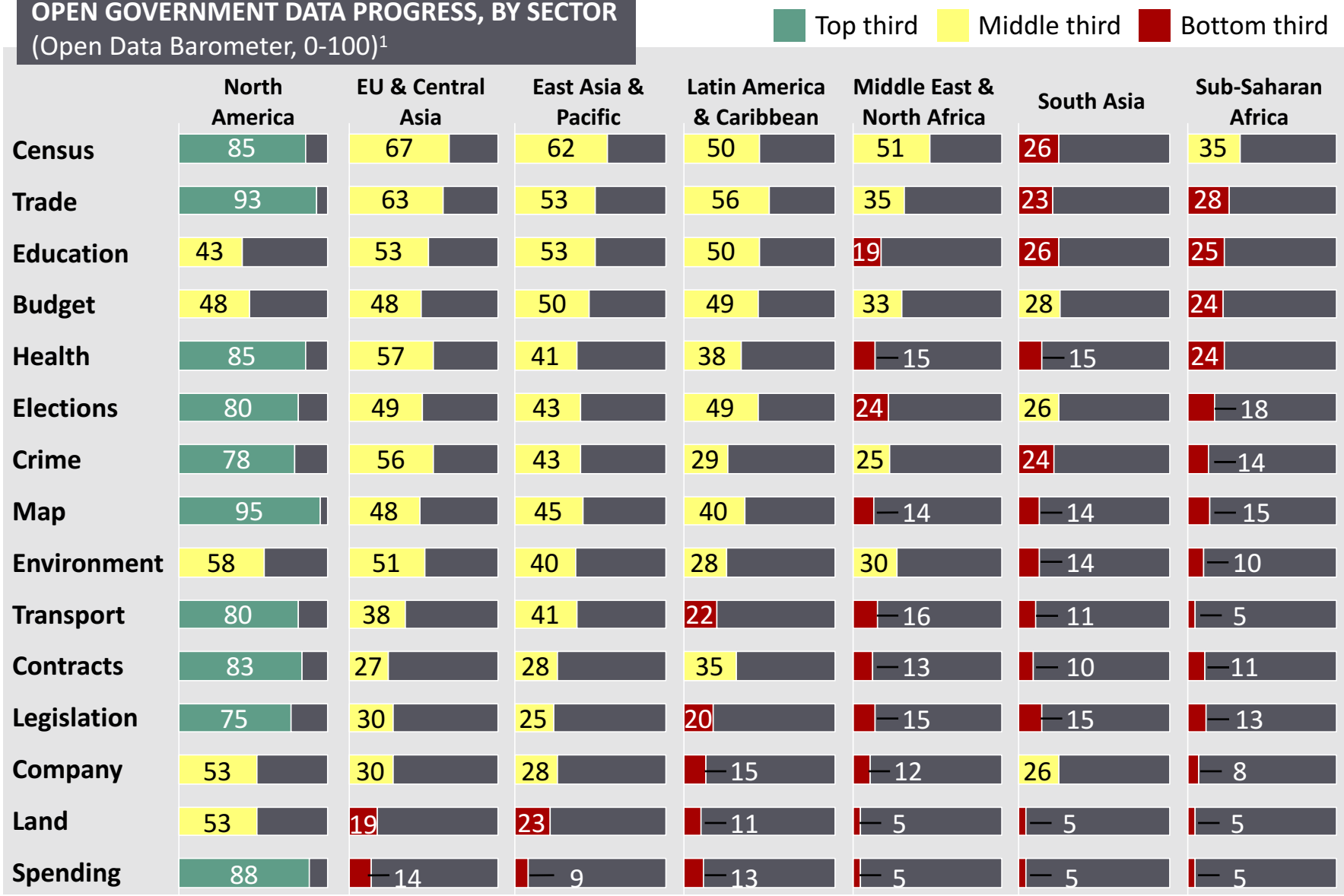
Open data efforts gained the most traction in high-income countries, although there are promising use cases across income levels



Notes: 1. OD Watch, "Open Data Inventory," 2017. 2. World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016. 3. WB, "World Bank Support for Open Data," 2018.
Sources: Open Data Watch, "Open Data Inventory," 2017; World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016; Open Data Charter "Open Up Guide: Using Open Data to Combat Corruption," 2018; Open Data Charter "Open Up Guide: Using Open Data to Combat Corruption," 2018; OGP, "The Philippines progress report 2015–2017," 2018; WB, "World Bank Support for Open Data," 2018; Stakeholder interviews, 2018

Progress releasing and using data has varied by sector and domain

OPEN GOVERNMENT DATA PROGRESS, BY SECTOR
(Open Data Barometer, 0-100)[1]



Notes: 1. Sectors organized from highest to lowest global score and regions organized from highest to lowest scoring – from left to right – in the Open Data Barometer. Average Open Data Barometer score for sector datasets is 32.5. WWWF, "Open Data Barometer, 4th Edition," 2016.

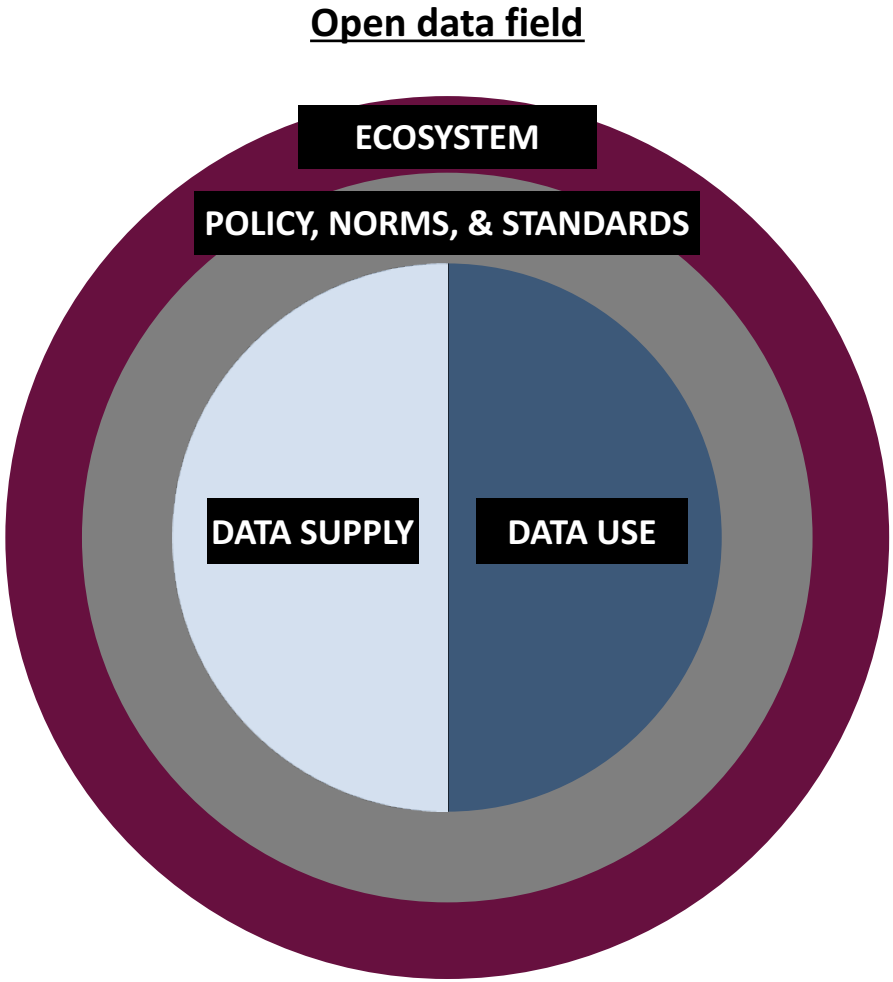
Sources: WWWF, "Open Data Barometer, 4th Edition," 2016 and Dalberg analysis

Advocacy, political climate, and technological change all shaped the field's trajectory

Driver		Select examples
 **Champion enthusiasm**	• **Pressure from grassroots and civil servants** fueled initial efforts around government transparency and accountability—and have **sustained "movement-like" energy over time** • Pressures have **shaped the open data dialogue** by pushing for government transparency, raising concerns and risks (e.g., privacy), and working toward improved data quality	***In 2006, bottom-up pressure started building*** *in the UK as a group of volunteers launched theyworkforyou—a website that helps understand what happens in parliament by reusing government data*
 **Political climate**	• **Government support—or lack thereof**—has influenced public and private sector efforts around open data • Governments have helped **attract international attention and support for open data** (e.g., OGP, Open Data Charter), and **enabled or hampered data releases**—amongst other contributions	***In 2015 the Costa Rican government issued a decree*** *that government data should be published under open data technical standards—helping institutionalize open data efforts*
 **Data & tech growth**	• Development and diffusion of **information communication technologies enabled data release and use** • **Recently, a deeper understanding of the risks vs. rewards of tech and data** have prompted reevaluation of the initial promise of open data, amplified certain voices in the conversation (e.g., civilians, privacy experts), and helped create new anonymized data formats and standards	***Technology has enabled creation of more detailed, comprehensive datasets;*** *for example, Zillow—a real estate app—made real estate info digitally accessible for free - it was previously only accessible via physical registries*

Sources: Becky Hogge, "Open Data Study," 2010; Costa Rican Government, "Decreto Ejecutivo N° 40199-MP," 2015; The GovLab, "The OD500 Global Network website," 2018; Stakeholder interviews, 2018; and Dalberg analysis

We looked at four dimensions of open data as leading indicators of the field's ability to achieve its desired impact



IMPACT

Creating opportunity, improving government, empowering citizens, solving public problems

Source: The GovLab "OD Impact Webpage," 2018; Stakeholder interviews, 2018, and Dalberg analysis

There has been demonstrable progress in building an ecosystem; developing policies, norms, & standards; and releasing & using data (1/2)

	Open data ~2007	Open data ~2018
Ecosystem	• **Few incipient actors exist,** like the Sunlight Foundation - founded in 2006 • **Few open data-focused events** (e.g., conferences) • **Siloed open data ecosystems exist in a few sectors or topics,** (e.g. weather)	• **Well-established actors exist,** including open data champions (e.g., ODI and Open Data Charter) and active supporters (e.g., OGP) • **Open data events** happen recurrently and have grown in size (e.g., 10x growth for International Open Data Conference, IODC; sold out Open Data Institute Summit) • **Global and regional communities** exist (e.g., Iniciativa Latinoamericana por los Datos Abiertos, ILDA)
Policy, norms, & standards	• **Legislation:** No explicit open data laws exist and some countries have laws that restrict open data possibilities[1] • **Policy:** No explicit open data policies exist • **Norms:** First norms are created, like the eight principles of open government data[2] • **Technical standards:** Sector-specific technical standards exist or are being created (e.g., the US Environmental Protection Agency is using open standards for environmental data)	• **Legislation:** A few countries have open data laws or laws that include open data standards (e.g., Germany's open data law enabling free access to govt data) • **Policy:** Countries have instituted OD policies (e.g., the US has an OD policy established by an executive order) • **Norms:** Have developed across sectors (e.g., Open Data Charter, 16 G20 countries have OD strategies,[3] OD policy of International Aid Transparency Initiative) • **Technical standards:** Thousands of open standards exist (e.g., Open Contracting Data Standard),[4] including quality standards and infrastructure to monitor progress (e.g., Open Data Barometer)

*The following slides **contain additional detail on developments in each category***

Notes: 1. For example, the UK had difficult copyright and licensing rules making it difficult to work with public data. 2. OECD, "Compendium of good practices on the use of open data for Anti-corruption," 2017. 3. ODI, "Open Standards for Data: Guidebook," 2018.

Sources: Stakeholder interviews, 2018; Joshua Tauberer, "Open Government Data: The Book," 2014; U.S. Government, "data.gov webpage," 2018; Techradar, "Hack to the future: Inside the Young Rewired State Project," 2012; OECD, "Compendium of good practices on the use of open data for Anti-corruption," 2017; World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016; ODI, "Open Standards for Data: Guidebook," 2018; Stakeholder interviews, 2018; Dalberg analysis

There has been demonstrable progress in building an ecosystem; developing policies, norms, & standards; and releasing & using data (2/2)

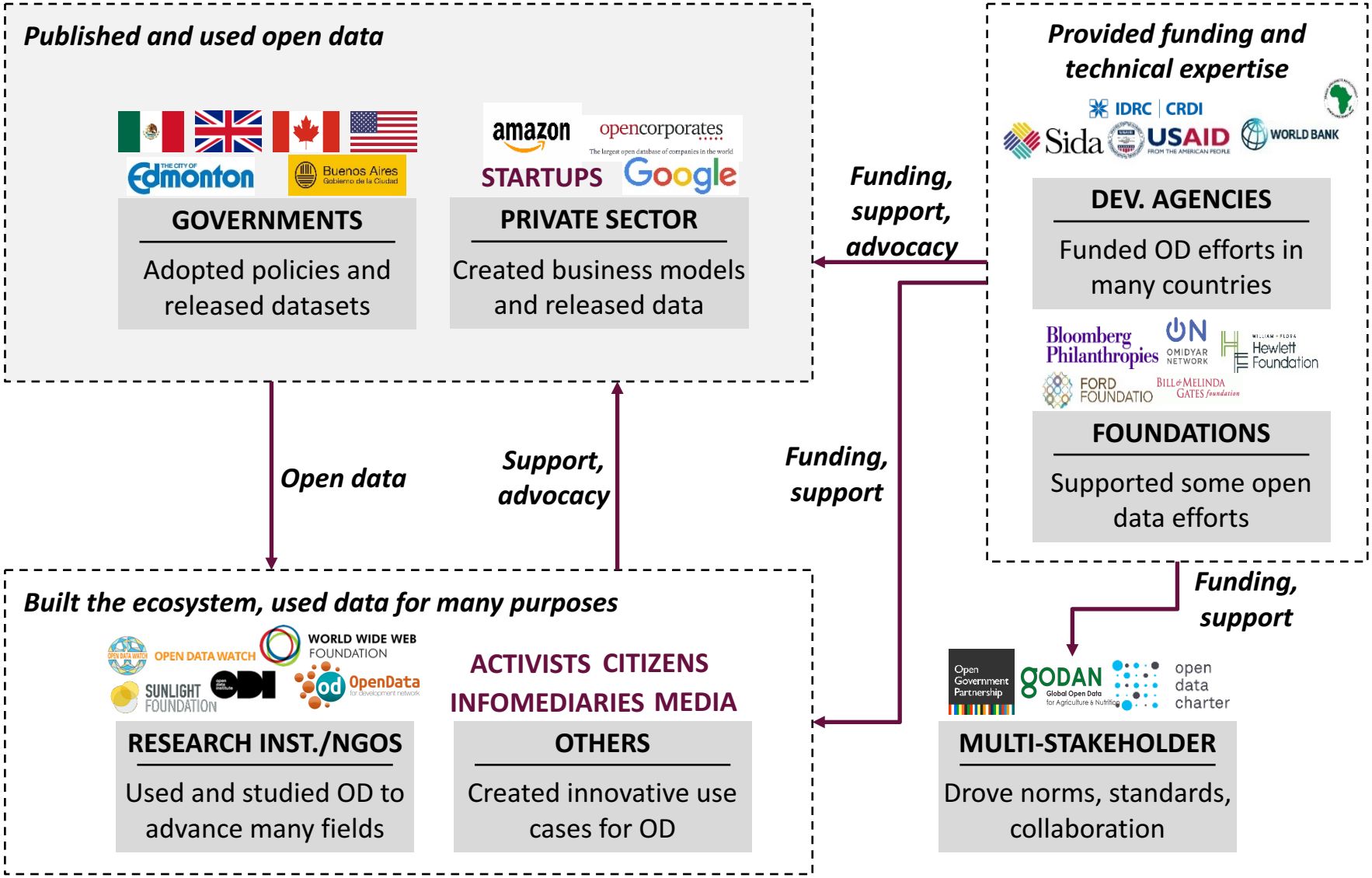
	Open data ~2007	Open data ~2018
Data release	• **A few governments have efforts to open data** (e.g., the city of Washington DC launched the first major government data catalogue in 2006[1]) • **Open data supply is very limited** (e.g., in 2009 data.gov—the US federal government data portal—had 47 datasets[4])	• **Having open data portals is common for most countries** (e.g., 79 out of the 115 governments in the Open Data Barometer have at least one portal[3]) • **Open data repositories hold vast amounts of data** (e.g., data.gov has ~200,000 datasets[4]) • **90% of government datasets remain closed**, according to the Open Data Barometer
Data use	• **First events to use open data were held:** - First "Rewired State Hack the Government day" is held in the UK with 80 developers[2] - The Sunlight Foundation holds its first Transparency Camp	• **A range of use cases have been demonstrated** across sectors and geographies • **Open data community has shifted to focus more on data quality and use** (e.g., more "purpose-driven" OD Charter strategy—meaning data is released based on a clear goal) • **There is more active engagement of end users of data** (e.g., civil society, infomediaries)

*The following slides **contain additional detail on developments in each category***

Notes: 1. Joshua Tauberer, "Open Government Data: The Book," 2014. 2. Techradar, "Hack to the future: Inside the Young Rewired State Projecta," 2012. 3. World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016. 4. U.S. Government, "data.gov webpage," 2018.

Sources: Stakeholder interviews, 2018; Joshua Tauberer, "Open Government Data: The Book," 2014; U.S. Government, "data.gov webpage," 2018; Techradar, "Hack to the future: Inside the Young Rewired State Project," 2012; OECD, "Compendium of good practices on the use of open data for Anti-corruption," 2017; World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016; ODI, "Open Standards for Data: Guidebook," 2018; Stakeholder interviews, 2018; Dalberg analysis

Ecosystem: Funders, civil society, and dedicated partnerships enabled government and private sector data release



Note: 1. These descriptions illustrate key roles/linkages and are not exhaustive. For further details please refer to annexes.

Sources: data.gov, "home page," 2018; Pew Research Center, "Americans' Views on Open Government Data," 2015; Stakeholder interviews, 2018; and Dalberg analysis

Ecosystem: The open data community is now linking to other advocacy efforts—and more concrete use cases are needed to cement linkages

*"What unites the progressive parts of the open data, privacy, and AI communities? I'd argue that **each has a clear recognition of the power of data, and a concern with minimizing harm**"*
– Open data expert

Open data

Open data experts have started to engage with other related issues (e.g., ODI strategy). However, collaboration is not yet "mainstream"

*"It's not about privacy, big data, or AI. **It's all of these put together"** – Former gov leader*

Privacy

Link between open data and privacy is increasingly clear. Resources for privacy experts to collaborate with open data community are limited

PRIVACY INTERNATIONAL

OPEN RIGHTS GROUP

AI ethics & governance

AI has become increasingly relevant given data use and the need to effectively scrutinize and govern automated decisions – the link to OD is still nascent

PROFIBUS • PROFINET

AINOW

DeepMind

*"When you **compare privacy** with other fields, **we are so tiny** and we are fighting on so many fronts, **we can't prioritize open data.**" – Privacy expert*

*"It is important to **tap into new energy**, but it is still unclear how or where to do this…for example a real **synergy for privacy and OD could be the new horizon of AI.**" – Open data expert*

Sources: Stakeholder interviews, 2018 and Dalberg analysis

Policy, norms & standards: Open data policies and standards have gained traction at the global, national, and subnational levels

KEY FINDINGS

- OGP, the Open Data Charter, and other global advocacy efforts **secured important commitments from global, national, and subnational governments.**
- **Translation into legislation** at the national and local levels is still underway. For example, **France and Germany recently created open data laws**. Australia and Connecticut recently announced plans to do so.

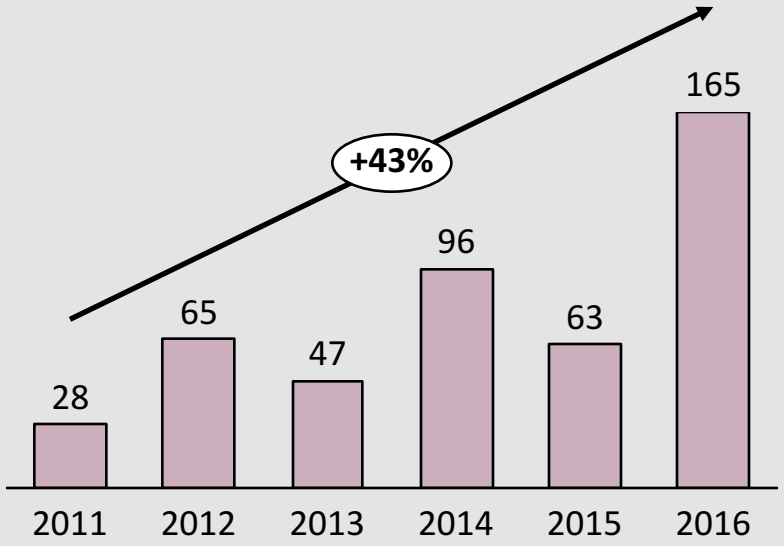
PROGRESS TO DATE

19 national and **35** local/subnational governments are part of the **Open Data Charter**[1]

59 countries made **464 OGP** open data commitments[2]

7 countries in the **Open Data Barometer** have an explicit policy commitment to make government data open by default[3]

Number of OGP commitments tagged with open data[2]
Commitments, 2011-2016



*"Open data got broad buy-in as it was a **more technical, and less controversial issue** than open government." – Funder and researcher*

*"**Cross-pollination between governments plays an important role in disseminating open data**, for example Burkina Faso's government began to grow interest in moving the topic nationally after a trip to Ghana." – Government official*

*"**Legal support is important** to create sustainability, as without laws it becomes very difficult to support open data initiatives that will outlast government changes."*
– Government official

Notes: 1. Open Data Charter, "Webpage, About Us," 2018. 2. OGP, "OGP Explorer," 2018. 3. World Wide Web Foundation, "Open Data Barometer Global Report, 4th Edition," 2016.

Sources: Open Data Charter, "Webpage, About Us," 2018; OGP, "OGP Explorer," 2018; World Wide Web Foundation, "Open Data Barometer Global Report, 4th Edition," 2016; French National Assembly, "Bill on a Digital Republic," 2016; OGP, "Germany Finally has an Open Data Law," 2017; Lexology," Australian Government committed to open data with response to Privacy Commission," 2018; Digital communities, "What's New in Civic Tech: New Legislation in Connecticut Bolsters State's Open Data Efforts," 2018; Stakeholder interviews, 2018, and Dalberg analysis

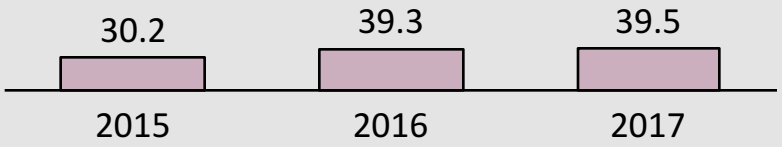
Data release: Public and private data released continues to grow. Quality is now the focus to increase usability

KEY FINDINGS

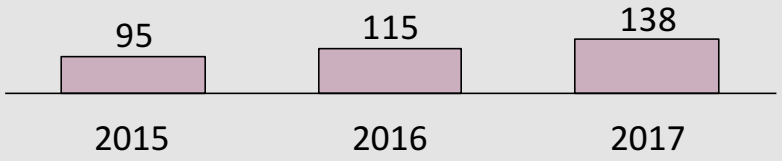
- **Release of public and private data is increasing.** Experts also note a growing focus on "purpose-driven" release—meaning data is released based on a specific goal.
- **Data quality remains a challenge.** Indices show increases in number of datasets but decreases in quality.
- These indices measure quantity and quality of open data released. However, **if release is "purpose-driven," there is no expectation that all government datasets should be open.**

AVAILABILITY

Coverage and openness of official statistics published by national statistical offices (NSOs)[1]
Index (0-100), 2015-2017

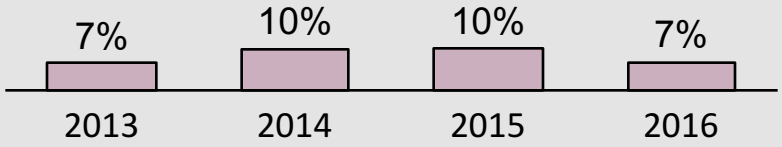


Companies listed on OpenCorporates[2]
Millions of companies, 2015-2017

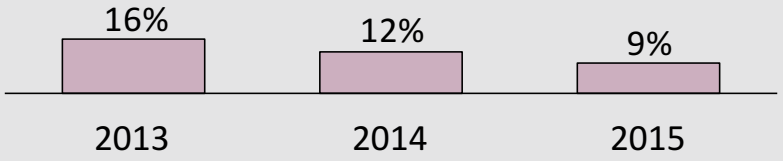


QUALITY

Open Data Barometer datasets that meet open data quality standards[3]
% of datasets, 2013-2016



OD Index datasets that meet quality standards[4]
% of datasets, 2013-2015



*"The **rhetoric around open data has started to shift, from open for openness sake, to more purpose-driven initiatives** of why we want to open the data." – NGO*

*"**Opening data without following guidelines** – such as updating it periodically or publishing it in machine readable formats – **really decreases its utility.**" – Open data expert*

Notes: 1. Open Data Watch, "Open Data Inventory 2017 Index," 2017. 2. OpenCorporates, "About Timeline," 2018. 3. World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016. 4. Open Knowledge Network, "The Global Open Data Index," 2018.

Sources: Open Data Watch, "Open Data Inventory 2017 Index," 2017; OpenCorporates, "About Timeline," 2018; World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016; Open Knowledge Network, "The Global Open Data Index," 2015; Stakeholder interviews, 2018; and Dalberg analysis

Overall, the open data field has matured and developed some aspects of longer-term sustainability

	Open data ~2007	Progress by ~2018
Narrative	• **Localized narrative** in a few countries (e.g., US, UK)	• Open data efforts exist in **every region** and in almost every country • **OD relates to many issues areas** and has seen **uptake across 20+ sectors** (e.g., extractives, education) and domains (e.g., weather)
Norms	• **Few norms** in place around need to open data	• **Incipient changes in norms and standards** across sectors and countries, e.g. reporting in extractives, release of gov. data, ODI and ODC's 5-star deployment scheme. **Fewer changes in private sector**
Policies	• **No dedicated policies in place**	• **~60 countries** have made commitments via OGP;[1] a few have OD legislation (e.g., Germany) • **35 sub-national governments** have adopted Open Data Charter[2]
Institutions	• **Some early institutions** (e.g., Sunlight, early Open Knowledge)	• **50+ funders** have supported open data efforts[3] • **Specialized OD orgs** have led efforts (e.g., ODI's data spectrum) and adjacent orgs have built OD into their work (e.g., EITI)
Constituency	• **Some emerging champions** (e.g., Sebastopol advocates)	• **Open data and sector-specific champions** exist • **Many people use OD** without knowing (e.g., 42% of Londoners use TfL-driven apps[4])
Technical leadership and capacity	• **Early tech enthusiasts** becoming involved (e.g., Tim O'Reilly)	• Open data leaders have **established a backbone** (e.g., data portals, technical definitions, indices, talent)

Notes: 1. Open Government Partnership, "The OGP Explorer," 2018. 2. The ODC, "The Open Data Charter Webpage," 2018. 3. The State of Open Data, "Donors – Stakeholder Chapter WIP," 2018 – As the State of Open Data is still a WIP, this information may change when finalized and reviewed. 4. Deloitte, "Assessing the value of TfL's open data and digital partnerships," 2017.

Sources: Robert Wood Johnson Foundation, "Exiting Responsibly: Best Donor Practices in Ending Field Support," 2011; The ODC, "The Open Data Charter Webpage," 2018; Open Government Partnership, "The OGP Explorer," 2018; The State of Open Data, "Donors – Stakeholder Chapter WIP," 2018; Deloitte, "Assessing the value of TfL's open data and digital partnerships," 2017; Stakeholder interviews, 2018; and Dalberg analysis

Several tensions are top-of-mind for open data champions

PURPOSE-DRIVEN VS. FREE-MARKET

Purpose-driven: *data should be released based on clear goals to use it (e.g., Ebola outbreak data to control the epidemic)*

> ***"Purpose-driven release links directly to use of data,*** *this is why we always prioritize purpose-driven releases"*
> *– GCE grantee*

> *"I think in the future 'OD' will disappear and* ***integrate into other sectors as a tool employed for specific purposes****"*
> *– OD expert*

Free-market: *as much data as possible should be released based on principle of openness (e.g., government data is "open by default") and belief that market will find the most important uses*

> ***"From a policy perspective, opening up data should not be contingent on how many people are using it.*** *Some datasets are so critical that if only one person uses it, that is fine" – GCE grantee*

PRIVACY VS. OPENNESS

Privacy: *the ability of an actor (e.g., individual, company, government) to govern what data on them can be stored and shared with a third party*

> *"The* ***'open by default' principle of open data, really creates a red line*** *between the openness field and the privacy field"*
> *– Privacy expert*

> ***"There are a lot of risks…****Personal data like income tax and healthcare records should be closed"*
> *– Funder*

Openness: *data is responsibly shared with everyone, freely*

> ***"Data should be 'as open as possible' over 'open by default.'*** *And getting govts to recognize this as part of their duties is key"*
> *- GCE grantee*

> *"'Open by default'* ***does not mean opening all datasets****. It's more about* ***transparency*** *and being open about what you're not opening"*
> *– OD expert*

Sources: Stakeholder interviews, 2018; Route Fifty, "The Difficult Balance of Transparency and Privacy for Local Governments," 2018; Twitter, "Twitter webpage," 2018; Privacy International, "Video: What Is Privacy?," 2018.

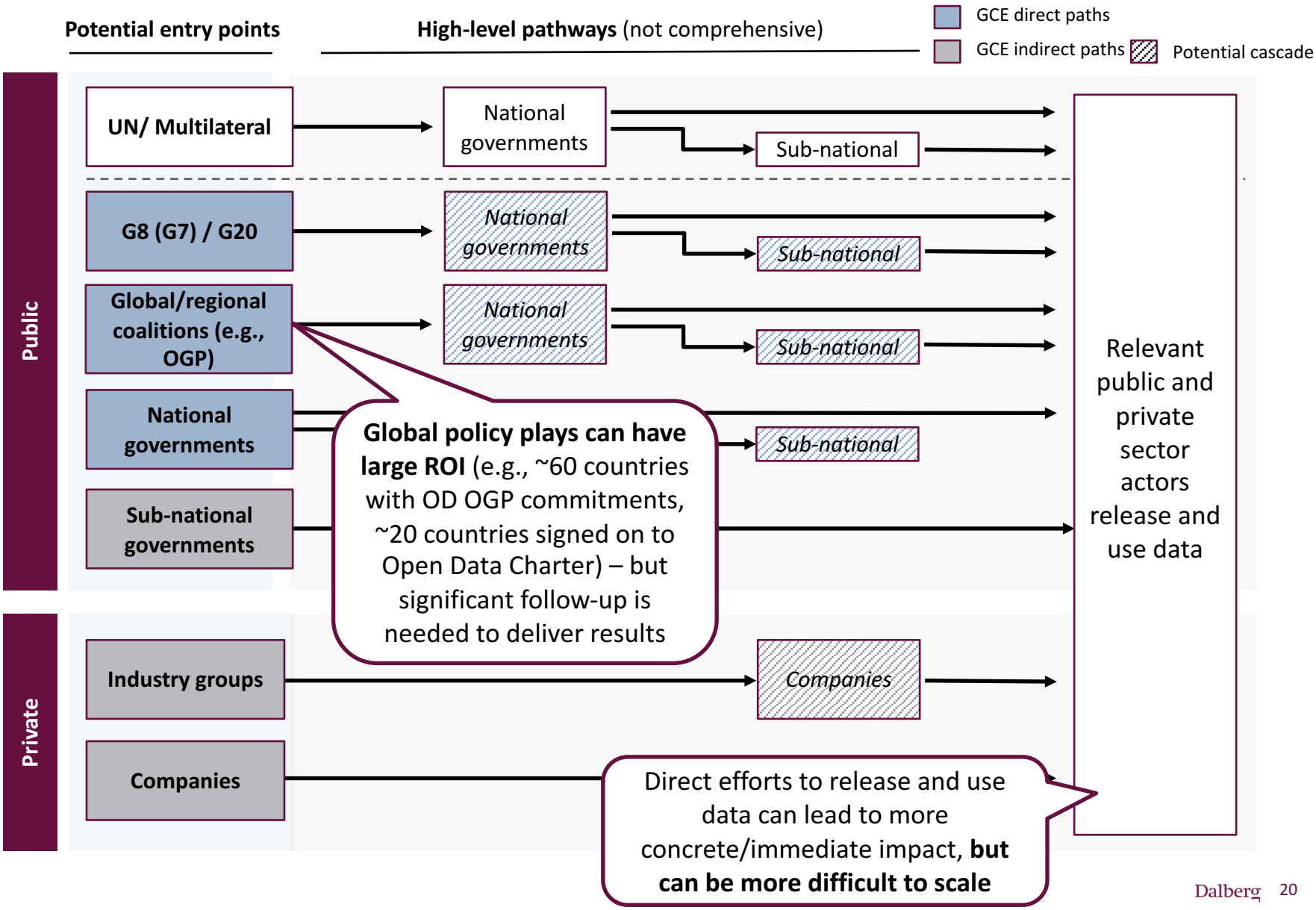
Open data – summary of findings

Evolution and impact

Lessons learned

Implications for the future

A. Global policy agreements have high ROI potential



Sources: Dalberg analysis

B. Realization of results from global policy agreements requires sustained focus, incentives, and clarity on who will drive implementation

Lesson learned

- **Global advocacy laid important foundations,** for open data policy and regulation at the national and local levels, but is not enough to drive end impact
  - **70% of OGP open data commitments cannot be confirmed** due to lack of review and/or data
  - Countries have **not fully delivered on G8, G20 commitments**[1]
- **Implementation and delivery of open data commitments requires "boots on the ground"** (i.e., deep local engagement, culture change, and dedicated budgets and staff to succeed)
- To drive long-term success, it is important to **identify the constituencies** (e.g., within governments and companies) who drive sustained release of data – **and users who will engage/benefit from the data**[2]
- It is critical to have **full theory of change** for how policy efforts translate into durable end impact – including strategies to build ownership across relevant constituencies, embed changes in legislation, etc.[3]

*"Building sustainable policies that create lasting change can start with high level political will **but need to be followed by smarter ways to advocate for change, including building ownership across constituencies, laying the foundations for transformative legislation, and delivering results** that resonate with the needs and demands of people." – Open Data Charter*

*"Nothing will happen to someone who doesn't comply an OD commitment – **enforcement doesn't happen**"*
– Privacy expert

Notes: 1. For example, a Transparency International study found five G20 countries – Brazil, France, Germany, Indonesia and South Africa – have not made enough progress in releasing all anti-corruption datasets required and ensuring they are easy to find and to use. 2. Open Data Charter, "Bridging the gap," 2018. 3. "Testing, learning and adapting: A year in the life of the Open Data Charter team," 2018.

Sources: Internal GCE documents; Stakeholder interviews, 2018; and Dalberg analysis

C. Clear goals, collaborative users, and windows of opportunity drive impact of open data release and use

Lesson learned

- Open data projects have **most effectively delivered impact when they are focused on solving problems people care about**[1]
- "Purpose-driven" release can help **prioritize release of data that is most demanded** from citizens, CSOs, and other actors who use it – which is critical given limited capacity and resources[2]
- Open data released without a clear purpose **risks harming perceptions about the value of the field**: *"this is where open data went wrong"*
- The debate about **purpose-driven release** (i.e., opening data for a clear goal) vs. **free-market-driven release** (i.e., releasing as much as possible) continues *(see annex slide 126)*
- Some experts fear a growing **focus on data use risks losing focus on underlying rights-based principles** – as well as shared data infrastructure

*"Opening data for the sake of opening results in a bunch of **zombie platforms that are created and never used or maintained**." – GCE grantee*

*"As the openness space matures and starts thinking about use cases and users, there is a tension. People say 'there is no point in publishing data if no one is going to use it,' which is really threatening. **Some datasets are so critical that if only one person uses it, that is fine."** – GCE grantee*

***"Problem-focused, but public-minded is the goal"** – OD expert*

Notes: 1. Medium, "Testing, learning and adapting: A year in the life of the Open Data Charter team," 2018. GovLab case studies also point to partnerships, public infrastructure, policies and performance metrics, and problem definition as key enabling conditions. Core challenges are readiness, responsiveness, risks, and resource allocation. 2. For example, the Open Data Charter frames purpose-driven release as one way to prioritize efforts within a government's broader commitment to "Open by Default."

Sources: Medium, "Testing, learning and adapting: A year in the life of the Open Data Charter team," 2018; the GovLab, "OD impact webpage," 2018; the Open Data Charter, "ODC webpage," 2018; Internal GCE documents; Stakeholder interviews, 2018; and Dalberg analysis

D. "Open data" as a concept has demonstrated limitations addressing related risks and maximizing opportunities of data use

Lesson learned

- Many early open data advocates did not give sufficient attention to **the risks and costs of opening data** – or propose mitigation strategies to address them[1]
- **Cases of opening data without having the appropriate precautions have evidenced open data's risk.** For example, Eightmaps in the USA permitted people to gather personal information on donors supporting bans on same sex marriage in California, leading to harassment and threats to civilians

*"The important advances lie in the nuance about **when does Congress need secrecy, when does open data create a risk of abuse, and how much is this database going to cost**. These are the hard questions at the core of open data advocacy that are largely ignored." – GCE grantee*

*"One of the lessons is the **costs and risks are both complicated**. Whoever has more expertise and better empirical guidance about what the actual risks are in any given disclosure or open data scheme – what it's going to cost and what the potential negative side effects are – this is what is worth its weight in gold. **Most people who call themselves experts are not really grappling with these questions.**" – GCE grantee*

Notes: 1. "The open data community did not stop driving for more and more data…they did not stop to pause and to think what is going to happen with all of this open data? I have not seen this moment of contemplation and reflection…not a lot of people are stopping and seeing what is going on." – Privacy expert.

Sources: Internal GCE documents; Stakeholder interviews, 2018; Stakeholder interviews, 2018; and Dalberg analysis

Open data – summary of findings

Evolution and impact

Lessons learned

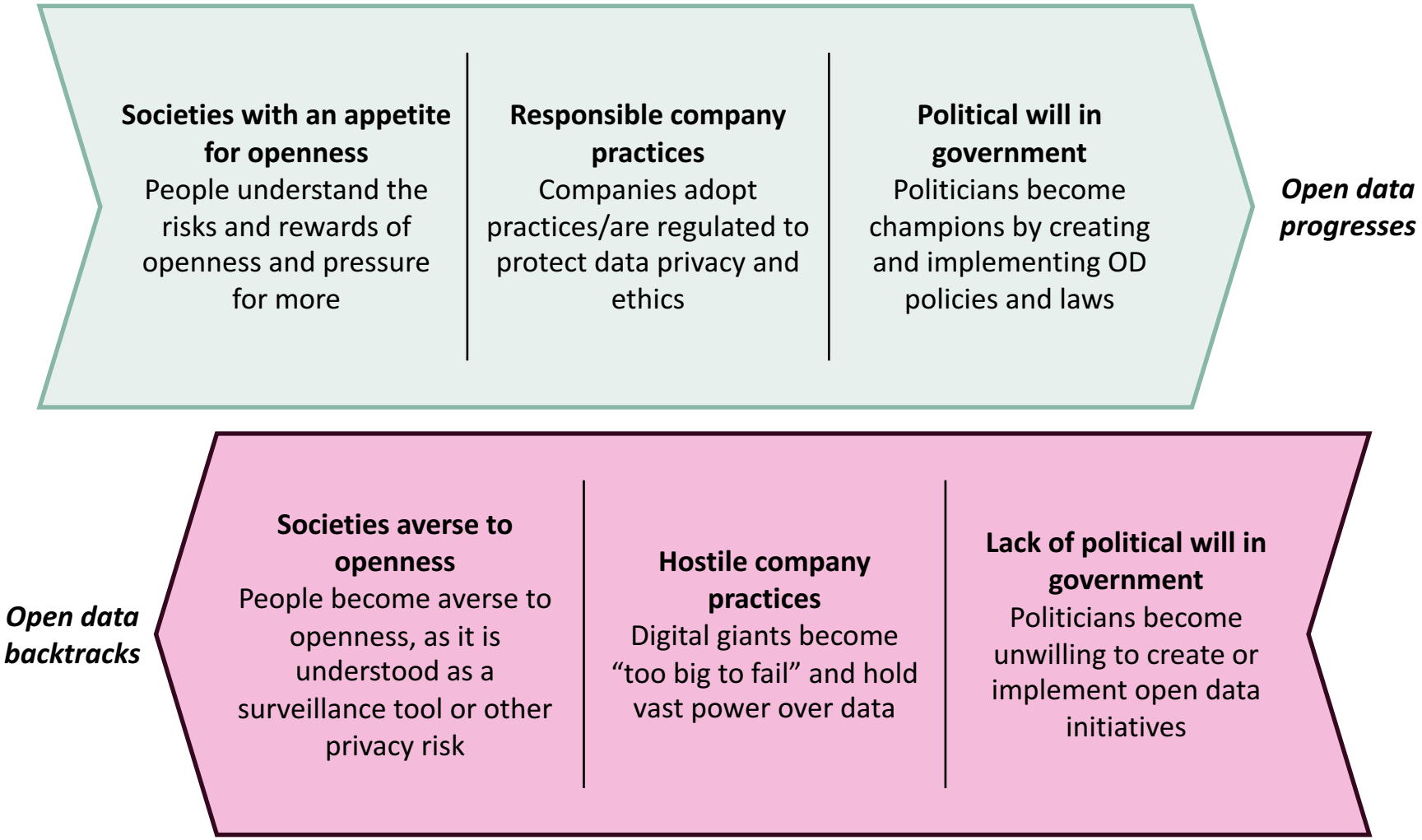
Implications for the future

Looking forward, the open data field requires additional efforts to cement norms, change policies, and strengthen technical capacity

	Open data today	Key priorities to strengthen the field
Narrative	• **Widespread narrative** with OD knowledge and use in many countries, sectors, and groups	• **Address data risks** and consider how to protect individual privacy and promote ethical data use • Increase awareness of open data's **tangible impacts**
Norms	• **Norms to open data exist**, but social action is low (e.g., limited action after Trump closed various datasets)	• **Energize and empower citizens and other users (e.g., infomediaries) to demand public data,** as they would for any public good
Policies	• **Few countries have OD laws or laws that include OD** • **Some countries have OD policies**	• **Embed open data in more laws** at national and sub-national levels • **Drive implementation** of open data commitments
Institutions	• **Well-established specialized institutions** (e.g., ODI) • **Strong OD enablers** (e.g., IATI)	• **Increase sustainability of** many organizations who struggle to secure funding
Constituency	• **Clear champions** (e.g., France) • **Widespread support** from various regions (e.g., LAC, Africa)	• **Support data use collaborations** that maximize impact • **Train users and potential users** to make use of available data for different activities (e.g., decision-making, entrepreneurship, civic participation)
Technical leadership and capacity	• **Low technical capacity and digital literacy** to drive data use	• **Ensure technical capacity** exists to ensure long-term success (e.g., in government)

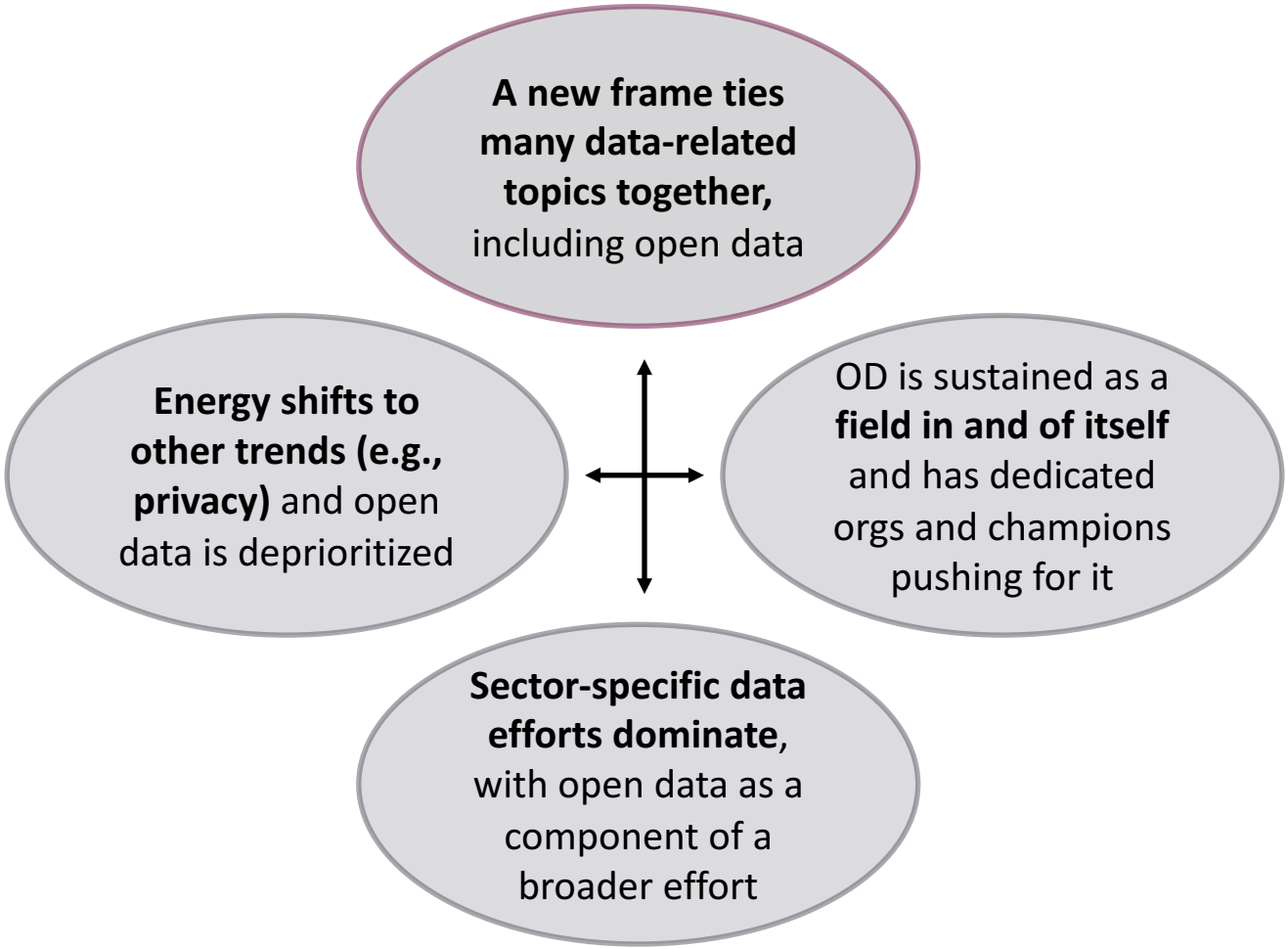
Sources: Robert Wood Johnson Foundation, "Exiting Responsibly: Best Donor Practices in Ending Field Support," 2011; The ODC, "The Open Data Charter Webpage," 2018; Open Government Partnership, "The OGP Explorer," 2018; The State of Open Data, "Donors – Stakeholder Chapter WIP," 2018; Deloitte, "Assessing the value of TfL's open data and digital partnerships," 2017; Stakeholder interviews, 2018; and Dalberg analysis

Many external factors will influence the future of open data



Sources: Stakeholder interviews, 2018; Dalberg analysis

Based on these trends, open data efforts could move in several directions

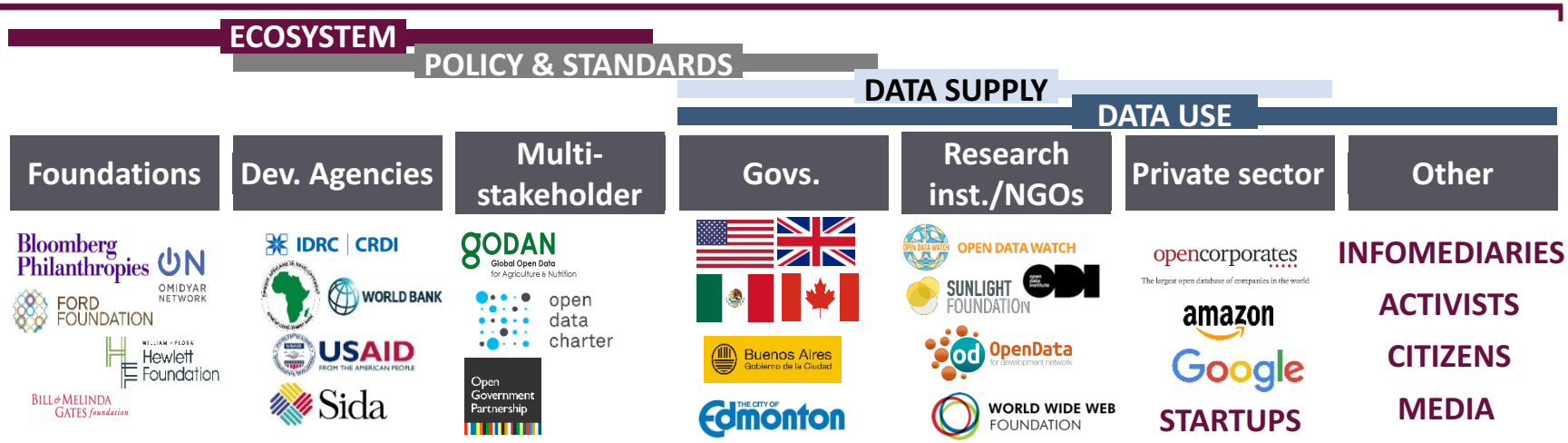


Sources: Stakeholder interviews, 2018; and Dalberg analysis

Annexes:

- **Open data**
- Field Sustainability
- Sources and references

A combination of champions and political forces fueled critical developments across the open data system



Main achievements[1]

- **Built orgs in the field**
- **Funded key milestones** (e.g., creation of OD charter)
- **Strategically advocated** for more open data (e.g., funders around G8 and G20 summits)

- **Supported key OD groups** focused on developing regions (e.g., OD4D funded by IDRC, WB, and UKaid)
- **Funded key studies** (e.g., supported "The State of Open Data" report)

- **Provided funds** to important OD users (e.g., Godan's support to farmers)
- **Committed governments** to OD (e.g., OGP pledges)
- **Created OD quality standards**

- **Opened important datasets** (e.g., US gov has ~200,000 datasets[2])
- **Set policies & standards** around the production of open data
- **Committed resources to OD** (people, budget)

- **Supported policies and standards** (e.g., Sunlight's leadership in generating OD standards in 2007)
- **Stewarded progress** through constant research and monitoring

- **Generated open data** for use
- **Funded open data** initiatives (e.g., support of Google to WWWF)
- **Used open data** for products (e.g., Google's use of transport OD)

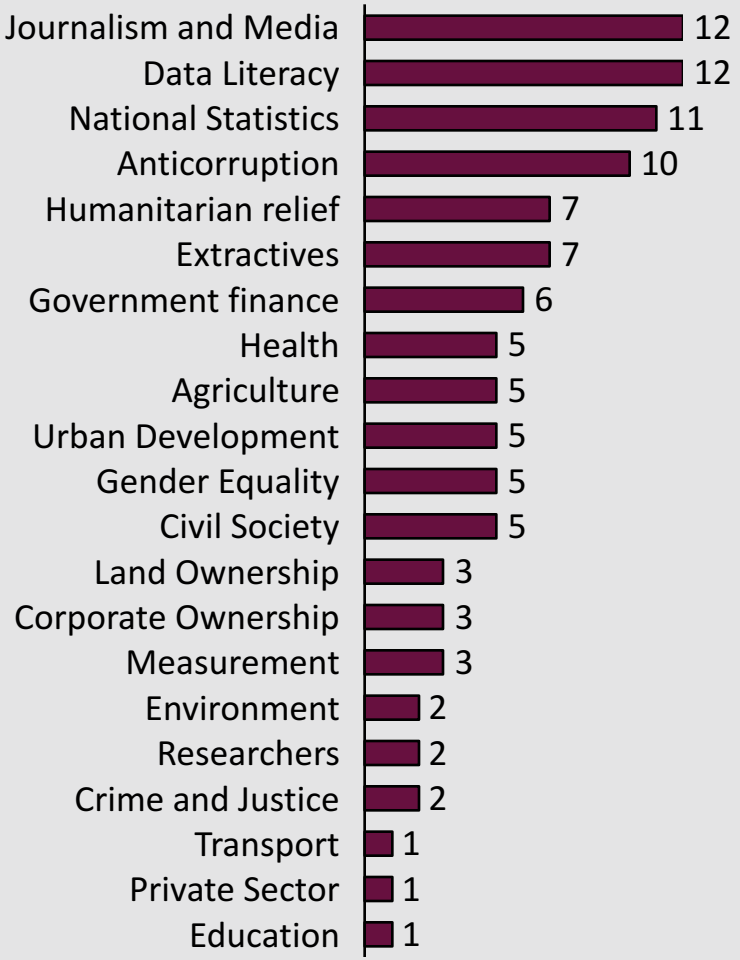
- **Created pressure** demanding OD from governments
- **Used open data** to create startups
- **Used open data** for anti-corruption

Notes: 1. These descriptions illustrate key roles these segments of actors have played so far, hence are not exhaustive. 2. data.gov, "home page," 2018.

Sources: data.gov, "home page," 2018, and stakeholder interviews, 2018.

Ecosystem: Funders have supported the uptake of open data—primarily through sector-focused efforts

Number of open data donors supporting a sector[1]
Number of donors, 2018



KEY FINDINGS

- **Open data has the support of at least 55 funders,** concentrated in journalism and media, data literacy, national statistics—and less so in transport, private sector, and education [1]
- **The five donors that support the most sectors in open data are:** IDRC (10), GCE (9), Hewlett (9), Open Society Foundation (8), and UK's Department for International Development (8)[1]
- **Some actors noted lack of collaboration between donors**—e.g., funding similar activities without coordinating with each other; not looking for "joint collaboration" opportunities

*"We were able to advance in large part due to **international funding for our efforts.**"*
– National-level civil society

*"A lot of focus has gone towards creating systems, **but not on the more systemic support that organizations and governments need to get open data embedded.**" – OD expert and GCE grantee*

Notes: 1. Open Government Partnership, "The OGP Explorer," 2018. 2. The ODC, "The Open Data Charter Webpage," 2018. 3. The State of Open Data, "Donors – Stakeholder Chapter WIP," 2018 – As the State of Open Data is still a work-in-progress, this information may change when finalized and reviewed.
Sources: The ODC, "The Open Data Charter Webpage," 2018; Open Government Partnership, "The OGP Explorer," 2018; The State of Open Data, "Donors – Stakeholder Chapter WIP," 2018; Stakeholder interviews, 2018; and Dalberg analysis.

Ecosystem: Some open data champions are uncertain about the future

KEY FINDINGS

- Some champions believe OD **has not delivered on its initial promise**—partly due to impossibly high initial expectations
- Some interviewees noted that **open data efforts center around the "usual players"** (i.e., donors, funders, and advocates) and have not fully tapped into related initiatives/projects (e.g., data work in sectors)
- The ecosystem is still trying to strike the **correct balance between mainstreaming the field** (e.g., becoming embedded in many sectors) **and focusing on core open data infrastructure**
- **Some actors want to move—and are moving (e.g., ODI)—open data to a broader data framework**. But many advocates remain unsure about how best to do this

> *"**OD is a victim of its own success** as it built a great hype, and it did not prove the direct return of investments it promised" – OD expert*

> *"Right now there is a lot of **uncertainty around where things are going and what needs to happen in the future,** for open data" – GCE grantee*

SPOTLIGHT: TWITTER DISCUSSION ON OPEN DATA[1]

In March, 2018 **a foundation Program Officer started a Twitter discussion** by stating he wished champions had ***"pushed service design rather than open data a decade ago."*** This led to 200+ responses that capture current perspectives and sentiments across many open data champions and advocates.

> *"…I definitely do not think we should look for use of datasets but other way around, problem first. The era of 'govt data and the invisible hand' is no longer" - Funder*

> *"Open Data on the opioid crises, climate change, housing prices, rental costs (…) has been instrumental in helping officials and the public tackle issues that I'm not sure start as UX problems." – IT and gov. expert*

> *"…Service design is critical, but so is freedom of info. the two even complement (…), if done right. I don't see this as an "either/or" issue: the public both needs & deserves better UX, UI & access to info." - NGO*

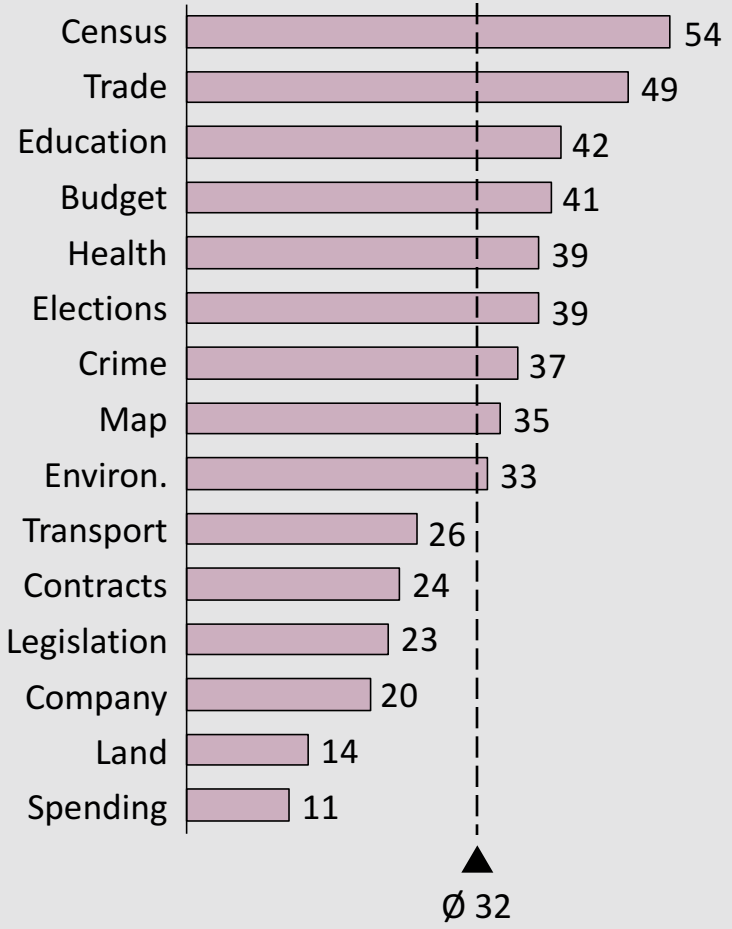
Notes: 1. Twitter, "Twitter webpage," 2018.

Sources: Twitter, "Twitter webpage," 2018; World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016; Stakeholder interviews, 2018 and Dalberg analysis

Data release: Quality of open data varies across sectors, partly due to sensitivities around certain topics

SUPPLY PER TOPIC

Open Data Barometer rating, by topic[1]
Average score (0-100), 2016



KEY FINDINGS

- **Quality of open datasets is low on average**, particularly for spending, land, and company data
- **Datasets that can be most impactful to drive transparency and accountability** (e.g., spending, land) can be the hardest to open and improve as they have high political sensitivity
- Some interviewees noted that the **movement of people** from the open data field (e.g., ODI) to other sectors is a **catalyst of open data quality,** as these people transfer best practices and know-how

*"To get governments to **open potentially controversial or sensitive data, you must first approach them with a friendlier tone** of opening weather or transport data, and work from there."*
- Donor

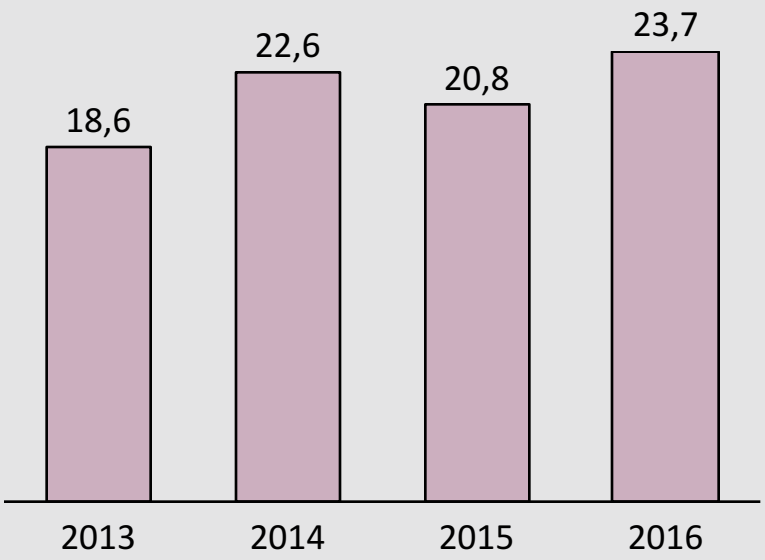
*"One of our first projects was making nine government procurement datasets talk to each other. When we were done, we ended up **knowing more about the government's procurements than the government itself**."*
– Think tank

Notes: 1. World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016.
Sources: World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016 and Stakeholder interviews, 2018

Data use: Open data use and impact show growth, but challenges remain around technical capacity and understanding value

OPEN DATA USE

Open Data Barometer impact index[1]
Index (0-100), 2013-2016



Measures the extent of use of open data in political, social, and economic fields; OD has demonstrated a small but steady rise driven by North America, East Asia, and Europe

> ***"Some of our efforts with open data have been hugely impactful in the country.*** *For example we uncovered a huge loss of public funds from teachers that were getting paid salaries who didn't exist, and supported the government in rectifying this." – Researcher*

> *"We have **helped entrepreneurs improve their business by teaching them how to use open data**. For example we had the case of a clothes salesman who improved his sales with what we taught him." – Government official*

> *"Today very **few people can analyze or use open data**, as it needs a high level of technical knowledge that many lack." – Open Data Advocate*

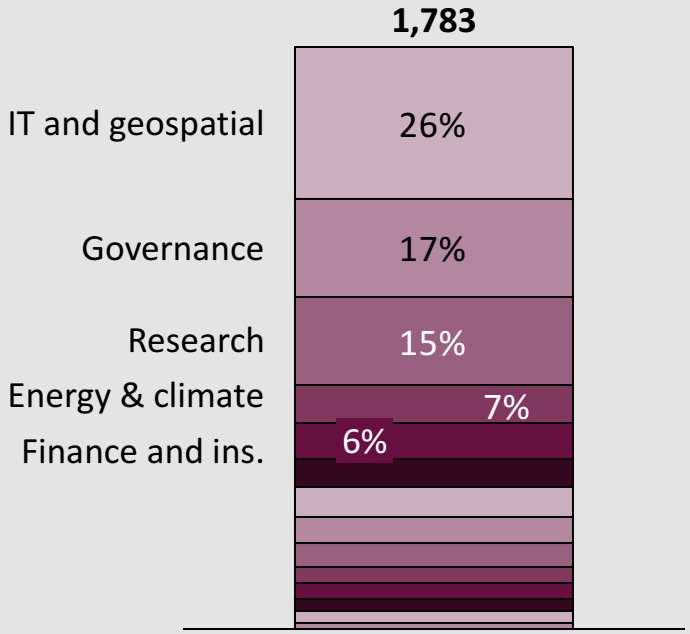
Notes: 1. World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016.

Sources: World Wide Web Foundation, "Open Data Barometer, 4th Edition," 2016 and Stakeholder interviews, 2018

Data use: Use cases exist across a broad array of sectors

SPOTLIGHT: USE ACROSS SECTORS

Organizations using open data, by sector[1]
% of organizations in each sector, 2016



This subset—which is not representative—shows organizations are using open data across a range of sectors. The subset is biased towards organizations in North America and Europe.

*"The **biggest open data success stories precede the OD movement**, such as GPS or weather data." – Technology expert*

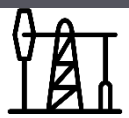
***"The private sector is great at identifying useful open data and reaping benefits from it in the near term**. This use of open data is very impactful and much less politicized than traditional open data use cases." – Open data expert*

Notes: 1. Center for Open Data Enterprise, "The Open Data Impact Map," 2016. 2. Other sectors – in descending order: Healthcare, Transportation and logistics, Media and communications, Education, Housing, Consumer Agriculture, Other, and Culture and tourism.

Sources: Center for Open Data Enterprise, "The Open Data Impact Map," 2016 and Stakeholder interviews, 2018

Fiscal governance: Progress within fiscal governance sub-domains

SPOTLIGHT: EXTRACTIVES



- **Culture around releasing data started ~2002** – with Tony Blair's announcement of the Extractive Industries Transparency Initiative (EITI). Extractives data started being released, but quality was low as there were no clear standards and releases were not digital.[1] EITI put in place open data policy in 2013-2015
- **Strong constituency exists** – EITI has 51 implementing countries, $2.4 trillion disclosed, and 95% of datasets comply with OD established standards;[1] Open Oil created in 2011 to bring open data tools to the oil industry[2]
- **Demonstrated impact** – Nigeria recovered $2.4 billion of unpaid revenue and identified $9 billion it expects to recover[1]

SPOTLIGHT: CONTRACTING

- **Born after OD –** the open contracting field was born ~2012 with the Open Contracting Partnership (OCP), where open data standards played a central role from the beginning[3]
- **Strong OD organizations** – e.g., OCP's open standards have gained commitment from over 30 governments to date[3]
- **Demonstrated impact with strong use cases** – ~10% savings for governments;[3] in Paraguay, the media used open contracting data to force the exit of the Education Minister due to an irregular catering contract
- **Focus on purpose-driven action** – e.g., within OCP, open data is seen as a means to an end, not an end in itself

SPOTLIGHT: BUDGETS

- **Efforts for open budgets precedes OD** – efforts for open budgets can be traced back to the 80's – e.g., in 1985 Disha, a civil society organization in India, gathered budget data and used it for advocacy work[4]
- **Existing open budget standards-** e.g., The Global Initiative for Fiscal Governance has developed 10 principles for open budgets[5]
- **Limited availability of data -** ~75% of countries do not publish sufficient budget information[4]
- **Recent backtrack** - After 10 years of progress, there was a global decline of two points in the Open Budget Survey from 2015-17, partly due to government crackdown on CSOs[6]

Notes: 1. The Extractive Industries Transparency Initiative, "EITI Webpage," 2018. 2. Open Oil, Open Oil webpage," 2018. 3. The Open Contracting Partnership, "OCP webpage," 2018. 4. The International Budget Partnership, "IBP webpage," 2018. 5. The Global Initiative for Fiscal Transparency, "GIFT webpage," 2018. 6. The International Budget Partnership, "The Open Budget Survey 2017," 2017.
Sources: The Extractive Industries Transparency Initiative, "EITI Webpage," 2018, Open Oil, Open Oil webpage," 2018, The Open Contracting Partnership, "OCP webpage," 2018, The International Budget Partnership, "IBP webpage," 2018, The Global Initiative for Fiscal Transparency, "GIFT webpage," 2018, The International Budget Partnership, "The Open Budget Survey 2017," 2017 and Stakeholder interviews, 2018.

Open data in sectors (1/4)

Sectors	Key actors	Key activities/progress	Key impact	Lingering gaps
Agriculture	• GODAN • WB • AfDB • AidData • CGIAR	• Strong OD organizations - e.g., GODAN has ~700 partners[1] • Vast use and impact of weather data for decision-making (e.g., sowing day, harvesting)	• Proven impact – e.g., GODAN published two volumes of OD impact	• Confusion in data ownership • Lack of incentives to provide data • Limited use by smallholder farmers
Anti-corruption	• OD Charter • CSOs • Media • OGP • OCP • WWWF • TACOD • RiSSC	• Growing support - OD charter has defined priority data to fight corruption • Uses of OD to call-out or look for corruption – e.g., Regards Citoyens, a French CSO, created a platform reusing OD showing gifts from pharma. to Drs.	• Limited direct impact evidence - e.g., 2015 RiSSC study found that OD didn't have a causal effect on anti-corruption[2] • Case studies of OD use for anti-corruption - In Germany of citizens stewarding pharma's gifts to Drs.	• Disconnected development of anti-corruption and open data losing opportunities to add value • Data is commonly unavailable, has quality issues, and people don't have the skills to use it • Difficulty to move from corruption to persecution
Corporate	• OpenCorporates • GovLab • Global Witness • Open-ownership • Transparency International • EITI	• Central registries of beneficial ownership exist in a few countries (e.g., UK, Ukraine, Denmark) • Testing of a beta data standard to describe beneficial ownership (BODS)	• Existence of an index to monitor the use of OD – the Company Data Index • Known use in uncovering scandals through the identification of shell companies (e.g., Panama Papers)	• Little use of standards for corporate registries • Limited interoperability between datasets due to weak standards • Low availability of data as OD (e.g., OD Barometer found that 5% of registries are OD[3])
Crime & justice	• IDRC • OGP • ODI • MySociety • GovLab • UpTurn	• Open data is gaining attention as a tool for crime & justice – particularly with international organizations that push OD policies (e.g., OGP)	• Proven importance of OD for crime & justice (e.g., the GovLab's Criminal Justice Innovation Project)	• Political and cultural barriers reduce OD's implementation • Limited interoperability between available datasets • Limited publication of judicial data in open formats
Education	• Open State Foundation • Academia	• Open data is used as an input, output, and subject of education • Data reporting for SDGs on education have improved their quality recently	• Strong impact cases such as Mejora tu Escuela in Mexico or monitoring school budget cuts in the UK	• Low research on the uses and needs of OD in education • Researchers rarely make their data open, making verifying results difficult

Notes: 1. GODAN, "GODAN webpage," 2018. 2. RiSSC, "Revolution Delayed? A study on the impact of Open Data on Corruption," 2015. 3. WWWF, "The Open Data Barometer 4th edition," 2016.

Sources: OD4D. "The State of Open Data – WIP," 2018; WWWF, "The Open Data Barometer 4th edition," 2016; RiSSC, "Revolution Delayed? A study on the impact of Open Data on Corruption," 2015; WWWF, "CONNECTING THE DOTS: Building the Case for Open Data to Fight Corruption," 2017; OD Charter, "OD Charter webpage;" GODAN, "GODAN webpage," 2018; Stakeholder interviews, 2018; and Dalberg analysis

Open data in sectors (2/4)

Sectors	Key actors	Key activities/progress	Key impact	Lingering gaps
International aid	• IATI • Publish what you Fund • Global Humanitarian Assistance • Dev. Data Hub • AidData • All Voices Count	• Active tracking and monitoring of progress - e.g., Aid Transparency Index published since 2011 • Existing international consensus on OD requirements and needs - e.g. IATI initiative, HDX labs in Dakar and Nairobi	• Monitoring of aid donor performance in reporting activities established clear benchmarks and oversight • Improved coordination among donors in geographies and topics being supported	• Limited knowledge of IATI standards among people who are interested in aid information, as found by a 2015 USAID study • Limited use in decision-making, as not all donors are basing their decisions on data or are not prioritizing it
National statistics	• Open Data Watch • OKI • OD Charter • IDRC • UNF • WB	• Strong strides in opening data sets - e.g., ODIN scores for over 180 countries show progress through its three editions • Countries publishing data are working to establish standards (e.g., France)	• Countries have improved reporting on achieving SDG commitments, according to the Open Data Inventory • Census data is the highest quality open data according to the Open Data Barometer	• Progress in improving coverage of missing data is slow • Lack of many datasets essential to measuring SDG progress • Little gender disaggregation data • Low political support for quality data
Urban development	• Open Cities • OKI • Sunlight F. • Cities Climate Leadership Group • OD4D • Open Data Soft	• Strong infrastructure to source data – e.g. crowdsourcing, crowd-mapping • Existing multi-stakeholder coordination which enhances data's interoperability and maximizes shared infrastructure	• Strong technical developments in the field - e.g., SDG tracking through geospatial data, improved estimation of urban poverty	• Multiple stakeholders – including government – lack knowledge of existing tools and/or do not use them for decision-making
Government finance	• Follow the Money Network • International Budget Partnership • GIFT	• Efforts that precede the open data movement – some that date back to the 80s • Strong CSO support, due to its importance for advocacy work • 2017 Open Budget Survey shows progress stalling from 2016-17, after years of continued progress	• Multiple recorded use cases - e.g., over 250 cases recorded in the Open Data Impact Map • Evidence of impact at a global level - e.g., 2015 GIFT research coded 120 impact cases	• Most budget data available is too highly aggregated • Spending data is not readily available and is the last type of data govs. are willing to open • Implementation of the G20 Open Data Principles is low and inadequate

Sources: OD4D. "The State of Open Data – WIP," 2018; IATI, "IATI webpage," 2018; Publish What you Fund, "Aid Transparency Index," 2016; Open Data Watch, "Open Data Inventory Index," 2017; WWWF, " The Open Data Barometer 4th edition," 2016; GIFT, "GIFT webpage," 2018; International Budget Partnership, " The Open Budget Survey," 2017; GIFT, "Open Budget Data: Mapping the Landscape," 2015; Stakeholder interviews, 2018; and Dalberg analysis

Open data in sectors (3/4)

Sectors	Key actors	Key activities/progress	Key impact	Lingering gaps
Extractives	• EITI • Publish what you Pay • Open Oil • OCP • Responsible Mining Index	• 51 EITI countries have disclosed 95% of their data in OD format[1] • 51 EITI countries have agreed to provide project-level disclosures from the financial year of 2018, in OD format[1]	• ~65 companies disclose data in the UK through an extractives disclosure API[2] • Countries have improved their management of extractives - e.g., Nigeria recovered USD 2.4 billion unpaid and identified USD 9 billion expected to recover[1]	• Black box methodologies – particularly from private actors – remains a common practice in extractives - e.g., how deal decision-making is done • Many valuable datasets remain private
Health	• MoHs • BMGF • IDRC • MCC • Pepfar • GovLab	• Various MoHs have led efforts to open data at national and subnational levels - e.g., OD work in Mexico by the Slim Foundation and the MoH • Increased use of automation in data collection has improved the quality and veracity of data	• Tangible improvement of health sector governance – e.g., sub-Saharan Africa has received significant investments to improve health data	• Accountability remains limited • There is tension between open and personal data issues • In some countries opening health data is difficult without e-government infrastructure
Environment	• Resource watch • Specialized players in sub-topics – e.g., climate change, air quality, biodiversity, water, forest	• Strong political backing by almost all countries – e.g., The Paris Agreement requires countries to release OD detailing progress against goals • More comprehensive environment OD platforms are emerging - e.g., wdc.org.ua	• Sensors are being implemented at a rapid pace, allowing multiple streams of data to be made available for research • The Open Data Impact Map has tracked over 100 cases of organizations using energy and climate data[3]	• Lack of a comprehensive inventory is resulting in collection of data that could already be available • Lack of common standards reduces use and interoperability • Difficulty in creating strong business cases hampers funding
Transport	• Transportation camp • Oasis project • GovLab • Eurocities	• Transport data success stories precede OD conversations • Transport data is commonly used on a day-to-day basis by many to navigate cities	• Strong impact cases – e.g., The Transport for London's (TfL) OD has generated ~USD 150 million for the London economy[4] • Strong use of data – e.g., with TfL's data ~600 apps were created, used by 42% of London[4]	• Little transport data is published in compliance with OD's technical definition • Limited data interoperability due to lack of use of common identifiers

Notes: 1. EITI, "2018 EITI Progress Report," 2018. 2. Publish What You Pay, "Uk government review of the reports on payments to governments regulations," 2017. 3. Center for Open Data Enterprise, "The Open Data Impact Map," 2016. 4. Deloitte, "Assessing the value of TfL's open data and digital partnerships," 2017.

Sources: Center for Open Data Enterprise, "The Open Data Impact Map," 2016; Publish What You Pay, "Uk government review of the reports on payments to governments regulations," 2017; OD4D. "The State of Open Data – WIP," 2018; IATI, ", EITI, "2018 EITI Progress Report," 2018; EITI, "EITI Webpage," 2018; The GovLab, "Open Data Impact Webpage," 2018, Deloitte, "Assessing the value of TfL's open data and digital partnerships," 2017; Stakeholder interviews, 2018; and Dalberg analysis

Open data in sectors (4/4)

Sectors	Key actors	Key activities/progress	Key impact	Lingering gaps
Land	• Cadasta F. • Land Matrix • Access Land • Global Land Alliance • PRIndex • Radiant	• Continued work from specialized stakeholders, with the support of OD specialists – e.g., The Cadasta Foundation and Open Knowledge have worked together to explore open land data • Focused work on geospatial mapping data, by increasing accuracy and helping communities with no formal land recognition	• The land records authority of UK (HM Land Registry) freed two of its land ownership data sets, however the terms of re-use were changed in April 2017 and the dataset is no longer technically open	• Limited supply - ranks as the least likely data to be available (e.g., least open among 15 types of data in the open data index)[1] • High aversion from government to open this data due to political aversion and privacy concerns • High aversion from landowners due to privacy concerns, as established by 2016 study by the Cadasta Foundation
Banking	• ODI • Barclays • COADEC • EY • HSBC • Royal Bank of Scotland	• Development of standards – e.g., ODI developed open banking standards • Nascent field – to date, the UK has adopted open banking and other countries have shown promising steps (e.g., Australia)	• The UK has become a leader in Open Banking • Impact data is limited given that efforts are relatively nascent	• Open banking faces substantial data concerns – particularly around client privacy and security • Some banks and FinTech companies have expressed aversion to using open banking standards

Notes: 1. Open Knowledge Foundation, "Global Open Data Index," 2015.

Sources: OD4D, "The State of Open Data – WIP," 2018; ODI, "Open banking: setting a standard and enabling innovation," 2018; Becky Hogge, "Open Data Six Stories About Impact in the UK," 2015; The Cadasta Foundation, "Cadasta Website," 2018; Open Knowledge Foundation, "Global Open Data Index," 2015; Stakeholder interviews, 2018; and Dalberg analysis

Open data in regions (1/3)

Sectors	Key actors	Key activities/progress	Key impact	Lingering gaps
Asia	• WF Open Data Labs • DataKind • OKI • IDRC • OD4D • WWWF	• Various OD civil society initiatives, including active initiatives to improve open data – e.g., Open Data Asia 2020 which sets the region's OD agenda • Tangible improvements in OD – e.g., clear growth throughout Asia in ODB scores	• Nascent efforts show evidence of impact at outcomes level, but not yet changing lives • Concrete impact cases exist – e.g., use of OD for Nepal's earthquake recovery, use of mapping data to identify dengue outbreak in Singapore, and India's energy mapping tool ESMI	• Funding limitations have driven various initiatives to dry-up after funding ends • Use is lacking in lower-income countries, especially countries in western and southern Asia • Limited use outside of the private sector
SS Africa	• WWWF • Code for Africa • OGP • ODI • Follow the Money	• Policy support to OD or adjacent topics – e.g., 15 countries have constitutional mandate or an Access to Information Act • Uptake of global efforts – e.g., commitments of various African countries under OGP (e.g., Kenya, Cote D'Ivoire) • Nascent policy commitments – e.g., Burkina Faso started drafting its open data policy	• Tangible use cases have been championed mainly by infomediaries – e.g., Follow the Money Kenya uncovered deviation of funds to support families with lead poisoning	• Limited engagement from civilians and private sector, reducing potential OD uses • Little sustainability of OD – e.g., Kenya originally led the way, however they backtracked and now countries like Cote D'Ivoire are becoming regional leaders • Lack of strong legal frameworks including open data policies, political will, and funding
Western Europe	• Open Knowledge network • MySociety • OKI • ODI • WWWF • OpenCorporates	• Strong non-gov data efforts are becoming more common – e.g., Open Science, OpenGlam, TfL • Global leaders in OD have emerged from EU, like UK, France, and Denmark • Governments have dedicated full-time resources to OD efforts – e.g., Belgium's data harmonization agencies	• Multiple strong impact cases have been recorded – e.g., Denmark's release of address data, creating direct financial benefits for 2005-09 of ~USD 70 million, at a cost of only ~USD 3 million;[1] Sweden's launch of openaid.se disclosed aid funding for higher transparency[1]	• Alignment of policies across government agencies remains challenging and very few countries have engraved OD in their legislation • The private sector continues to lag behind government efforts, with exceptions like OpenCorporates

Notes: 1. The GovLab, "OD Impact," 2018.

Sources: The GovLab, "OD Impact," 2018; OGP, "Independent Reporting Mechanism," 2018; Open Data Labs, "Open Data Asia 2020," 2015; The GovLab,"OD Impact webpage," 2018; WWWF, "The Open Data Barometer 4th Edition," 2016; OD4D. "The State of Open Data – WIP," 2018; Stakeholder interviews, 2018; and Dalberg analysis

Open data in regions (2/3)

Sectors	Key actors	Key activities/progress	Key impact	Lingering gaps
North America & Oceania	• GovLab • OCP • Sunlight Foundation • CfA • New America • ODI • Strong government leaders	• Use of OD by govs to engage in evidence-based policymaking • Emphasis on data quality, to increase OD's usability by civilians and machines (e.g., AI) • Mix of political headwinds and tailwinds for OD – e.g., US support slowdown at federal level due to change in government; Canada's consistent support to OD provides full-time focused resources; New Zealand's government has made OD commitments and investments for implementation	• New Zealand – OD, open source tools, and crowdsourcing were used to develop tools to respond to natural disasters, enabling citizens to check the status of their homes and saved the government USD ~6 million in costs within its first year of use[1] • Canada – T3010 provided a mapping of the nonprofit sector in OD format which helped improve advocacy work by creating a common understanding about areas with duplication of efforts[1]	• Limited data use remains as a barrier in most countries, as many civilians rarely engage with the data due to factors like lack of incentives or lack of knowledge • Political headwinds have demonstrated fragilities in what has already been built; for example a few months after taking office, Trump took down datasets that had been open, like federally-funded teaching positions
MENA	• ODI • OKI • IDRC • WB	• There is a growing data community, with capacity building organizations and data-driven innovation • Progress in legal reforms that support open data – e.g., Jordan and Tunisia have access to information laws, while Egypt, Lebanon, and Morocco have drafts for similar laws[2] • Recently, almost all MENA govs are backsliding on OD, with lower scores compared to the previous Open Data Barometer	• The Lebanese Association for Democratic Elections used OD to promote electoral transparency by visualizing voter trends in past elections to help create discussions and participation in the election process • In Morocco, Geospheres harmonizes urban data from different subnational governments and other sources to provide an easy-to-use geospatial platform of Moroccan geospatial data	• Lack of civil society engagement with open data • Little pressure for governments to make data public or provide it in quality format • Lack of data infrastructure to collect and disseminate it

Notes: 1. The GovLab, "OD Impact," 2018. 2. OECD, "Benchmarking Digital Government Strategies in MENA Countries," 2017.

Sources: The Sunlight Foundation, "These government open data sets have been taken down since Trump took office," 2017; OECD, "The MENA-OECD Governance Programme," 2017; OECD, "Benchmarking Digital Government Strategies in MENA Countries," 2017; OECD, "The MENA-OECD Governance Programme," 2015; The GovLab, "OD Impact," 2018; OD4D, "The State of Open Data – WIP," 2018; WWWF, "The Open Data Barometer 4th edition," 2016; Stakeholder interviews, 2018; and Dalberg analysis

Open data in regions (3/3)

Sectors	Key actors	Key activities/progress	Key impact	Lingering gaps
Eastern Europe	• DFID • USAID • WB • Governments	• Increased momentum and political interest around joining OD global initiatives – e.g., various countries from Western Balkans and the Caucasus are considering open contracting • Improved overall awareness around OD and how to combine it with other sources of data for problem-solving	• Ukraine's ProZorro experience has served as a global example of a high ROI OD investment • Roll out of the Personal Democracy Forum in Ukraine has helped consolidate the community across the region • In Kosovo, a bottom-up movement for OD has generated pressure for policy-makers	• Lack of support for collaborative innovations – with multiple siloed efforts at regional, national, and sectoral levels • Data infrastructure and quality are low – e.g., in the region, only 4% of datasets analyzed in the Open Data Barometer were fully open[1]
LAC	• OECD • Abrelatam • Red-Gealc • Open Contracting • OGP • ILDA • ECLAC • OD Charter • IMCO • Caribbean Open Institute (COI)	• LAC has the highest number of adopters of the OD Charter • Promising work around fiscal governance is occurring – e.g., more fiscal governance data is available in LAC than anywhere outside of Western Europe and North America • Various cooperation mechanisms and forums have continued interest – e.g., AbreLatam, Condatos • Strong political will – e.g., Costa Rica is working on a decree to institutionalize its OD Policy through participatory dialogue	• Strong impact cases are seen in almost all countries of the region – e.g., A Tu Servicio in Uruguay, Mejora Tu Escuela in Mexico, Budget Transparency Portal in Brazil, and Aclimate in Colombia • Strong use by media and communications of OD – e.g., La Nacion – an Argentinean newspaper – has made government data more accessible through a platform that reuses it so civilians can access datasets like consumer indices, industrial data, weather data, and CO2 emissions	• Limited effectiveness of participatory mechanisms reduce the potential impact of OD, for example corruption scandals may be uncovered and put in the public eye, but few consequences are had due to ineffective institutions • Civil society groups commonly lack financial support from governments, and must work with very limited resources to drive for impact • Governments and civil society groups commonly want to do more with open data, but lack the technical capacity • Political instability jeopardizes progress – in Costa Rica, after a change in government, the new administration took down a well-functioning open data platform – as it was associated with people from the previous administration – to start from scratch

Sources: 1. WWWF, "The Open Data Barometer 4th Edition," 2016.

Sources: The GovLab, "OD Impact webpage," 2018; WWWF, "The Open Data Barometer 4th Edition," 2016; Open Data Charter, "Open Up Guide: Using Open Data to Combat Corruption," 2018; The Open Data Charter, "OD Charter webpage," 2018; OD4D. "The State of Open Data – WIP," 2018; Stakeholder interviews, 2018; and Dalberg analysis

Annexes:

- Open data
- **Field Sustainability**
- Sources and references

Considering field sustainability

ASPECTS OF SUSTAINABILITY	CONSIDERATIONS
Narrative *Ability to create, articulate, and agree upon a frame and goals*	• **Frame:** Is the framing of the issue understood and reaching multiple audiences? • **Clear goals:** Is there a clear goal for the field?
Norms *Creation, adoption, and change of relevant norms and expectations*	• **Standards and principles:** Have standards, principles, and/or expectations changed? To what extent have changes spread across domains and sectors (e.g., government, private sector)?
Policies *Ability to embed practices in policies or laws*	• **Policy change:** Are there policy changes that have been made as a result of the work of the field? Do field actors monitor and report on the implementation of relevant policies?
Institutions *Existence of multiple and diverse orgs focused on different aspects of the field*	• **Key institutions:** Do key institutions have the ability to successfully weather shocks? • **Diverse funding:** Are there diverse/multi-sector sources of funding and investments?
Constituency *Interest and commitment across relevant supporters*	• **Awareness and support:** Are goals of the field recognized and embraced? • **Demand**: Is there a political constituency or market to sustain demand?
Technical leadership and capacity[1] *Recognized leaders with the technical knowledge to drive the field forward*	• **Tech leadership:** Are tech leaders driving progress forward? • **Knowledge and capacity:** Does the field have the capacity it needs to drive research and evolution?

Notes: 1. Relevant feature for tech related fields. Framework adapted from Robert Wood Johnson Foundation, "Exiting Responsibly: Best Donor Practices in Ending Field Support," 2011 – with input from Larry Hirschhorn, "Ideas in Philanthropic Field Building," 2004, The International Consortium for Organizational Resilience, "ICOR Webpage," 2018. Center for Strategic & International Studies, "Resilience: A Critical Framework for Development," 2014.

Measures to assess sustainability

	Signs of nascent field	Signs of a sustainable field
Narrative	• New field • Broad problem area	• Existing field • Specific problem area
Norms	• Unchanged norms • Scattered practices	• Norms enacted and implemented • Institutionalized practices
Policies	• Unchanged policies and laws • Unrecognized by policies and laws	• Policies and laws enacted and implemented • Engraved in policies and laws
Institutions	• One major funder • New organizations	• Many funders • Established organizations
Constituency	• Low public awareness • Disconnected actors	• High public appeal or existence of constituency • Highly interconnected actors
Technical leadership and capacity	• Dispersed technical leadership • Little knowledge base • Limited resources to drive change	• Robust technical leadership • Significant knowledge production • Sufficient resources to drive change

Framework adapted from Robert Wood Johnson Foundation, "Exiting Responsibly: Best Donor Practices in Ending Field Support," 2011 – with input from Larry Hirschhorn, "Ideas in Philanthropic Field Building," 2004, The International Consortium for Organizational Resilience, "ICOR Webpage," 2018. Center for Strategic & International Studies, "Resilience: A Critical Framework for Development," 2014

Annexes:

- Open data
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- **Sources and references**

Open data: Methodology and objectives

Methodology

- **Interviews:** Dalberg conducted ~40 semi-structured interviews with GCE grantees, other open data experts, privacy and AI ethics experts, and other relevant actors. The interviews focused on all four of the learning questions.
- **Quantitative analysis:** Dalberg analyzed quantitative data to understand the evolution of open data and progress to date—disaggregated by region, country, sector, and actor where possible
- **Expert panels:** Dalberg convened an expert panel with experts from open data and adjacent topics (e.g., privacy) to discuss key questions and themes emerging from analysis. Dalberg also attended a State of Open Data editorial meeting.
- **Literature review:** Dalberg consulted over 100 internal and external sources—including academic studies, news articles, and webpages—to synthesize a wide range of perspectives and insights

Objectives

- **This study focused on four learning questions:**
  - How and why did the open data field evolve globally over the past decade? Where is the field today?
  - What role has GCE played in the field? How has GCE contributed to ecosystem, policy, and social impact?
  - What did GCE learn about its approach to investment and influence?
  - What are key opportunities for the field going forward? How should GCE approach each field in the future?
- **This study did not aim to:**
  - Evaluate all GCE open data grants
  - Provide a comprehensive mapping of all the sectors, countries, and actors working on open data
  - Assess the development of other data governance topics (e.g., privacy, AI ethics)
  - Compile and analyze all developments (e.g., open data laws, policies, norms, and technical standards)

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