

Open Data: What is it and how does it help you or your business?

CIPR best practice guide

Executive summary – why you should read this guide:

The UK is a leading exponent of a worldwide movement through which organisations freely share some of their data to improve governance, promote citizen engagement and enable development of new information services, applications and business opportunities.

This guide explains how open data relates to other 'open' initiatives, and identifies how open data can help organisations better connect with their publics. Such data can improve understanding between an organisation and its stakeholders, inform decision-making and help influence attitudes and behaviours. Open data inherently lends itself to transparency and accountability, which can help build trust and improve relationships in business.

Open Data and compliance with the CIPR Code of Conduct

- CIPR Members are required by the Code of Conduct to maintain the highest standards of professional endeavour. The minimum expectation is that you accept work which you are appropriately skilled or qualified to carry out, and maintain, through continuing development, relevant professional skills.
- Competence means that you are aware of and can mitigate the potential risks and ethical challenges presented by open data, through compliance with legal, regulatory, privacy and intellectual property protections, and ensuring data quality and accessibility
- Therefore, you should learn about the potential opportunities and impacts of using open data, and acquire new skills and knowledge so that you can use open data appropriately, or, where necessary, defer to experts in the field.
- If you are in any doubt about your responsibilities under the Code of Conduct, consult the Ethics Homepage or call the Ethics Hotline – 020 7631 6969



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1 What is open data?

“Open data is data that can be freely used, re-used and redistributed by anyone - subject only, at most, to the requirement to attribute and sharealike.¹”

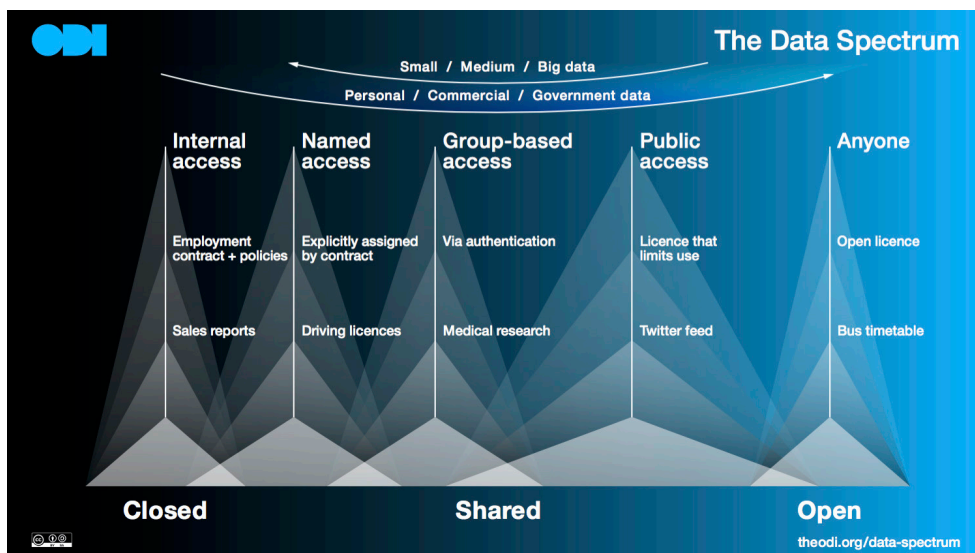
Open data is data that anyone can access, use or share. It is published under a licence expressly permitting its access, reuse, sharing and modification. It is not subject to restrictions, licenses, copyright, patents and charges for access or re-use.

When big companies or governments release such open, non-personal data, they enable small businesses, citizens, campaign groups, medical researchers, software developers and many others to develop resources which can make crucial improvements to their communities.

It is critical to understand that open data does not involve indiscriminate use of all information. It relates to the controlled release of certain types of data that:

- **is not confidential**
- **does not contravene personal data protection provisions**
- **does not compromise commercial relationships or intellectual property rights**
- **does not threaten the security of individuals or organisations**

The image below, from the Open Data Institute, demonstrates the differences between closed, shared and open data.



Open data impacts everybody. It provides individuals with improved access to healthcare services, allows cures for diseases to be discovered more efficiently, promotes understanding of local, regional and national governments, provides social, economic and environmental information, and makes travelling easier

¹ The Open Data Handbook: What is Open Data – <http://opendatahandbook.org/guide/en/what-is-open-data/>.
The Open Data Institute also provides a useful introduction to the subject – <https://theodi.org/what-is-open-data>.

1.1 Why 'open'

Arguments in support of open data include:

- **"Data belong to the human race"** – Examples include genomes, data on organisms, medical science, and environmental data.
- **"Publicly funded work should be public"** – The argument that data gathered by authorities at public expense should be made freely available for reuse by individuals started an open data culture in UK government (see section 1.5 below).
- **"Data is an enabler"** – Data smooths the running of communal human activities and is an important enabler of socio-economic development (health care, education, transport, economic activity etc.)
- **"Openness enhances research value"** – There is a strong and well-established trend in the direction of open publishing and open research as a requirement for funding. For example, some sponsors of research argue they do not get full value unless the resulting data is freely available; the rate of discovery is accelerated by better access to data; and making data open helps combat "data rot" and ensures that scientific research data is preserved over time.



1.2 Why not 'open'

Arguments against open data principles include:

- **Privacy** – access to data should be limited to specific users or to sub-sets of the data (see section 3 below)
- **Remuneration** – collecting, 'cleaning', managing and disseminating data can be labour – and/or cost-intensive processes
- **Cross-funding** – ie, the revenue earned by publishing data permits non-profit organisations to fund other activities (for example, a learned society's publishing supports the society)
- **Cost-recovery** – for example, the UK government allows Ordnance Survey to recover the costs of data collection (OS has released some open datasets, but as a 'trading fund' or government-owned company retains copyright on other data to help cover its costs).
- **Additional processing** – Raw data may need additional processing (analysis, apps etc.) to be useful to others.

Plainly, there is a balance to be struck between openness and personal and commercial requirements of privacy, security and commercial sensitivity. The Open Data Institute has drafted some principles governing how organisations can help people understand how data about them is collected, used and shared.²

² The principles (March 2016) were first shared in an ODI blog post by Ellen Broad, and are now captured in an ODI guide: Openness principles for organisations handling personal data

1.3 Open data examples

Citymapper is an example of what open data can offer in relation to public services. It harnesses open data to deliver an extensive array of real-time travel routes throughout London and other major global cities.

Similar projects have been undertaken in many towns and cities,³ providing citizens with data portals to access a wide variety of local or regional data. The illustration below shows some of the data available on the London Data Store's City Dashboard.



3 Local examples include the London Data Store, Data Mill North (formerly Leeds Data Mill), Open Glasgow, Bath Hacked, and MK:Smart in Milton Keynes.

Central Government departments and agencies are also sharing open data. For example:

- the Land Registry shares information about house purchase prices (used, in turn, by businesses as the property portal Zoopla)
- hospital waiting times and other health service-related open data can be accessed via NHS Choices
- the Police.UK portal provides data on local crime incidents
- the Environment Agency shares various datasets ranging from flood risk data (used by insurance businesses) to aerial photography, and
- Roadworks.org uses open data to inform road users about road works and traffic diversions.

Another example, in the private sector, is The Open Bank Project, an open source application programming interface (API) and App store for banks that empowers financial institutions to securely and rapidly enhance their digital offerings. For banks, it delivers innovation and allows them to provide a better service. Meanwhile, customers benefit from a wide range of banking applications that meet a variety of needs. In this case, open data facilitates more efficient data exchanges and better relationships between banks and their customers.



1.4 Other open initiatives

The Open Data movement shares similar objectives to other 'open' movements including:

- **Open access** – making scholarly publications (and sometimes associated datasets) freely available on the internet⁴
- **Open content** – making resources aimed at a human audience (such as prose, photos, or videos) freely available⁵
- **Open knowledge** – which includes open data
- **Open source (software)** – concerned with the licenses under which computer programs can be distributed (not normally concerned with data).

⁴ CIPR Education and Skills group has advised that open data is already having a significant impact on the education sector. Efforts are underway to educate librarians and research support staff on open access. Academic librarians have front-line responsibility in many institutions for curating most intellectual assets, including their university's researchers' published findings, and advising on open access.

⁵ Examples here would include Wikimedia Commons.



1.5 Open data in the UK

In 2006, the Guardian newspaper's Technology section began a "Free Our Data" campaign, calling for data gathered by authorities at public expense to be made freely available for reuse by individuals. This led eventually, in 2010, to the creation of the Open Government License and the Data.gov.uk site, with organisations including Ordnance Survey and Transport for London contributing some of their data sets for public use.

Since 2010, the UK has become a world leader in open data, with open data supported at the highest levels in the UK government,⁶ and arguing that we should value data as part of our national infrastructure. The UK signed the G8 Open Data Charter in July 2013, and has topped all three editions of the global Open Data Barometer since 2013.

In October 2015, the UK was one of 17 countries to sign and formally adopt the six principles of the International Open Data Charter; this mandates that data released by governments should be:

- Open by default
- Timely and comprehensive
- Accessible and usable
- Comparable and interoperable
- For improved governance and citizen engagement
- For inclusive development and innovation

There is, therefore, a strong push on many UK public sector and other organisations, including private companies,⁷ to share open data, for social purposes and as a driver of economic advantage.⁸

⁷ The Open Bank Project is one example, but many other commercial organisations may also find value in sharing data – for example, UK insurers have been sharing data to combat organised fraud, and pharmaceutical companies are starting to release data on the uses of their drugs, so the cost of drug discovery is going down. The ODI has published a guide: How to Make a Business Case for Open Data.

⁸ In 2015, NESTA and the Open Data Institute ran an open data challenge. A PWC analysis of the value in that programme indicated that for every £1 invested in making data open, £10 of economic value was generated.



2. Why is open data relevant to public relations practice?

Open data can help organisations to connect with their publics. The data can facilitate better understanding between companies and stakeholders, helping to raise awareness, to inform decision-making and to influence attitudes and behaviours.

As professionals often tasked with mediating the interests and ambitions of a wide range of stakeholders (CEOs, stakeholders, editors, journalists, suppliers, etc), PR practitioners should be keen to harness the potential of open data. Open data inherently lends itself to transparency and accountability, which can help build trust and improve relationships in business.

PR professionals should therefore have some understanding of open data. However:

- they should also be aware of the potential risks and ethical challenges presented by open data (section 3)
- they may also need to learn more about the potential opportunities of using open data (section 4), and
- they may need to acquire new skills and knowledge so that they can use open data appropriately (section 5).

3. What are the risks in open data for PR?

- 1. Legal and regulatory data protection issues** – EU laws governing data protection have led to heightened data protection procedures. Prosecutions for failing to meet data protection guidelines could have a devastating reputational impact on businesses. PR professionals will also need to be aware of industry-specific regulator issues - in the medical world, for example, patients must give their consent for information to be used for a specific purpose.
- 2. Intellectual property** – Some individuals and organisations will regard data as their intellectual property and be reluctant for it to be shared. As previously outlined (see the ODI Data Spectrum), such attitudes or policies may be governed by data-sharing approaches that limit access to named users, to members of particular groups or subscribers, or by applying licences and copyright provisions. There may also be a sense of 'ownership' – for example, medical researchers, who have worked hard to gather data may not want to share it, despite the potential community benefits it may offer.
- 3. Data standards** – Releasing data in common and consistent formats, ideally using open standards, is a factor in its usability.
- 4. Data quality** – There needs to be assurances around the provenance and quality of the data published by organisations (users of data will need consistent contextual information about datasets - a description of what's in the data, how it was produced, when it was made open and by whom. This helps them know if the dataset is useful or reliable). Also consider the reliability of some data – data based solely on internet surveys for example, may be unreliable and unfit for purpose (the CIPR's skills guide on using statistics in communication can help here).⁹
- 5. Skills lag** – Journalists, specifically data journalists, are already one step ahead of most PR professionals with regard to open data. If journalists are competent in mining data to find stories and raise issues with organisations, PR professionals need to be prepared.
- 6. Key messaging** – Communicating key messages may become more challenging. Traditionally, a published report would be recognised as a news source but in the new landscape the data itself can become the news source and can be interpreted by journalists and others in different ways.

⁹ The CIPR guide to using statistics in communication can be found at <https://www.cipr.co.uk/content/using-statistics-communications-guidelines>

4. What ethical issues are raised by open data?

- 1. Privacy** – The more we open up vast databases operated by large organisations and government bodies, the greater the threat of data misuse. Open data itself cannot contain any information relating to specific individuals (or which potentially allows individuals to be identified) or commercially sensitive or confidential material. However, some argue the use of multiple sources of data could, if combined, yield information about individuals. Organisations and their PR advisors therefore need to be aware of their legal responsibilities when sharing data. Also there may be regulatory constraints; for example, financial regulators prohibit some financial institutions from sharing information relating to mortgages.
- 2. Confidentiality** – Confidential information should not be disclosed unless specific permission has been granted by the parties concerned; or unless it is in the public interest; or unless required to do so by law.
- 3. Integrity** – PR professionals need to be honest and truthful when using open data, and be aware of the potential impacts of their selection, presentation and use of information. They should have regard for the public interest, and be accurate in their dissemination of information.
- 4. Fair use** – Publication of sometimes vast amounts of data needs to be managed in a sensible manner to ensure data is used fairly. When released in its raw form, data is not open to the public in any meaningful sense. It is only open to a small elite of technical specialists who know how to interpret and use it, as well as to those that can afford to employ them. Furthermore, some forms of data published by organisations may only be useful to large private sector organisations who may plan to repackage and monetise the information, although recent laws have reduced the scope for making commercial income from data.
- 5. Competence** – PR professionals should be aware of the limitations of their professional competence, and should therefore be willing to accept or delegate only that work for which they are suitably skilled and experienced. In dealing with open data, they may need to seek advice from data specialist colleagues (see also section 5 below).

5. What are the opportunities in open data for PR?

1. Extend, augment and improve communications – Open data can help organisations to connect better with their publics and provide a richer context to both current and future communications – it may help explain complex challenges or provide detailed evidence of trends over time. In the UK, where there is a growing push for greater transparency in engagement with both public and private sector organisations, the release of open data relating to an organisation’s activities can be a tangible demonstration of its commitment to openness. It can complement communications with existing stakeholders, and potentially start new stakeholder engagements.

2. Data journalism – As mentioned, the emergence of ‘data journalists’ changes the relationship between journalists and public relations professionals. Open data can be used to provide the evidence for transparent and honest communications. As such, it should be regarded a key skill for all integrated communications professionals:

“With the open data revolution gathering pace reporters must now also be as at home navigating a data store as they are on the Town Hall press benches. Press officers must do likewise. Why? Because the avalanche of public information that will be released has the potential to sweep all before it and drown the unprepared.” – Dan Slee

Industry leaders predict ‘data journalism’ will become a recognised discipline. It will entail the use of apps and other resources to mine for news within published data. That makes it important for PR professionals.

3. Differentiation – Some PR agencies already employ data scientists as full-time members of staff. For example, in 2015, H+K Strategies Head of Data Science Sophie Warnes said:

“Companies like Amazon and Netflix use data science on a daily basis. They have algorithms to determine whether you’re going to want to buy something, or what films and TV shows you might want to watch next. Giving people brilliant recommendations like this will build affinity and customer loyalty. That’s the kind of insight that could only be brought into those companies by data scientists, and as brands wise up to this, it makes sense for PR agencies to pre-empt that need and start offering data science and insights as an additional service for clients.”¹⁰

4. Predictive analytics – As H+K suggest, today we can license data from social network providers, track what is being said in social media right now, and analyse historical data to understand how people reacted to previous campaigns or events. New PR tools will assist with predicting future outcomes, using evidence to automatically make recommendations for different campaign approaches based on the data, spotting patterns and connecting the dots in ways that humans cannot. This data can also be combined with multiple open data sources (potentially involving ‘Big Data’ analytics) giving social, economic, and environmental information about target audiences.

¹⁰ Quoted by Lance Concannon – <http://disruptive-communications.com/will-future-pr-execs-need-to-be-data-scientists/>



5. What are the knowledge or competence issues for PR professionals?

The Open Data Institute defines data literacy as: “the ability to understand data, how you can interact with it and what impact it can have”.

1. Know your data sources – PR practitioners need to know what data exists relating to their clients and organisations and the various stakeholders of those bodies. For example:

- Does the organisation publish open data itself?
- If not, does it have data that could potentially be made open to help achieve communication strategy objectives? (PR professionals will need to know what data organisations are legally allowed to share)
- Are the activities of the organisation detailed in open data published by others?
- Could existing external sources of open data (singly or in combination) be used to help the organisation in its communications?

2. Know how data is published – PR practitioners need to be familiar with the processes and issues around publishing data, just as many journalists and PR professionals are accustomed to the logistics of Freedom of Information (FOI) requests (incidentally, making data open will clearly eliminate the need for FOI requests about that data).

3. Know how to analyse data – PR professionals wanting to achieve communication objectives using open data will need to understand how actionable intelligence can be extracted from sometimes vast datasets, or combinations of datasets. They will need to have some knowledge of data analysis and be confident in interpreting the findings before they begin communicating. Without some data analysis skills, there is a risk that incorrect conclusions may be drawn.

4. Know your data consumers – Websites and free apps that allow users to access and interpret data open it to any member of the public (not just journalists). PR professionals may therefore need to be prepared to engage a broader group of stakeholders.

5. Know the impacts of data – Depending upon the organisation(s) and the type(s) of data concerned, the impacts of open data can be profound. For example:

- **Improving government** – Release of open data by government organisations can help increase transparency, and enhance public services and resource allocation.
- **Empowering citizens** – Access to open data can help citizens become more informed and involved in decisions directly affecting their lives, enabling new forms of social mobilisation.
- **Building business** – Open data can create new opportunities for both existing businesses and start-ups, fostering innovation and promoting economic growth and job creation. (For example, Transport for London’s release of public transport information has been used by 8,500 software developers, with over 500 apps developed, used by 42% of London travellers.)
- **Problem solving** – Open data gives citizens and policymakers new data-driven ways to assess problems, and to develop more targeted interventions. In effect, problems can be shared, and solutions can be developed collaboratively (‘crowd-sourced’).



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The guide was produced
in May 2017.

Chartered Institute of Public Relations
52-53 Russell Square
London WC1B 4HP
+44 (0)20 7631 6900
cipr.co.uk/cpd