Open Data – unbounded

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Summary

The article and the presentation deal with the topic „Open Data" in Austria and beyond.

Open Data is explained and best practice examples are taken from the City of Vienna, the Open Data pioneer in the German speaking countries. The objectives of the Open Data initiative are transparency, cooperation, participation, the promotion of the economy by means of Open Data as well as a paradigm shift towards an open administration that makes full use of the knowledge accumulated by the two million minds that make up this city.

The Open Data - landscape in Austria and the cooperation in the area D-A-CH-LI (Germany-Austria Switzerland-Liechtenstein) and the connection to the European Data Portal are described.

What is Open Data?
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Open Data are non-personal, not safety-critical and not infrastructure-critical data resources that are made accessible in the interest of the general public without any restriction for free usage, for dissemination and for re-use. That means: NO costs … also for commercial usage!

Open *Government* Data (OGD) are those open data resources held by public bodies, and made freely available for re-use for any purpose. The licence will specify the terms of use. Open Government Data are published voluntarily as a „bottom up movement".

Open Government Data are often also referred to as **Public Sector Information** (PSI):
Public sector information is information held by the public sector. The PSI Directive[2] on the re-use of public sector information provides a common legal framework for a European market for government-held data. It is built around the key pillars of the internal market: free flow of data, transparency and fair competition. It is important to note that not all of the public sector information is Open Data.

Eight Open Government Data principles were already formulated in late 2007[3] by Open Government advocates in the United States, enhanced by the Sunlight Foundation to 10 principles[4].

Whenever a public body publishes data as Open Data, the 10 principles should be adhered to as far as possible. If the compliance of individual principles is not possible, this should be justified internally and externally documented.

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[2] PSI Directive: http://ec.europa.eu/digital-agenda/en/european-legislation-reuse-public-sector-information
[3] OpenGovData.org, 2007. 8 Principles of Open Government Data:
http://www.opengovdata.org/home/8principles
[4] Sunlight Foundation: http://sunlightfoundation.com/policy/documents/ten-open-data-principles/

1. **Completeness**: the published datasets are as complete as possible; they form the entire extent of what is documented on a specific topic. Metadata describing the raw data are also included along with formulas and explanations to calculate the data. This will allow users to understand the adjustments of available information. *Before publication data protection restrictions, security restrictions or access restrictions have to be checked. Personal data are basically exempt from the publication*.

2. **Primary source**: The data is collected at its origin and is published with the finest possible granularity, not in aggregated or otherwise modified formats.

3. **Current provision**: the published records are available to the public within an adequate period as topically as possible. They are published as soon as they are collected and compiled. Data available in real time are retrievable through a programming interface (API).

4. **Easy access**: the published datasets are very easily accessible without barriers. Physical barriers must be avoided, such as technical barriers.

5. **Machine-readability**: data are stored in established file formats that are easily machine-readable so that an automated, structured processing is possible. The use of different file formats is recommended. Files should be accompanied by a documentation which refers to the format and on how it can be used in respect to the data.

6. **Discrimination**: Any person may at any time access the data without identifying him-/herself or having to give a justification for her actions.

7. **Use of open standards**: The formats in which the data are published are as open as possible, over which no entity has exclusive control. Here, the administration orientates on standards that were developed by bodies such as the World Wide Web Consortium (W3C) and at conventions of the Austrian BLSG.

8. **Licensing**: The datasets are published under the license Creative Commons Attribution 3.0 Austria (AT CC BY 3.0)[5] . The administrative unit must clarify any copyright, patent and trademark questions in advance.

9. **Documentation** (durability): Information published by the administration is fully documented with metadata, accessible for a long time. Once online, information is provided with an adequate version control and is permanently archived.

10. **Costs of utilization**: By specifying the use of the license: Creative Commons Attribution 3.0 Austria (CC BY 3.0) the user charges are currently not foreseen.

Why Open Data?
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The key opportunities to open up public data are:

⛨ **Transparency**
An open society needs an open and transparent government, because transparency creates and grants trust. Transparent data and accountable decision-making processes are key for voluntary participation in joint value creation processes and for cooperation.

⛨ **Unlocking the potential of public sector information!**
Data are THE resource of the 21st century – we live in a data-driven era and digitalization in all areas of life enables the **re-usage** of these data. Open Data is basis for Open Innovation. The key opportunity for public bodies is the use of the innovative power of society and

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[5] http://creativecommons.org/licenses/by/3.0/at/deed.de

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economy. Applications based on Open Data can lead to better and more efficient services. Positive societal effects are expected due to indirect profitability through new business models and thus higher tax revenue. The creation of new apps and visualization with Open Data strengthens the business location and leads to commercial exploitation

Open Government Data Vienna
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⚜ Vienna is Open Data pioneer in the German speaking countries: 2011 with data.wien.gv.at the 1. OGD portal in german-speaking area was launched. In the meantime – after 5 years - Vienna has an open data culture

⚜ Vienna maintains the open exchange with the Community - economy, start-ups, research, interested people. For the City of Vienna Open Data is the basis für **Open Innovation**. More than 190(!) apps and visualizations have been created with OGD Vienna!

Targets of Open Government Data Vienna
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Here are the target groups and goals of our initiative:

⚜ **Citizens** : There is more transparency, also in the decision making-processes.

⚜ More scope for **businesses** – we promote the business location Vienna.
The companies (Start-Ups!) could develop new apps and create new business with apps.

⚜ **Research**: We encourage innovation and creativity.

⚜ **Administration** itself saves time and ressources due to the easier cooperations and easier data usage. There are consistent processes and no media disruptions. Data governance is one of the key factors and opening of data is self-evident. We support the data responsible departments in worry-free data publishing and so they proactively fulfill the legal obligations. (PSI Directive[6], Informationsweiterverwendungsgesetz (IWG)[7], Wiener Informationsweiterverwendungsgesetz (WIWG)[8]; Informationsfreiheitsgesetz (IFG)[9], ...)

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[6] PSI Directive: http://ec.europa.eu/digital-agenda/en/european-legislation-reuse-public-sector-information
[7] IWG:
https://www.ris.bka.gv.at/GeltendeFassung.wxe?Abfrage=Bundesnormen&Gesetzesnummer=20004375
[8] WIWG: https://www.wien.gv.at/recht/landesrecht-wien/rechtsvorschriften/html/i0500000.htm
[9] IFG: https://www.parlament.gv.at/PAKT/VHG/XXV/AUA/AUA_00001/

Benefit of Open Data

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🛡 The ROI of Open Data is more than €

The precise utility and value of Open Government Data for policy and administration can be quantified only vaguely.

The Danube University Krems evaluated the open data initiative of the City of Vienna in 2012. At time of the study 38 applications with OGD Vienna were available. The application developers were interviewed for the creation effort of applications, which on average spent 68.6 hours per application. [10]

At 38 applications that access OGD Vienna, the opportunity expenses correspond to more than € 208.000 development costs that could be saved. In September 216 the 198 apps listed in data.wien.gv.at/apps are worth more than € 1,085.000.

Open Government Implementation Model
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The KDZ - Centre for Public Administration Research was contracted by the Chief Executive Office of Vienna to contribute to the Open Government strategy of the City of Vienna. In order to bring the insights and propositions gained to the attention of a wider public, the Open Government Implementation Model was published.[11] It was reused by authorities in the country and abroad as foundation for their open-government initiatives and has already been downloaded over 8,000 times all over Europe. The Implementation Model The version 2.0 was published for public consultation in a revised version 2.5 and was published in a version 3.0 in mid-2016.

Since there are now countless publications on the topic of Open Government in German and English, the question of "How should public administration agencies proceed in the implementation of Open Government?" illustrates the focus of the Open Government Implementation Model. Therefore, the aim is to develop practical recommendations with regard to the approach for the government and administration.
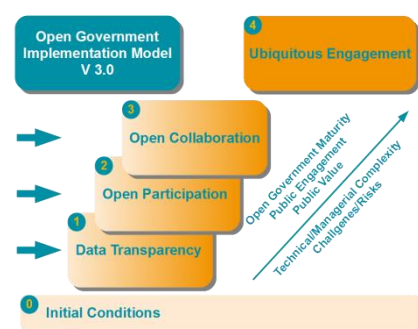
The Implementation Model is made up of the following stages:

🛡 **Stage 0 – Initial State and Frame Conditions**: Open government still limited or non-existent and no initiatives planned. But the frame conditions can already be shaped.

🛡 **Stage 1 – Data Transparency:** Opens access to administrative data, in particular in terms of Open Government Data (OGD).

🛡 **Stage 2 – Open Participation:** Opens politics and administration to the ideas and knowledge of external stakeholders[12.]

🛡 **Stage 3 – Open Collaboration:** Improves cooperation between politics and administration with external stakeholders. Enables the use of collaboration tools for the achievement of specific outputs. In this context, "co-production" can differ in intensity, with the joint performance of tasks down to task delegation and voluntary activities also being included.

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[10] https://open.wien.gv.at/site/wp-content/blogs.dir/5/files/2013/06/od-evaluation-2012.pdf
[11] http://kdz.eu/de/node/2651

⛨ **Stage 4 – Ubiquitous engagement**: The continuous participation of external stakeholders is continually taken into account in the stages of the political cycle. "Co-designing", "co-commissioning", "co-delivering", and "co-assessing" generate public value.

Open Government Vienna - Organizational Structure
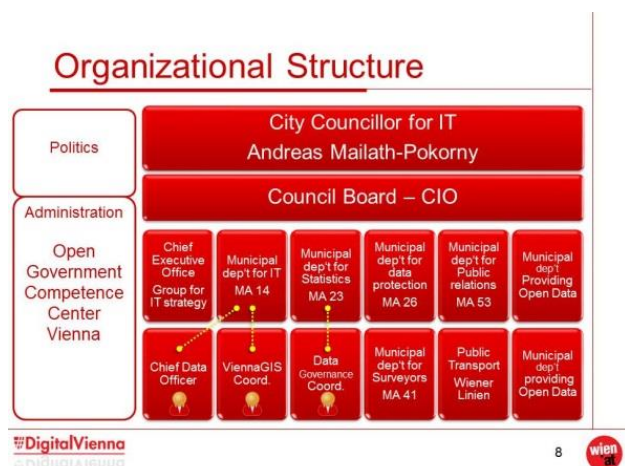
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In 2015 the coalition between the Vienna social democrats and the green party signed an agreement to force the open government initiative in Vienna. This political backing is very important and a success factor for a well-developed open government initiative. So the administration can refer to the government, if there are troubles at the implementation.

In order to implement Open Government, it is first necessary to determine responsibilities. Given limited public sector resources, it is not recommended to create new departments. Moreover, an interdisciplinary approach is required. It is therefore recommended to establish a "virtual organisational unit": the Open Government Competence Centre. In particular, persons from the following organizational units should come into consideration: Administrative Management, Innovation and Modernisation, Information- and Communications Technology (ICT) , E-Government, Public Relations, Social Media, Legal, Data Protection. Perhaps also data-intensive specialist departments, such as Geodata Infrastructure (GIS), Environment, Statistics, etc.

Team play between politics and administration

It is essential to provide the political bodies with timely information on planned events. The regular exchange of information between politically accountable players (Municipal Councillor, City Councillor, and Mayor) and the OGD Competence Centre throughout the term of the initiative is likewise of the essence.

The figure shows an example of the Open Government Structure in the City of Vienna.It's necessary to coordinate the political line with the implementation, therefore there is close contact between the City Councillor and the CIO. On demand a Council board is convened.

Open Government Portal Vienna - open.wien.gv.at

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The Open Government Portal of he City of Vienna includes the

⛨ **Open Data Portal** data.wien.gv.at with open data and documents,

⛨ information and news,

⛨ an **overview of participation projects** in Vienna and

⛨ the **showroom of all apps and visualizations** that have been created with the Open Data Vienna.

⛨ Completely new is the possibility of a **transparent collection of ideas** for new data available, We ask: „Which data do you need for your work, for apps and visualizations or in which data

are you interested? Describe the dataset, we do the recherche." Comments and votings of other people help to evaluate the demand. We keep informed of the status of the recherche. After completion, the result will be published.

Apps and Visualizations
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More than **190 Apps and Visualizations** from Open Data of Vienna and more than 300 from Open Data of Austria have been created!
Here are some examples, to show the various and innovative ideas:

⛊ Toilet Map Vienna

In the same night after the press conference and the first publication of open data a young man developed this app. It shows you the way and gives you information about opening time and if it is suitable for disabled people. Especially for families with children or sick persons the app is very useful.

⛊ WAVE

Wave is an innovative mobility assistant for intermodal traffic. You can use it with a speech interface and it understands your wishes acoustically. The support is an intermodal route through Vienna with different transportation means.

⛊ Our favorite in visualization is "**Data Honeycombs**"[13] from Thomas Tursics. It is also available for other cities, like Amsterdam, Berlin, Cologne and Aachen.

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[13] http://daten-waben.tursics.de/?city=vienna&page=cards

Open Data in Austria

<slides 20-23>

⚜ 2 "sisters": **Open Government Data Portal & Open Data Portal**

Austria has worldwide the first Open Data Portal for non-government data
(NGOs, business, private, etc.)

⚜ **UN Public Service Award**

The Austrian Open Data activities won the Nations Public Service
Award 2014, because of the outreaching cooperation and community
involvement.

⚜ **Cooperation OGD Austria**

„Cooperation OGD Austria" was founded by the Federal Chancellery, the cities of Vienna, Linz,
Salzburg and Graz on the 13th July 2011. Federal Government, States, cities and towns in
cooperation with the communities, science, culture and the economy are willing to set the basic
agreements for the future of Open Government Data in Austria. By agreeing on common standards
an effective framework for the benefit of all stakeholders should be created. The Cooperation
represents the interests of ministries, states, cities and communities – to unite all actors who
operate, plan or create an open government data platform. The Federal Chancellery is the link to
Competence Center Internet Society (KIG) and the Platform Digital Austria.
Reference documents of sub-working groups of the Cooperation OGD Austria get published as
agreements and drafts at the common reference server.

⚜ **Low-threshold Conditions**

In Austria we have committed to use Creative Commons
Attribution 3.0 Austria (AT CC BY 3.0) for Open Data,
because it is internationally standardized.
CC BY means a license that allows re-distribution and re-
use of a licensed work on the condition that the creator is
appropriately credited. The developers have only to
mention the name of the data owner. They have to
mention the data source. This means free usage, also for
commercial usage. This leads to innovations by start-up companies, economic growth through
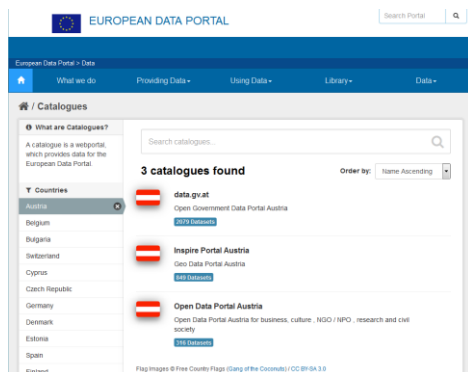innovation and additional tax revenues through economic growth.

Open Data in Austria and beyond
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The Austrian data portal data.gv.at hosts the metadata of all Austrian local catalogues.
The European Data Portal harvests the metadata of data.gv.at, opendataportal.at and the national INSPIRE portal inspire.gv.at.

- **We offer** metadata in 12 languages (for now), we visualise, we offer quality checks for datasets
- **We train** a suite of learning experiences in the field of Open Data from publishing to the re-using Open Data
- **We showcase** Open Data events, Open Data news, Open Data best practices, Open Data reports, etc
- **We collect** by inviting stakeholders to share their stories, their feedback, their portals
- **We convene** meetings, webinars, events to discuss open data best practices, challenges and next steps
- **We share** our source code and promote open source and re-use of components and standards

Cooperation OGD D-A-CH-LI

- The collaboration between Germany – Austria – Switzerland- and Liechtenstein (D-A-CH-LI) is a cooperation about best practices and exchange of experiences in technical issues (e.g. metadata) and in Open Data culture with assistance of research & science
- Our Vision is a Data-Ecosystem in the area D-A-CH-LI
- Since 2012 we organize OGD D-A-CH-LI – conferences once a year and meet several times a year in working groups.

Lessons Learned for everyone who wants to open up data
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Here is the summary of lessons learned from the Open Government Initiative of the City of Vienna –
The Hint: Use the Open Government Implementation Model!

More Open Data and Tools

<slide 29>
- England https://data.gov.uk/
- USA https://www.data.gov/
- Germany https://www.govdata.de/
- Switzerland https://opendata.swiss/de/
- World Bank
  http://data.worldbank.org/
  http://beta.data.worldbank.org/
  http://blogs.worldbank.org/opendata/untangling-syrian-refugee-crisis-open-data
- Wikidata https://m.wikidata.org/wiki/Wikidata:Data_access/de
- Dbpedia http://wiki.dbpedia.org/
- github https://github.com/caesar0301/awesome-public-datasets
- Microsoft Azure Marketplace https://datamarket.azure.com/browse/data
- http://opendata.stackexchange.com/questions/6861/data-on-refugee-migration
- http://rawgit.com/OKFNat/data/master/refugees_unhcr/visualisierung.html
- Mapsmarker https://www.mapsmarker.com/docs/api-tutorials/how-to-display-markers-in-wikitudes-augmented-reality-browser/
- Open Data Maps http://sindre.at/praesentation/open-data-maps/#/

Sources and Links

- Open Government Portal Vienna https://www.data.wien.gv.at/
- Open Government Data Portal Austria https://data.gv.at/
- Open Data Portal Österreich https://www.opendataportal.at/
- Cooperation OGD Austria https://www.data.gv.at/infos/cooperation-ogd-austria/
- Cooperation OGD D-A-CH-LI https://www.data.gv.at/infos/ogd-d-a-ch-li/
- Open Government Implementation Model http://kdz.eu/de/node/2651
- Open Data Inside: http://www.opendatainside.com/
- European Data Portal: http://www.europeandataportal.eu