



## **Position Paper**

# **Open Government Data – free for business and society**

**Deutscher Dachverband für Geoinformation e.V. (DDGI)**

**25<sup>th</sup> June 2013**







## OPEN GOVERNMENT DATA – FREE FOR BUSINESS AND SOCIETY

### CONTENT

I. Open government data – freely available public sector information .....	2
II. Innovation potential for citizens and businesses .....	2
1. Innovation potential and economic development .....	2
2. Development of the Internet and media sectors .....	3
3. Further development of the range of linked open data.....	3
III. Prerequisites for a sustainable open government data strategy .....	4
1. Providing government data in an easy-to-use form.....	4
2. Enabling free access to public sector information through services.....	4
3. Data should be provided free-of-charge .....	4
4. Developing different models for providing data and services.....	5
5. Creating a uniform license model for Germany .....	6
IV. DDGI recommendations .....	7
Appendix A: examples of open government portals .....	9
Appendix B: members of the Open Government Data Expert Commission.....	11





## I. Open government data – freely available public sector information

The discussion concerning the use and reuse of public sector information (PSI) has been conducted for more than ten years now. Various laws have been passed in the meantime regulating access to and exchange of these data. These bills have either been passed at the initiative of the federal government (IFG – Freedom of Information Act) and the regional governments, or have been derived from EU directives (IWG – Reuse of Information Act from the PSI Directive, GeoZG – Geodata Access Act passed by the federal government from the INSPIRE directive, regional geodata access laws and the Environmental Information Act UIG).

In parallel, there have been increasing demands to allow public access to non-personal and non-secret public administration data in the sense of the open data idea free-of-charge, in order to promote transparency and innovations. Open data are understood to be non-personal, non-secret data able to be read by machine. One speaks of Open Government Data (OGD) in this context in the sense of the open data idea.

Open government data do **not** concern the issue of sovereign data as part of administrative procedures, such as excerpts from cadastral maps.

Germany declared the federal government's geodata to be open data in the course of the Revision to the Geodata Access Act (GeoZGÄndG). The Geodata Usage Ordinance (GeoNutzV), which allows commercial and non-commercial use of the data free-of-charge, has also been passed in the meantime.

The Federal Ministry of the Interior reacted to these developments early in 2013 and launched the GovData portal in a public beta-version. The portal aims to create a uniform, central access to government data derived from national, regional and municipal sources. In the sense of open data, the use of open licenses is to be promoted and the range of raw, machine-readable data increased.

## II. Innovation potential for citizens and businesses

The potential of open government data in Germany, which is now to be exploited, is summarised below:

### 1. Innovation potential and economic development

OGD have the potential to promote innovations and economic development. From the viewpoint of a single government office, value exploitation may well end with distribution of the data. Yet from a macro economic viewpoint, businesses, private developers and scientific institutions are decisive players in refining government data. A fundamental characteristic of open government data is that, in principle, any branch of industry can profit from these data. Open government data can therefore be regarded as an infrastructure measure.<sup>1</sup>

New applications, products, services as well as new business models and chains of production can be developed beyond the existing opportunities of use by reprocessing, refining and distributing OGD. Innovative solutions generate economic growth and cre-

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<sup>1</sup> According to Groll (2011), Piker (2012)

ate jobs. The state can promote and encourage the development of innovative solutions by citizens and by private businesses in line with demand because it is the key mover in releasing and providing government data.

### **2. Development of the Internet and media sectors**

OGD can provide new impetus for growth in the Internet and media sectors in Germany.

The US study "FAIR USE IN THE US ECONOMY"<sup>2</sup> dating from 2011 comes to the conclusion that companies which build upon open source and open content generate added value amounting to something like a sixth of US GDP (Gross Domestic Product), in other words around 2.4 billion USD. This is particularly attributable to the absence of access barriers, the high intensity of use, the broad usability and the resulting networking effects of the redistribution and reprocessing of the original content.

Access to free content has been one of the major building blocks for the launch and growth of large American companies in the past ten years, above all in view of the increasing importance of web-based business models.<sup>3</sup>

The European Commission has put forward a strategy for open data in Europe. This is expected to bring growth to the EU economy of 40 thousand million Euro<sup>4</sup> per annum.

### **3. Further Development of the range of linked open data**

Public data and services can be linked together along with further information on the Internet. This firstly underlines the potential of open data. Secondly, a better basis for taking decisions can be delivered to decision-makers from politics, society and business, so that these can master the complex challenges posed by the growing information society. Huge opportunities can be opened up by linking OGD with the rapidly growing pool of data created in or converted into the open linked data format (OLD). As with OGD, the great majority of OLD have a spatial reference. A whole galaxy of new linkage options can be exploited almost automatically, solely through stating spatial references of OGD in the OLD format.

## **III. Prerequisites for a sustainable open government data strategy**

In order to be able to exploit the potential of open government data and their use and reuse in future, DDGI regards the following prerequisites as necessary for a sustainable strategy for open government data:

### **1. Providing government data in an easy-to-use form**

OGD should be made available in a structured form able to be read by machine, so that these can be filtered, searched through and reprocessed by other applications.

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<sup>2</sup> Thomas Rogers & Andrew Szamoszegi, Fair Use in the U.S. Economy: Economic Contribution of Industries Relying on Fair Use (CCIA: 2010) available online at [ccianet.org](http://ccianet.org)

<sup>3</sup> Idem

<sup>4</sup> [http://europa.eu/rapid/press-release\\_IP-11-1524\\_de.htm](http://europa.eu/rapid/press-release_IP-11-1524_de.htm)



## 2. Enabling free access to public sector information through services

In principle, the motto should be "open data first", under which all public sector information is provided as OGD. If this is not the case, a justified exemption regulation should be applied for, which needs to be issued by an existing, central authority at the respective federal level. Otherwise there is the risk that the only data provided will be that for which there is hardly any demand.

Apart from providing raw data or processed data, the additional provision of OGD through services is essential. Standardised services (web services) enable data to be accessed in a structured form and allow their interoperable use by means of different network-based applications and information systems. They are thus the link between the raw data and specific solutions, Apps etc.

Apart from the provision of services to enable access to (raw) geodata, it is also recommendable to publish visualisation services that allow a rapid evaluation and direct use of OGD. The federal government's GovData portal has nevertheless not been able to depict such to date.

The implementation of the INSPIRE directive has created a legal basis to regulate the provision of data and services using specified technical standards (Geodata Access Acts passed by the federal and regional governments). As a rule, the portals for these services already exist at the different administrative levels. In the case of non-personal data, these services should also be released for public access as a matter of principle.

## 3. Data should be provided free-of-charge

As shown in Table 1 below, raw data (initial data and measurements of surveys), processed data (statistics and maps) and standardised services (web map services, web feature service as demanded by INSPIRE) should generally be made available free-of-charge.

	Raw data	Processed data	Standardised services	Special data evaluations
Free	✓	✓	✓	-
Services costs	-	-	-	✓

Table 1: Cost regulation for data and services

A political consensus must exist for providing data and services free-of-charge. The data keepers naturally face a loss of income in the initial phase. As this income is taken into account in the budget consolidation, a settlement needs to be arranged between the specialist departments and the finance department. It is pointed out here that the added tax revenue generated from open data access easily compensates for this loss of

income. The de facto loss of income in the specialist departments averages around 1% of their overall budget<sup>5</sup>, which would be far exceeded by the additional tax revenue to be expected from the exploitation of value.

On the other hand, it is reasonable to expect that a service charge is made for special evaluations which are explicitly prepared at a customer's request.

#### 4. Developing different models for providing data and services

User-friendly services and portals must be created in future to allow free access to public sector information. These should enable citizens, companies, government offices, NGOs (non-governmental organisations) etc. to search for data and use these in a simple manner. The technology to implement such portals already exists. The services could be operated either by the public sector itself, in cooperation with private businesses or – on the proviso of appropriate agreements – by private businesses alone. DDGI believes that the federal government's GovData portal should therefore be regarded as only one option of access.

Apart from simplifying access to OGD, the provision/publication process needs to be arranged in such a way that OGD providers can publicise their data inventories easily and efficiently – ideally in different, widely used output formats and through various types of services. A good basis for this is cloud-based sharing platforms, such as those already available on the market. They likewise ensure a defined service quality.

#### 5. Creating a uniform license model for Germany

Licenses for the use, reuse and redistribution of public sector information are still a major problem. Licenses are nevertheless important because they provide legal certainty both for the provider and for the reusers in creating a business basis. This problem can be solved by introducing licensing conditions for the range of open data. These should ensure that the source credits originally attached (e.g. a common label, logo) can be integrated and thus inherited and passed on in a staggered manner from user to user. Existing approaches could be deployed for this purpose, such as those regulated in Creative Commons (CC) licenses, which already offer a range of different, international license models. A uniform license model for open public sector information should be created on this basis, whereby the examples set by Britain and France could well serve as orientation. The United Kingdom has created an "Open Government Licence"<sup>6</sup> for the use and reuse of public data. By stating the license, users can freely use, publish and distribute public sector information, even for commercial use and for integration in their own products. Only a few conditions need to be observed, such as those to prevent misuse or a falsification of the data. A licence<sup>7</sup> has likewise been prepared in France. This enables free reuse and lays down similar regulations. Both licenses are designed in a very compact, clearly structured way and stipulate unambiguous, simple conditions of reuse. The licensing conditions in these countries have proved to be a considerable simplification for those who reuse and redistribute public sector information.

<sup>5</sup> <http://www.bundeshaushalt-info.de>

<sup>6</sup> <http://www.nationalarchives.gov.uk/doc/open-government-licence/>

<sup>7</sup> [https://www.apiefrance.fr/sections/acces\\_thematique/reutilisation-des-informations-publiques/des-conditions-generales-pour-la-reutilisation-des-informations-publiques/](https://www.apiefrance.fr/sections/acces_thematique/reutilisation-des-informations-publiques/des-conditions-generales-pour-la-reutilisation-des-informations-publiques/)



There is still no holistic license model for OGD in Germany. The Geodata Usage Ordinance (GeoNutzV) is the first legal instrument created by the federal government to determine all reuse of data. However, the "German data license" offered by the federal government's GovData portal is separated into commercial and non-commercial use. The federal government has a further model consisting of eight licenses under geolizenzen.org, whereby there is the obligation to register for this site.

The standard terms of use for OGD should be contained in just one license. This should enable commercial and non-commercial use of the data and services in equal measure.

#### IV. DDGI recommendations

The economic potential of open government data (OGD) is enormous. The European Union predicts income of 40 thousand million Euro per annum, the US government assumes that a sixth of US gross domestic product is attributable to the exploitation of value through open content. Set against this, the loss of income in administrative departmental budgets at all federal levels in Germany would be less than 1% of expenditure. DDGI therefore recommends that the framework conditions to exploit this potential finally be created, so that the opportunities offered by the public data infrastructure can be fully exploited.

In this context, DDGI regards open government data as being all non-personal, non-secret public sector information able to be read by machine. Open government data do **not** concern the issue of sovereign data as part of administrative procedures, such as excerpts from cadastral maps.

Starting from this premise, DDGI has formulated the following recommendations:

- A. The Revision to the Geodata Access Act (GeoZGÄndG) passed by the federal government, including its Usage Ordinance (GeoNutzV), is the first act in Germany to regulate by law how OGD should be handled. Germany declared the federal government's geodata to be open data in the course of the Revision to the Geodata Access Act. This ground-breaking act and its Usage Ordinance should serve as the **basis** for generally **releasing the data and services for use and reuse**.**

  - All data and services should be provided **free-of-charge**.
  - **Uniform conditions** for free use, reuse and distribution of open public sector information as defined in the sense of this document should be introduced, as is already foreseen by the Usage Ordinance accompanying the Revision to the Geodata Access Act.

- B.** In principle, the motto should be "**open data first**", under which all public sector information is provided as OGD. If this is not the case, a justified exemption regulation should be applied for, which needs to be issued by a central authority at the respective federal level.
- C.** Launch **secure, cost-efficient provision platforms** to share OGD, e.g. in an open data cloud (public or private). These should ensure simple, flexible publica-

tion and collaboration processes and a reliable, scalable provision of services and data.

- D. The interregional, standardised "**webatlasde**" map service, a map service comparable to Google Maps and Bing Maps operated by the association of surveying offices of the states of the Federal Republic of Germany (AdV), **should be available immediately throughout Germany free-of-charge as open government data**, as has already happened in Baden-Württemberg (see Appendix A: Maps4BW).
- E. Inclusion of all levels of government: 80 % of the data are collected at local government level! A **manual for the provision of open data** is urgently required for all levels of government. Simple, **standard solutions for open data portals** should be offered.
- F. Communicate and promote these aims and strategies, thereby creating the basis for growth and employment in Germany and Europe: **10% growth per annum** on the data and data services market is possible and should be the target.

DDGI e.V. is prepared to contribute the expertise of its members in discussions on parliamentary bills, in preparing implementation rules and for introducing prototype applications. The expertise from business, administration and research required for this purpose are bundled in the DDGI "Open Government Data" consultancy group, in which DDGI members are represented in the following fields:

- Management and Consultancy Services
- Internet and Open Data
- Information Technology and Geoinformation Systems
- Remote Sensing and Monitoring

The consultancy group is the interface to politics and to the relevant associations on all matters concerning open government data.



## APPENDIX A: EXAMPLES OF OPEN GOVERNMENT PORTALS

### DATA.GOV.UK



Public sector information in the UK is collected and published on the DATA.GOV.UK platform to raise the transparency of work at governmental levels. Over 9,000 data records are already available from central ministries, local authorities and other public sector institutions. These data can be used freely by anyone.

Link to the web site: <http://data.gov.uk/>

### Basemap.at



The basemap.at platform is a government base map for Austria created by the federal states of Austria in cooperation with authorities and partners from the fields of science and business. The map is based on current government geodata. Features of the platform are its free use, free availability, performant use and its compatibility with all base maps in global circulation (e.g. Google Maps, Bing Maps, OSM).

Link to the web site: <http://www.basemap.at/>

### Maps4BW

Maps4BW offers users a web map service (WMS) featuring a uniform presentation of ATKIS-DLM data in high graphic quality. The content is adapted automatically to the scale of the presentation. At the finest degree of detail, the service more or less comprises the content of the ATKIS basis DLM, information on buildings and street names. The geographic area covered is Baden-Württemberg. Maps4BW can be used within the framework of the open data strategy pursued by Baden-Württemberg's Ministry for Rural Space and Consumer Protection under the CC BY 3.0 license. The service is free-of-charge.

Link to the web site:  
<http://www.webatlas.de/ArcGIS/rest/services/Maps4BW/MapServer?f=jsapi>

### **GeoNutzV simplifies the provision of the federal government's geodata**

The Geodata Access Act passed at the end of last year enables the federal administration to provide geodata and geodata services free-of-charge. A novelty is now the ordinance determining the conditions of use for the provision of federal government geodata (GeoNutzV), which entered force in March. GeoNutzV determines the conditions of use for federal government offices which keep geodata in a uniform, binding manner. Free public availability of the federal government's geodata and geodata services is an important step towards open data. The basis for this is the EU's INSPIRE directive.

Link to the web site:

<http://www.gesetze-im-internet.de/geonutzv/index.html>

### **GovData**



Although the data portal for Germany can still not really be regarded as a good-practice solution, it is a reference product overseen by the Federal Ministry of the Interior (BMI): GovData, the data portal for Germany, intends to offer a uniform, central access to government data drawn from national, regional and municipal sources. The aim is to enable data to be called up from one source and thus make them easier to use. In the sense of open data, the intention is to promote the use of open licenses and to increase the range of raw, machine-readable data.

The fact that some of the services can only be offered with restrictions at the present time is admitted in the introduction to the portal: "It is a long path and government needs time to come to terms with this cultural turnabout. For this reason, GovData not only offers open data, but also such with restricted use. We assume that we will make the best progress in this way over the long term."

<https://www.govdata.de/>

### **Geolizenz.org**

The Geolizenz.org application developed by the Commission for Geoinformation Science (GIW) is a special case. The aim was to provide geodata simply in a standardised manner using one-click licensing. The result is eight different licenses able to be assigned to one geodata product on offer. Users can obtain the data under the respective license conditions via an online platform. In contrast to what is foreseen by GeoNutzV or implemented in GovData, use of this portal and therefore the licences carries the obligation of registration.

Link to the web site: <http://www.geolizenz.org/>



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