Licensing Guidelines for Data Owners
2015, Apps for Europe

Apps for Europe is a support network with a mission to turn data based apps into viable businesses. By implementing Business Lounges at local app contests and hack events across the continent, Apps for Europe is accelerating the relationship between developers and investors. The culmination of these events is an International Business Lounge at Future Everything where the best apps, either invited after a local Business Lounge, or selected from our online competition, will have the opportunity to pitch their idea to win investment for the future development of their product.

Abstract

Guidelines for public sector bodies, data owners or publishers on the evaluation if and what intellectual property rights (and other additional rights) might be attached to a given dataset or document, and on how they can easily choose and apply open standard licenses to their data.
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1. What is Open Data?

Open data (https://okfn.org/opendata/) can be freely used, reused and redistributed by anyone – subject only, at most, to the requirement to attribute and to ensure all derivatives of a work is to be licensed under the same or compatible license.

However, in most countries, an author of a new work is automatically covered by copyright law. This means that this work (and in this case this dataset) cannot be used by others without explicit permission. To effectively give this permission a third party/third parties, an open license can be utilised to disseminate open data.

In order to be considered open data, and for the public to be able to (re)use it, a given dataset must be licensed in an appropriate manner which enables this reuse within the existing legal framework.

2. Why do I need to license my data and declare it open?

Legal tools, like licenses, waivers and right status markers are designed to enable and encourage potential third parties to (re)use your data, communicating the terms under which reuse may take place, and ensuring confidence in potential reusers.

In most countries around the world, copyright of any work (including datasets) automatically belongs to the author. For others to reuse a dataset, they must give explicit permission to do so.

Issues of rights in data are complicated (http://opendefinition.org/guide/data/). The term ‘copyright’ covers a number of rights, and an author may choose to waive some and retain others, via a license that explicitly states the rights that others have to reuse your dataset.
3. What is a license?

Simply speaking, a license is a legal document that allows others to use a dataset under certain conditions. Licenses can be granted to individuals (e.g. a commercial software license or a license for an ebook) or they can be granted to anyone who respects the licensing conditions. The latter are called Public Licenses. In the data context public licenses are legal documents that contain a number of conditions that users of the licensed dataset must respect in order to be allowed to use the licensed dataset.

If a user of a dataset does not respect the licensing conditions, then he or she is infringing the underlying rights (such as copyright and/or database rights) of the party who has licensed the dataset.

While, in theory, you can draft your own license, this is not recommended for a number of reasons. Instead, you should consider using one of the existing standard licenses that are widely used online. The most widely used licenses are offered by Open Data Commons (http://opendatacommons.org) and Creative Commons (http://creativecommons.org). Using standard licenses ensures that the licenses are well crafted, easily understood by potential users and that the licensed data can be combined with other datasets that are licensed under the same terms.

Public Licenses generally apply conditions on two different types of use. First of all, all Public Licenses will specify conditions that must be met when the licensed material is being used (such as attribution must be given to the creator). Some licenses also specify conditions that must be met when the licensed material is modified and then publicly used (such as, all modifications must be made available under the same terms as the licensed material).
4. Why would I license my data openly?

There are many arguments as to why you should open up a dataset you’ve curated; ranging from the desire to increase the accessibility of human knowledge, through to the desire to allow others to reuse your data, and through attribution to raise your own profile. Would you like to see greater recognition for your work? Would you like your work to have the greatest amount of possible impact?

If you are the rights holder of government data, then you should be opening your data as part of democratic responsibility and accountability. If you are an academic, it is likely that there are pressures on you to ensure you gain the widest possible impact from your research. Allowing others to build on your findings and datasets you have potentially accumulated in support of the research is a great way to do this. Using an open data license also provides insights into your source data and methodology.

Cultural institutions are also increasingly discovering the benefits of an open data strategy, for example to maximize their outreach and to help fulfill their public mission to make culture accessible. It also forces them to address issues on copyright and data formats that will lead to a more coherent data policy and a more efficient data-infrastructure, as well as understanding the re-use potential of their online collection.

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**Open Licenses**

Not all public licenses are also open licenses. If you want to publish your data as open data then you will need to publish it under a license that meets the criteria of the open definition. This means that this license must allow that the data can be freely used, reused and redistributed by anyone – subject only, at most, to the requirement to give attribution to the data owner and the requirement to make modifications available under the same licensing conditions.

There are a number of other licensing conditions such as ‘non-commercial use only’ or ‘no derivative works’ that do not conform to the open definition. Data made available under licenses containing these conditions cannot considered to be open, as these conditions discriminate against certain types of users (such as commercial users) or prevent meaningful reuse altogether (because they only allow redistribution of unmodified material).

Using an open license for your datasets will ensure maximum reusability by third parties. It clearly establishes the conditions under which the datasets can be used and reused and it ensures that your material can be combined with datasets made available by thousands of other data owners (for more on license compatibility see the description of the license types below). Using an open license also makes it easier for users to comply with the licensing conditions. Some open licenses also contain machine readable licensing information that allows search engines and other software to take licensing conditions into account.

**What Open Licenses can I use?**

As mentioned above there are currently two widely used families of open licenses that you can use to publish your data: The Open Data Commons licenses and the Creative Commons licenses. (you can find a full overview of all open licenses here: [http://opendefinition.org/licenses/](http://opendefinition.org/licenses/)).

While the Open Data Commons licenses have been specifically designed for use with data, the Creative Commons licenses are designed to work with both data as well as creative works (content), such as writings or artworks. Both license families provide human readable summaries (deeds) next to the full license texts that inform users about the conditions of the license. The Creative Commons licenses also contain a machine readable summary of the licenses.

Creative Commons and Open Data Commons each offer three different licenses that meet the criteria of the open definition. These can be grouped together in three different Categories: Public Domain Dedications, Attribution Licenses and Attribution ShareAlike licenses. Below we summarise the main licensing conditions of these licenses. Please be aware that these summaries do not contain all licensing conditions. You are strongly encouraged to familiarise yourself with the full licenses before licensing your data under any of these licenses.

**Public Domain Dedications**

While they are strictly speaking not licenses, these legal tools are used for the same purpose as open licenses. Since they do not establish any conditions that a user has to meet, these legal tools are also referred to as Public Domain Dedications or Public Domain waivers.

Applying a Public Domain waiver means that you waive all rights (database rights and/or copyright) that you hold in the licensed material so that it effectively becomes part of the Public Domain.

Applying a public domain waiver to your data ensures maximum usability (when working with large datasets from different sources even an attribution requirement can be a substantial burden for users) but it also means that you decide to give up control over what others do with the licensed data.
● The Open Data Commons Public Domain Dedication and Licence (PDDL) allows users to use the licensed material for all purposes, including commercial purposes, without any restrictions.

● The Creative Commons Zero Universal Public Domain Dedication (CC0) allows users to use the licensed material for all purposes, including commercial purposes, without any restrictions.

Compatibility: Making your data available under a Public Domain Dedication ensures that it can be combined with material that has been published under any other license.

**Attribution Licenses**

Attribution licenses are licenses that place a single condition on users of the licensed material. The requirement to attribute the owner or licensor of the licensed material and to clearly communicate the licensing conditions whenever the licensed material is used.

Attribution licenses allow you to maintain some limited control over the use of your data. Any use of your data must be attributed to you or a party identified by you. This gives you credit whenever your data is used by others including in situations where the material is used in modified form.

● The Open Data Commons Attribution License (ODC-BY) allows users to use the licensed material for all purposes, including commercial purposes. The license requires users to attribute any public use of the licensed material, or works produced from the licensed material, in the manner specified in the license. For any use or redistribution of the licensed material, or works produced from it, the user must make clear to others the license of the licensed material and keep intact any notices on the original licensed material.

● The Creative Commons Attribution License (CC-BY) allows users to use the licensed material for all purposes, including commercial purposes. The license requires users to give appropriate credit, provide a link to the license, and indicate if changes were made to the licensed material. Users may do so in any reasonable manner, but not in any way that suggests the licensor endorses the user or the specific use made by the user.

Compatibility: Making your data or content available under an Attribution License ensures that it can be combined with material that has been published under any other license. If data or content from many different datasets or collections licensed under Attribution Licenses are combined this can lead to attribution stacking (impracticable amounts of parties who have to be attributed) that may make combining large numbers of datasets impractical.

**Attribution ShareAlike licenses**

Attribution ShareAlike licenses are the category of open licenses with the most restrictions on users of the licensed material. In addition to the attribution requirements established by attribution licenses (see above) they also require, when published or distributed, that modifications of the original licensed material are licensed under the same conditions as the licensed material. This means that users are required to also license their own contributions to the modified works under the same license.

Attribution ShareAlike ensure that the licensed material can only be modified by users who are willing to apply the same open license to their own contributions. This ensures that modifications of the licensed material remain available as open data or content. Attribution ShareAlike licenses work very well for large collaborative projects such as Wikipedia or Open Street Map. On the other hand the ShareAlike requirement can make it difficult for some who want to use your data for commercial purposes to make use of your data or content.

● The Open Data Commons Open Database License (ODbL) allows users to use the licensed material for all purposes, including commercial purposes. The license requires users to attribute any public use of the licensed material, or works produced from the licensed material, in the manner specified in the license. For any use or redistribution of the licensed material, or works produced from it, the user must make clear to others the
license of the licensed material and keep intact any notices on the original licensed material. Users that publicly use any adapted version of the licensed material, or works produced from an adapted version of the licensed material, must also offer the adapted version of the licensed material under the ODbL.

- The Creative Commons Attribution ShareAlike License (CC-BY-SA) allows users to use the licensed material for all purposes, including commercial purposes. The license requires users to give appropriate credit, provide a link to the license, and indicate if changes were made to the licensed material. Users may do so in any reasonable manner, but not in any way that suggests the licensor endorses the user or the specific use made by the user. If users remix, transform, or build upon the licensed material, they must distribute their contributions under the same license as the original.

Compatibility: Making your data or content available under an Attribution ShareAlike means that it can only be combined with material that is licensed under the exact same license (at the moment there is no compatibility between the ODbL and CC-BY-SA).

5. How do I license my data openly?

It's really simple to license a dataset - although the idea may sound complex. The key steps in this process are:

1. Identify what items you want to open up and assess if the data you want to provide requires permission from rights holders (factual data for instance usually isn’t protected, neither are most databases created by publicly funded institutions). If permission is required, ensure you gain this from the rights holders.
2. Decide which legal tool is most suitable, and apply this clearly.
3. Release and promote it.

A broad overview of the process required:

1) Identify items for release, assess permissions required and ensure you get these permissions.

Just collecting a set of data doesn’t mean that you have all the relevant rights from rights holders, and you need to check that you are able to relicense the data. In some cases you will be the sole rights holder of the data. The data can also be of such a nature that it isn’t subject to protection in the first place. If the data is in the public domain, a license or dedication cannot be applied (this is considered copyfraud), but best practice is to mark it with a Creative Commons Public Domain Mark. However, if the dataset includes photos or pictures that are not yours originally, they are considered the creative content of someone else, and you will need to ensure you have permission from that person.

2) Decide upon license and declare this clearly.

As mentioned earlier, there are several existing licenses - such as the Open Data Commons and Creative Commons licenses - and these are well regarded, recognised as providing clarity about what permissions they grant, understood world-wide and are machine readable. While, in theory, you can draft your own license, this is not recommended for a number of reasons. Instead, you should consider using one of the existing standard licenses that are widely used online, as also explained above.

The machine readability of these licenses is a key benefit, and will help those who use multiple datasets and may wish to automate the process of identification. A custom license or a written legal document won’t allow this.

You should make a choice to waive as many rights as possible to remove obstacles for reuse to the largest extent possible - thereby making your data more attractive for re-use.

Regardless of the license you choose, it should be explicitly declared. It should be readable to - with a hyperlink to the relevant license, specific statements/images written - as well machine readable - for instance, by ensuring the license is included in file metatags and in the embedded metadata.
6. Different areas of data

Data naturally exists across numerous fields, but as mentioned this guide will be focusing on three specific areas: government data, scientific data and cultural data.

Government data

Government data are data that are produced or commissioned by government or government controlled entities and ranges a wide spectrum of data - including for instance statistical data, financial data, geospatial data, infrastructural data, legislative data and much more. When released with an open license, as outlined above, they become the key means to serve many different reuse purposes:

- Transparency: In a well-functioning, democratic society citizens need to know what their government is doing. To do that, they must be able freely to access government data and information and to share that information with other citizens. Transparency isn’t just about access, it is also about sharing and reuse — often, to understand material it needs to be analyzed and visualized and this requires that the material be open so that it can be freely used and reused.
- Releasing social and commercial value: In a digital age, data is a key resource for social and commercial activities. Everything from finding your local post office to building a search engine requires access to data, much of which is created or held by government. By opening up data, government can help drive the creation of innovative business and services that deliver social and commercial value.
- Participatory Governance: Much of the time citizens are only able to engage with their own governance sporadically — maybe just at an election every 4 or 5 years. By opening up data, citizens are enabled to be much more directly informed and involved in decision-making. This is more than transparency: it’s about making a full “read/write” society, not just about knowing what is happening in the process of governance but being able to contribute to it.

What government licenses will I come across?

Open government data are most often released under the Open Data Commons Open Database License (ODbl), although in many cases governments have chosen to customize this license in specific areas to address special considerations from their side - one example is the UK Government License. This makes is difficult to navigate the government data space and in such cases requires reading the specifics of the license to gain complete of its reusability. It is useful, however, to refer to the government license overview on the Open Definition’s list of licenses, that specifies which licenses are open or not.

Where can I find open government data?

A growing number of European governments are making key datasets available in an open fashion. Several useful registries exist including (but not limited to) datacatalogs.org and publicdata.eu of which the latter also gives an overview of many of the national government data portals in the European Union. Additionally, the European Union releases many of its data in the EU open data portal.

For a more broad survey of sources, as submitted by citizens across the world, it is also worth visiting the Global Open Data Index (http://index.okfn.org) that provides a growing overview of the availability of key open government datasets around the world.
**Scientific data**

*What are scientific data?*

Scientific data are the results of scientific processes and research, including experimentation, observations, simulations, models and calculation. This data may include numbers, text, images, pictures, mathematical equations, both audio and video recordings, and any code used in computational process, such that the data is sufficient to repeat the experiment and gain the resulting data. Data are produced as a result of both publically and industry funded research.

As defined by the Panton Principles, open scientific data are data ‘freely available on the public internet permitting any user to download, copy, analyse, reprocess, pass them to software or use them for any other purpose without financial, legal, or, technical barriers other than those inseparable from gaining access to the internet itself.

*Why should scientific data be published openly?*

While there are a number of personal benefits to opening up your scientific data, for instance raising the visibility and impact of your own research, as well as satisfying the requirements of either funders or publishers, these are not the only benefits that may be found.

As the recent Royal Society ‘Science and a public enterprise’ states, the publication of open scientific data ‘permits others to scrutinise them, to replicate experiments and to reuse data to create further understanding’. Science is a process of building upon and reusing the existing body of published scientific knowledge, and this should include the underlying data and code that has led to specific conclusions.

Data that is published openly with a suitable license enables more rapid sharing of data across the world, and greater access to potential reusers. This enables the acceleration of scientific progress, helping academics solve global problems facing the 21st century, such as energy and food security.

People often justify not publishing their research data by saying their data ‘is not very interesting’. However, is impossible for you to decide how others may use your research - either now or in the future. Even datasets that appear niche and obscure may be invaluable to others.

*How to publish my scientific data?*

Research data can be published openly either as an independent object through a repository, as a ‘data paper’ with a small section of textual documentation, or alongside a traditional publication.

Wherever possible, scientific data published should be released under a public domain license, placing the fewest restrictions possible upon reuse. While data released under this license does not legally require attribution, citation still remains the norm within science, and the license does not replace this norm.

There are many hundreds of different data repositories many of which are either institutional or discipline specific. You should first confirm whether you are expected to publish your data in a certain location as a result of funding agreements, or as a result of either departmental or institutional expectations. If this is not the case, you can find registries of repositories can be found in a number of locations including:

- Directory of Open Access Repositories: [http://www.opendoar.org](http://www.opendoar.org)
- Registry of Open Access Repositories: [http://roar.eprints.org](http://roar.eprints.org)
Different repositories are provided by different organisations or businesses, and may offer very different services, including review of the data, or persistent identifiers such as DOIs. Not all repositories publish data openly under a public domain license such as CC0 or an Open Data Commons PDDL license, so it is important to check that the repository you chose does allow this.

You should also consider the likely longevity of the repository. Owners of a business may go bust, and this may result in the removal of datasets. Institutional repositories or subject specific repositories supported by Government funds will likely be maintained and supported for the foreseeable future, with suitable contingency plans and can often offer a safe option. However commercial options are available, such as Figshare or Dryad, and these companies also state they have plans in place in case of any problems.
Culture data

Open culture data and content is high on the digital agenda in Europe.

The majority of GLAMs (galleries, libraries, archives, museums) have yet to implement this new form of transparency and public access in their policies. GLAMs do, however, increasingly realise that open access to data and content helps drive users to their online channels, for instance by providing content for reuse on Wikipedia articles. Hence, open data and content strategies support cultural institutions in the fulfillment of their public mission to provide access to our collective heritage, not just through their own channels, but also beyond. As Waibel and Erway (2009) state: “for [GLAM] content to be truly accessible, it needs to be where the users are, embedded in their daily networked lives.” It also stimulates collaboration in the GLAM world and beyond. It allows the creation of new services and supports creative reuse of material in new productions. As Bill Joy notes in “Joy’s law”: “No matter who you are, most of the smartest people work for someone else” (Lakhani & Panetta, 2007). Thus, encouraging external parties to reuse publicly available sources stimulates innovation in the GLAM sector and results in services of higher quality and diversity, therefore contributing to the public mission of making collections broadly available.

What do we mean by culture data?

First efforts have been made by GLAM-communities to specify guidelines and principles for cultural heritage institutions to publish open data. Institutions and (European) international projects like the Rijksmuseum, The British Library, Europeana and the Digital Public Library of America (DPLA) have successfully been developing open data policies for their own institutions and projects. The Dutch Open Culture Data initiative for example started in September 2011 by defining guidelines in order to make clear to contributors what principles they should at least adhere to and inspired by Open Culture Data, the international OpenGLAM-network also started to discuss the principles of open culture data. Although the principles are not set in stone and are a topic of ongoing discussion in the communities, a few general answers to the question what open culture data and content is, can be identified:

● Collections: although the Dutch Open Culture Data initiative sees open culture data in a very broad way considering all information that is produced by GLAM institutions (Baltussen, 2013), the focus is on the vast collection of works - of images, film, video, books and manuscripts - that these institutions hold, including the digital representations of the works in these collections: “The internet presents cultural heritage institutions with an unprecedented opportunity to engage global audiences and make their collections more discoverable and connected than ever [...]” (Open Knowledge, 2013).
● Reusable: the data and/or content should be published by GLAMs in a way that everyone should be able to consult, use, spread, and reuse the data or content through an open license or by making material available in the public domain. Europeana, the main aggregator and discovery portal for European digitised works, in 2011 adopted their Data Exchange Agreement to release the digital information about the works of art (metadata) under CC0. It is increasingly becoming the norm for projects and institutions to release collection metadata into the public domain using a Creative Commons Zero waiver, following the example provided by Europeana. Followed by policies of the Rijksmuseum, The British Library and The Walters Art Museum, for the representations of the works - or the content itself - it has becomes more and more common practice to keep digital representations of works for which copyright has expired in the public domain by not adding new rights to them and make them available in the public domain by marking them as such (e.g. Public Domain Mark or CC0).
● Statement for reuse: when publishing data and/or content GLAMs should communicate clearly what the wishes and expectations with respect to the reuse of the data are. It has increasingly be the norm for institutions to make an explicit and robust statement about this and publish this on the institution’s website.
● Machine readable formats and documentation: the data should be made available by GLAMs in file formats which are machine-readable and are able to have their data extracted by computer programs. It has increasingly become the norm that the structure
and possible uses of the data are documented in datablogs or webpages, so reusers have a quick guide into the specifications of the data.

- Engagement: GLAM’s should be open in their communication with reusers, engage and service them where the reusers are. For example by working together with reusers at hack events, answers questions via Twitter or give them tools (e.g. Rijksstudio) that make it easier to reuse the data. “The provider is prepared to answer questions about the data from interested parties and respects the efforts that the open data community invests in developing new applications” (Open Culture Data, 2013).

What licenses do other GLAMs use?

When it comes to open culture data, GLAMs make a clear distinction between content and metadata. All digitised cultural objects are defined as content (e.g., scanned paintings, photographed objects, and digital texts). All descriptive information about an object is called metadata (e.g., name of the creator, year of creation, size of the object, description). The accepted open licenses (from less to most restrictive) compliant with the principles stated before are:

**Metadata**

| Creative Commons Public Domain Dedication (CC0) | By using CC0 the GLAM institution explicitly waives any rights there might be on the metadata, including European specific database rights. Database right is a specific European Union sui generis right, which protects databases “that reflect substantial investment.” (Hugenholtz, 2004) | You can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission. |
| Creative Commons Public Domain Dedication (CC0) | In cases where the GLAM institution has (cleared) the rights, the institution explicitly waives any rights there might be on the object. | You can copy, modify, distribute and perform the work, even for commercial purposes, all without asking permission. |
| Creative Commons Attribution (CC-BY) | In cases where the GLAM institution has (cleared) the rights and reserves the right that the object is attributed when reused. | You are free to share (to copy, distribute and transmit the work), remix (to adapt the work to make commercial use of the work) under the condition that you attribute the work in the manner specified by the author or licensor. |
| Creative Commons Attribution-ShareAlike (CC-BY-SA) | In cases where the GLAM institution has (cleared) the rights and reserves the right that the object is attributed when reused and distributed under the same license. | You are free to share (to copy, distribute and transmit the work), remix (to adapt the work to make commercial use of the work) under the condition that you attribute the work in the manner specified by the author or licensor and if you alter, transform, or build upon this work, you distribute the resulting work only under the same or similar license to this one. |

If an object is under copyright and all rights are reserved, the object is not considered as open data as you are not able to reuse it in any way. The remaining four Creative Commons licenses are also considered to be too restrictive to be called open data, because they do not permit commercial reuse and/or making derivative works and are not compliant with open knowledge platforms and repositories like Wikimedia Commons, the media archive of
Wikipedia (Wikimedia Commons, 2013). The CC-BY and CC-BY-SA licenses are the only two licenses compliant with the open content rules of Wikimedia Commons. The most progressive way to publish culture data, in case the object is in the public domain or the GLAM institution has (cleared) the rights of the object, is by donating them to the public domain, using a CC0 waiver.

If you want to be sure or want to check if an object is in the public domain, you can do this via the Public Domain Calculator. Consumers of content in principle have the right to use works which are in the public domain without permission and with no copyright restrictions. In practice however determining if a work has passed into the public domain can often prove difficult for GLAMs. This is especially true when attempting to determine the public domain status of content in multiple jurisdictions. The Public Domain Calculators available on this website answer the question of whether a certain work or other subject matter vested with copyright or neighbouring rights (related rights) has fallen into the public domain in a given European country.
7. Want to find out more?

To know more about Open Data in general the Open Data Handbook is a valuable resource that is useful for anyone who wants to further understand open data. Additionally, a series of other recommended literature includes:


