

The paradigm of Open Data and Open Government

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Abstract

The necessary and expected transition from the information society to the knowledge society within the national context; requires an informed citizenry whose principal input are open data provided by the Mexican government with the premise that these are national property and therefore the property of each of the Mexican citizens, who can take advantage of this information to the benefit of society as a whole, while respecting the privacy rights of citizens information as the main pillar of the information a candidate to open.

10 Introduction

The necessary and expected transition from the information society to the knowledge society within the national context; requires an informed citizenry whose principal input are open data provided by the Mexican government with the premise that these are national property and therefore the property of each of the Mexican citizens, who can take advantage of this information to the benefit of society as a whole, while respecting the privacy rights of citizens information as the main pillar of the information a candidate to open.

The implementation of the strategy of open government and open data in an international context has shown many tangible benefits for citizens, sayogo [2] mentioned as part of the potential benefits, is including improved the social, political and economic values of the country where it was implemented.

In the world, many countries have begun to open government initiatives, driven by politicians in those countries, as in the case of President Obama, who in 2009, said that "openness will strengthen our democracy and promote efficiency and effectiveness in government." Countries committed to open government and open data believe that openness may, among other things, promote transparency, fight corruption, and give civic energy and commitment. Hillary Clinton, during his keynote speech at the society of open Government in Brazil in 2012, even went so far as to claim that the data open a new division between countries according to their level of openness is created, differentiating between open closed nations with nations. [2]

The attention of governments to open data is not only stimulated by the strategies nations spearheading these initiatives, but also for the development of technologies that allow the creation of new services based on open data [9].

However, within a national context, the implementation of a strategy of open government and open data does not guarantee that the strategy, implementation, and potential benefits mentioned about open government are to be replicated or will have the return benefits exactly as expected; a strategy "by the book" does not necessarily bring the potential benefits without proper implementation strategy. National implementation of open government within the Mexican context must have national contextual considerations such as: Laws, Rules, Culture, Economy, Infrastructure and Technology and also should be considered as a national and comprehensive government strategy in its 3 levels both Federal, and state, municipal and likewise for their 3 power levels.

In the following article will discuss briefly about the general concepts of open data and open government, later to be able to contextualize it within the current situation in Mexico, to subsequently refer to the minimum basic considerations that should to care about a national strategy of comprehensive open government in Mexico.

10.1 Background

Data

Machado makes a classification of the primary data, based on the semantic context for which they were defined in their original sources and the like this in its original repositories, being as follows way [3]:

Structured data

Is data that has a pre-defined structure, this information may contain attributes (metadata) that allow their classification, which may or not have default values, such structure or format used to facilitate the storage, use and generation of new information [13] .

Semi-structured data

These are data that have been processed in some way [13] [3].

Unstructured data

Those who do not have a predefined schema do not have a defined structure and it is not possible to use them in order to generate underlying information or use within specific contexts, example of this, is the information contained in websites.

Open Data

It is a philosophy that is based on the premise disclosure of information or some data, which must be free to use without copyright restrictions, patents or any other similar mechanism of control. For this information to be shared should be easily usable by third-party applications or other machines.

The W3C eGov Interest Group made a somewhat more precise definition, with regard to the use of this information. The group defines as open data to all information published in RAW format (also known as primary data or structured) data, which is readable by machines for full use within third party applications [3].

One way to do an implementation of open data is the adoption of W3C standards, which has defined 3 different mechanisms for the implementation of open data, which are URI, RDF and SPARQL:

URI

It is a string of characters used to identify a name or a resource on the Internet, it is defined in IETF RFC 2397 standards, which allows the inclusion of small data items online, as if they were referenced to an external source.

RDF

It is a W3C recommendation designed to standardize the definition and use of metadata descriptions [3].

SparQL

It provides both a query language and a protocol for accessing RDF data. SPARQL can be thought of as the Semantic Web SQL, and provides a powerful means to triples query's and RDF graphs[3].

Open Government

In this article will be continued referred over the term, open government and open government data but will refer to these terms exactly

In the first instance we will focus on the term Open Government data. The "Open Government Working Group" defines it as a data that has been generated by the government or by a government agency or entity, in which the government opens data that generates in compliance with the definition of the principles of open data.

On the other hand we have the concept of open government which has to do with those governments in which part of the information generated by them, it's published towards all people and societies through open data.

Among the main reasons that justify that some data is opened by the government include:

- Transparency
- Releasing the social and commercial value of the data
- Participatory Governance

In October 2007, 30 open government advocates gathered in Sebastopol, California, to discuss how the government of that country could open government data stored electronically for public use. Derived from that meeting settled eight basic principles that should be met for an implementation of open government data be it effective [10]

These principles are listed below:

Completeness
<i>Datasets released by the government should be as complete as possible, reflecting the entirety of what is recorded about a particular subject [10]</i>
Primacy
<i>Datasets released by the government should be primary source data[10]</i>
Timeliness
<i>The information collected by the government should be released as quickly as it is gathered and collected[10]</i>
Ease of Physical and Electronic Access
<i>Datasets released by the government should be as accessible as possible [10]</i>
Machine readability
<i>Data is reasonably structured to allow automated processing[3]</i>
Non-discrimination
<i>Data is available to anyone, with no requirement of registration[3]</i>
Use of Commonly Owned Standards
<i>Commonly owned (or "open") standards refer to who owns the format in which data is stored.[10]</i>
Licensing
<i>Maximal openness includes clearly labeling public information as a work of the government and available without restrictions on use as part of the public domain[10]</i>

10.2 OPEN GOVERNMENT INITIATIVE STRATEGY AND E-GOVERNMENT IN MEXICO

Once described the basics of open government and open data, we begin to deepen about the current state of implementations that have been made in the Mexican context about open data. We will start by describing government portals commonly mistaken for open government initiatives. These are e-government portals that have been implemented in various government entities; they essentially comply with a goal that is very palpable and consistent if the different existing solutions are compared. This objective is the publication and digitization of government services and transactions through internet, regularly there is confusion between such portals with open data initiatives and obviously this is a mistake, these types of websites should not be confused with initiatives open government, since these objectives as mentioned above differ in scope, it should be remembered that regularly these initiatives (e-Government and open data) complement each other and can coexist as one solution for institutions government to citizens.

E-Government Portals in Mexico.

In Mexico there are several initiatives of e- government in different states of the Mexican government, these strategies as well as the existing open government initiatives , are made with a unique approach of the administrations that implemented these strategies, under own criteria of management that they drive . This is because there is a lack of governance and there is a clear lack of definition of objectives, which fail to be clear and precise, in other words, there is no national strategy in this area that could allow to the government to have a common strategy. But we not delve more about it, since the purpose of this article is not to cover or describe the e-government strategies, however we can assume that many of the recommendations on open data can be extrapolated to the situation of e-government Mexico. Therefore reference will be made only to the approaches that generally have these initiatives.

In terms of e-Government in many states have local implementations, which can be classified according to the focused or orientation of the strategy defined during it design, this classification consists of the following general topics:

- Improving Public Administration
- Improving Human Resources
- Improved access to information
- Improving Government Services

We will use a real e-Government case as an example:

The government of the Distrito Federal in Mexico, has already done some of the work of digitization of various procedures and services, where the main focus has been the creation of various services based on information technologies that are designed to meet the needs of citizens, covering most of the four main objectives mentioned, an example of e- government services of DF are [14].

Consultation, Application and payment formalities

- Tenure
- Licenses

Consultation, Application and Payment services

- Use water
- Traffic Control

Consultation request and payment of fines

- Vehicular offenses

Consultation Office Location

Consultation Transport Services

Other.

In this implementation of e-government, we can see that has an acceptable level of maturity in general terms as to the number and quantity of services provided through digital media, however keep in mind that this level of maturity is such that no necessarily can be found in other implementations of e-government or otherwise, other definitions of similar services provided by other governments may also have a similar level of maturity, however the procedures and services are not always the same, since within detail information of each initiative, process or service structure are not necessarily equal. Such is the example of the implementation of the State of Colima [15]. The Maturity level of services given is similar to the Distrito Federal government; however, the procedures or services are not necessarily the same.

10.3 Open Data Portals in México

In terms of open government, Mexico already has initiatives underway and running, for example the case of the governments of Distrito Federal in Mexico, which already has an open data portal whose goal is that people can make use of government information to meet society needs and personal too, in terms of data generated by the Public Administration of the Distrito federal is concerned.

The DF makes publication of data packets in which made a classification of these into 3 main areas:

By Topic.

Data packets can be viewed depending on the information or topics that have been classified, which include: Education, Government, Public Works, Civil Protection, Health and Sports, among others.

By Government dependency

Describe the dependence into Distrito Federal, which generates open data information.

By kind of file

The DF government also did a classification by the type of file in which the open information is delivered, where the formats given are: CSV, DBF, HTML, KML, PRJ, QPJ, SHP, and SHX.

However, this initiative presents problems which are described below:

- As a focused state strategy in a local environment, the investment and benefits will only be used by the citizens of that locality and not by a greater number of citizens.
- This initiative may or may not be reusable by other government entity.

- There is no definition of how the data should be delivered from a technological approach.
- The generated knowledge about the implementation of open government initiatives is not used by other entities.

10.4 Considerations for implementing a strategy of open government in the national context

The decision to open information is more a political decision than a technology decision [1], because it involves defining a strategy, rules, standards and guidelines to be followed so that there is freedom of information with the necessary characteristics to be considered as open data.

However, such an effort could be exploited better if this came as part of a national strategy for open data and not be seen as focused or local efforts, which is how are doing some government with the various initiatives of state governments and municipal governments in Mexico, such strategies generate the following situations, problems and disadvantages:

In terms of efficient use of investment:

when having different strategies of open government, which focus in some regional needs, makes that the investment in the same category are replicated by others government in Mexico, i.e. financing of projects that are aimed at finding a common goal, and this government expenditure is replicated by others administrations between different levels of government in Mexico, making a deficient use of country economic resources.

In terms of homogeneity of strategies:

- The strategies developed on open government are not equivalent between different initiatives, i.e., the information released by the different instances is not the same between initiatives.

In terms of data standards

- A technological level may or may not be congruence between the format and standards, with open data information that is released between the different strategies. Complicating to users who use this information because they have to set different mechanisms for systems interoperability.

For the development of a strategy for open government in Mexico, the government must implement a national plan of open data, in which the government make and carry out the necessary definitions about the different aspects to consider, to make a implementation that include all government entities, such definitions should cover the following main point::

Legal requirements and implications

An open data strategy must be accompanied by changes in several Mexican laws in order to make the necessary adjustments to:

- Standardize processes and services.
- Providing legal support to the initiative of O.G.
- Give legal certainty to the initiative of O.G.
- Ensure the accuracy of the information
- Ensure open licensing
- Ensure privacy of information
- Ensure mandatory release

Selection and Prioritization of data to be published

It is necessary to make a choice about which data should be open by the Mexican government agencies. Give priority those who may be in the short term.

Format and technological standards data publication.

It is necessary that the definition of technological formats in which it shall release information the government will be open to the public is made.

Processes or procedures that could be approved.

Related to the legal part, to ensure interoperability between the data presented, it is necessary to ensure this through changes in processes and procedures for the services rendered by the government in order to allow consistency of information.

Updated and data time life

Define policies about the data time life and validity of the information and also define guidelines about mechanisms and frequency of data updates, prioritizing access in real time.

Metadata and attributes of information

Assign a consistent data to be opened so that the information needed, could be filter o removed easily.

Inventory Database

Generate national inventory database that will be the suppliers of information that will be open, according to the catalog arising from the selection and prioritization of data publishing.

Information Management

Build mechanisms to ensure the integrity and quality of published information [18], this segment is also preferable to have a legal reference enabling efficiency in implementation.

Linking Citizen

Promote citizen participation, in order to participate in the processes of government data release.

Privacy Policy

Related legal, it is necessary to generate a reference which would give legal clarity to the question: What information release? , Where the spirit of open government strategy of data and also the privacy policy of sensitive information of citizens and corporations is respected.

10.5 Towards a national strategy for open government

The United States has been made towards the unification of strategy their cities open data within the site cities.data.gov Chicago, Seattle, New York and San Francisco have been the first to take the plunge and share datasets on the same website in order to have a unique point of contact for access to open government information and further enhance the efficiency of resources and objectives.

In Mexico, is necessary the implementation of a draft National Strategy on open government, this strategy must be guided by a specialized agency of government and with legal certainty that allows governance of the open data initiative to all government entities in the data they generate. Once having consensus to make a national strategy, it is must necessary make the definitions and legal approvals requirements

10.6 A Ministry of Government, that rule allowing it initiatives

As noted previously a national strategy for open government is necessary , however it is not the only initiative that requires Mexico to run in Information Technology terms , currently there are a several initiatives and strategies TIC terms , that do not have an integral view of performance , as in the case of :

- Electronic Government
- Digital Government
- National Digital Strategy
- Prosoft 2.0

All these initiatives need to have a comprehensive view of performance that allows having a use of the resources invested in them, plus it is necessary to perform an alignment between these in order to enable citizens to see more tangible benefits of these that is why Mexico needs a government entity must allow adequate governance of all strategies, projects, initiatives, budgets and thus have a comprehensive approach to information Technology within the national context and thus also to have a use of IT investments and break the relationship of electoral processes and political times and beyond national technological objectives situations. The proposal is to integrate a Secretary of Information Technology that focuses on the technological requirements of Mexico and support the routing technologies strategies and comprehensive country toward common goals.

10.7 References

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