e-Government - Are Public Data really Open and Clear to Citizens?

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Government information (public data) and Open government

For better realizing the cornerstones of open government, which are transparency, participation and collaboration, public departments and agencies are required to publish government information online, to improve the quality of government information, to create and institutionalize a culture of Open government and finally to create an enabling policy framework for Open Government.

Overview

Relevant concepts: public data and citizens
Tracking progress
“Availability” of public data
“Open” data (format)
“Clear” data (content)
   Knowledge representation
   Integration/global information
Search and discovery
Conclusions and prospects
**Relevant concepts**

**Public Data:** is the objective, factual, non-personal data on which public services run and are assessed, and on which policy decisions are based, or which is collected or generated in the course of public service delivery.

*(The Public Sector Transparency Board – Working definition of public data)*

**Citizens:** users of eGovernment services are all citizens conceived as particularly varied: every single occupant of a country, people with minimal computing skills, with all possible background at different level, people unable to speak the main language of the country, people with disability.
Tracking progress

**Presumption of close data:** Government data no publicly available - Available only on specific request under legislation on the right to access

ICTs "flywheel effect" - (e-Gov) - cultural change

**Presumption of openness data:** All Government information published

Transparency as an issue of the public debate (e.g., transparency in the EU agenda)
Right to access as pertaining to all citizens independently from a specific interest
Openness in the EU context: strengthening citizen rights

⇒ Treaty on European Union (1992) - Declaration on the right of access to information: Transparency of the decision-making process strengthens the democratic nature of the institutions and the public's confidence in the administration


⇒ Art. 1 TEU: An ever closer union among the peoples of Europe, in which decisions are taken as openly as possible

⇒ Art. 10 TEU: Every citizen shall have the right to participate in the democratic life of the Union. Decisions shall be taken as openly and as closely as possible to the citizen

⇒ Art. 15 TFEU (ex Article 255 TEC): In order to promote good governance and ensure the participation of civil society, the Union’s institutions, bodies, offices and agencies shall conduct their work as openly as possible. - Right of access to documents

⇒ Regulation EC no 1049/2001: “... to ensure the widest possible access to documents”
Public data and citizens: the issue at stake

Citizens need **knowledge** not only **data**

*Example:*
Citizens requesting in the legal domain needs
- to have not only an answer,
  *but also*
- a reassurance that the answer is complete and correct, that no other relevant information has been missed out, and that information held implicitly in the information source has been rendered explicit*

**Knowledge** can derive from open and clear **data**

Availability of public data is a fundamental step towards the realization of open government (participation, accountability, collaboration)

**BUT**

it implies data available on the Web often characterized by:
- deriving from heterogeneous sources
- created by different actors
- represented in different formats
- vary in quality and completeness

Is this kind of data really Open and Clear to Citizens?
Open (format)

Open format is a format that is platform independent, machine readable, and made available to the public without restrictions that would impede the re-use of that information*

Essential principles of open data:
- Primary (*collected at the source – finest possible granularity*)
- Timely (*as quickly as necessary to preserve the value of data*)
- Machine-processable (*allowing automated process of data*)
- Non-discriminatory (*available to anyone without registration*)
- Non- proprietary – open standard
- License free (*no subject to any copyright*)

Openness of data encourages a developer community and third party organizations to use that data and build their own applications using it (re-use of open government data)

Example (1) data.gov.uk

The Government is releasing public data to help people understand how government works and how policies are made. Some of this data is already available, but data.gov.uk brings it together in one searchable website.

Making this data easily available means it will be easier for people to make decisions and suggestions about government policies based on detailed information. From data.gov.uk, raw data driving government forward can be accessed.

This can then be used by people to build useful services.

(http://data.gov.uk/about)
Example (2) data.gov (US)

The purpose of Data.gov is to increase public access to high value, machine readable datasets generated by the Executive Branch of the Federal Government. As a priority Open Government Initiative Data.gov increases the ability of the public to easily find, download, and use datasets that are generated and held by the Federal Government. Data.gov provides descriptions of the Federal datasets (metadata), information about how to access the datasets, and tools that leverage government datasets.

(http://www.data.gov/about/)
Example (3) data.gov.au

Data.gov.au provides an easy way to find, access and reuse public datasets from the Australian Government and state and territory governments.

It encourages all users to improve government information by using it to develop tools and applications which benefit all Australians.

(http://data.gov.au/)
# Open data sites

**International data.gov websites**
- United States of America - [http://www.data.gov/statedatesites](http://www.data.gov/statedatesites)
- Canada -
  - Canadian Parliament: [http://openparliament.ca](http://openparliament.ca)
  - City of Edmonton: [http://data.edmonton.ca/](http://data.edmonton.ca/)
  - City of Mississauga: [http://www.mississauga.ca/data](http://www.mississauga.ca/data)
  - City of Nanaimo: [http://www.nanaimo.ca/datafeeds](http://www.nanaimo.ca/datafeeds)
  - City of Ottawa: [http://www.ottawa.ca/online_services/opendata/index_en.html](http://www.ottawa.ca/online_services/opendata/index_en.html)
  - City of Toronto: [http://www.toronto.ca/opendata](http://www.toronto.ca/opendata)
  - City of Vancouver: [http://data.vancouver.ca/](http://data.vancouver.ca/)
- Denmark - [http://digitaliser.dk/resource/432461](http://digitaliser.dk/resource/432461)
- Finland - [http://www.suomi.fi/suomifin/yhteisot_palvelut/avoin_date](http://www.suomi.fi/suomifin/yhteisot_palvelut/avoin_date)
- Germany - [http://www.portalu.de/ingrid-portal/portal/default-pago.psm1](http://www.portalu.de/ingrid-portal/portal/default-pago.psm1)
- Ireland - [http://www.statcentral.ie/](http://www.statcentral.ie/)
- Italy - [http://www.dat.piemonte.it/](http://www.dat.piemonte.it/)
- New Zealand - [http://www.data.govt.nz](http://www.data.govt.nz)
- Norway - [http://data.norge.no](http://data.norge.no)
- Spain -
  - Proyecta Aporta: [http://www.aporta.es/webguest/buscaador_de_catalogos](http://www.aporta.es/webguest/buscaador_de_catalogos)
- United Kingdom - [http://data.gov.uk](http://data.gov.uk)

**Source:** data.gov
Defining clearness

Adjective

- **S:** (adj) clear (readily apparent to the mind) "a clear and present danger"; "a clear explanation"; "a clear case of murder"; "a clear indication that she was angry"; "gave us a clear idea of human nature"
- **S:** (adj) clean, clear, light, unclouded (of sound or color) free from anything that dulls or dims) "efforts to obtain a clean bass in orchestral recordings"; "clear laughter like a waterfall"; "clear reds and blues"; "a light lilting voice like a silver bell"
- **S:** (adj) clear, unencumbered (especially of a title) free from any encumbrance or limitation that presents a question of fact or law) "I have clear title to this property"
- **S:** (adj) clear, clean-cut, clear-cut (clear and distinct to the senses; easily perceptible) "as clear as a whistle"; "clear footprints in the snow"; "the letter brought back a clear image of his grandfather"; "a spire clean-cut against the sky"; "a clear-cut pattern"
- **S:** (adj) well-defined, clear (accurately stated or described) "a set of well-defined values"
- **S:** (adj) clear (free from clouds or mist or haze) "on a clear day"
- **S:** (adj) clean, clear (free of restrictions or qualifications) "a clean bill of health"; "a clear winner"
- **S:** (adj) clear (free from flaw or blemish or impurity) "a clear perfect diamond"; "the clear complexion of a healthy young woman"
- **S:** (adj) clear (clear of charges or deductions) "a clear profit"
- **S:** (adj) clear, decipherable, readable (easily deciphered)
- **S:** (adj) absolved, clear, cleared, exculpated, exonereated, vindicated (froed from any question of guilt) "is absolved from all blame"; "was now clear of the charge of cowardice"; "his official honor is vindicated"
- **S:** (adj) clear, percipient (characterized by ease and quickness in perceiving) "clear mind"; "a percipient author"

Adverb

- **S:** (adv) clear, all the way (completely) "read the book clear to the end"; "slept clear through the night"; "there were open fields clear to the horizon"
- **S:** (adv) clearly, clear (in an easily perceptible manner) "could be seen clearly under the microscope"; "She cried loud and clear"

WordNet home page
Clear relates to:

- Knowledge representation
- Integration/global information
- Search and discovery
Knowledge representation

Governments need to:
- Acquire information about themselves
- Describe themselves to citizens and stakeholders

Example:
Ontological representation based upon life event, an entity that links together administrative services, procedures and requirements.
See Access-eGov project adopting life events to model governemnt process from the point of view of the users which can browse the site by using life events.
The information resources in e-government contexts are a wide set, (including data, documents, files, services) coming from different sources

⇒ **Need for semantic interoperability (which enables organisations to process information from external sources in a meaningful manner. It ensures that the precise meaning of exchanged information is understood and preserved throughout exchanges between parties*)

Different level of specificity, different types of data to be exchanged and linked

⇒ **Need for semantic markup to allowing machine understanding of data**

Governments are complex entities; each entity has its own information and descriptive terminologies

⇒ **Need for integration operating with different terminologies**

* European Interoperability framework, 2010
Data are stored in many databases in different departments and locations.
To realize the potential gains from this data it is necessary to bring it together from across government and elsewhere on the Web to achieve synergy and maximize value.

The **enhancement of advanced searching possibilities and facilities** implies the building up of specific semantic tools such as thesauri and ontologies allowing to structure contents and to retrieve them according to their implicit or explicit meaning. This means that the user can access the data starting a search from a significant word or concept without having a specific background.
The *file rouge* is the Semantic Web approach: implementation of semantic resources (data+metadata)

**Controlled structured vocabularies** (now called KOS: *knowledge organization systems*): hierarchies of *terms* for organizing knowledge in a given domain supported by a community of practice and a set of standards

**Lexical or lightweight ontologies**: nets of *concepts* structured according to lexical, taxonomic and conceptual relations

**Formal ontologies**: *classes* of entities described by formal (meta) properties and attributes, expressing a meaning agreed among the members of a community of interest
Conclusions

Whilst the realisation of the openness of data is almost realized, the clearness is not yet completed as further improvements are needed.
Prospects

Upcoming Trends to be considered:

⇒ **Linked Data initiative** offers a vision in which data are published on the Web oriented to interoperability and reusability, allowing systems to incorporate and understand data.
Release data and then re-publish it in linked data form (*One of the Public Data Principles by Public Sector Transparency Board - UK*)

⇒ **The Linked Data implementation of the Semantic Web** concept represents a complement of the Governments interest to put data freely on-line, where qualified relationships between them are established and data can be better accessed and understood. This contributes to citizen awareness of government activities as well as to Government transparency and accountability.

⇒ Considering **semantics** as the cornerstone of future applications