

Case Study São Paulo City

OPEN DATA IN LEGISLATIVE: THE CASE OF SÃO PAULO CITY COUNCIL



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OPEN DATA IN LEGISLATIVE: THE CASE OF SAO PAULO CITY COUNCIL, BRAZIL

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1 Introduction

Open government data (OGD) policies in Brazil are still relatively recent. The beginning Open Government Data Portal came in 2011. However, according to Matheus, Ribeiro and Vaz (2012), it is possible to find a number of open data policies in national and subnational governments across Brazil: particularly at the states and municipality level.

In this paper, which forms one part of a multi-country study titled “Opening the cities: Open Government Data in local governments of Argentina, Brazil and Uruguay” we explain how OGD emerged in São Paulo and explore the impacts that OGD policies are producing on local civil society and private sector, we highlighted the local initiative from São Paulo City Council.

São Paulo City Council is a pioneer in open data policies in Brazil in three ways: a) it had one of the first open data policies in the country – starting this in June, 2011 through a law that created the Open Data Parliament Program; b) it is one of the few initiatives that are led by the legislative branch of government at the subnational level in Brazil; and, c) it was the first public organization that held a Hackathon in Brazil.

The São Paulo City Council Open Data Portal was launched before the federal government Dados.Gov.Br portal, going online in September 2011, whilst the federal portal was first presented to public in June 2012.

Therefore, the objective of this paper is to present the case study of the São Paulo City Council. The document is divided into the following areas of focus:

- **Emergence of the open data policy:** presenting the context and main factors and actors involved in São Paulo's open data initiative;
- **Policy Design:** showing who is responsible for the open data initiative in the legislative branch, as well as exploring the relationship between the government and the civil society in the defining characteristics of São Paulo's open data policy;
- **Information Provision and Resources:** verifying the available data and analyzing this data from two perspectives (the eight principles of open data and the five star of open linked data);
- **Users:** pointing to the citizens that are using (or not using) the data from this initiative;
- **Impacts:** seeking to understand what kind of emergent impact open government data policies have had in São Paulo.

After a brief introduction to the concept of open data we work through these areas of focus in sequence. These sections are then followed by discussion and conclusions.

1.1 Conceptualizing Open Government Data and its Principles

The field of open government data (OGD) policies is related with many other themes such as open government, access to information rights and public policies. It is important to define the framework that was used for investigating the situation of OGD policies in São Paulo, and in the three other cities involved in the wider Opening the Cities study.

Although the concept of OGD has only been studied very recently by researchers and practitioners, it is possible to identify some characteristics in common for how open data is generally defined. Table 1 presents selected conceptualizations of open government data:

Table 1: Concepts and Authors of Open Government Data

CONCEPT	SOURCE
"Open Government Data are all stored data of the public sector which could be made accessible by government in a public interest without any restrictions for usage and distribution".	Geiger & Lucke (p. 269, 2012).
"The two main elements of OGD are normally defined as follows: Government data: is any data and information produced or commissioned by public bodies. Open data: are data that can be freely used, re-used and distributed by anyone, only subject to (at the most) the requirement that users attribute the data and that they make their work available to be shared as well".	Ubaldi (p. 6, 2013).
"Definitions of open government data (OGD) generally require that the data must be accessible (e.g. online), in standard and re-usable formats, and under licenses that allow for data to be re-used in different contexts".	Davies (p. 2, 2010).
"Government data shall be considered open if it is made public in a way that complies with the principles below: complete, primary, timely, accessible, machine processable, non-discriminatory, non-proprietary and license free"	Open Gov Data (2007).
"Open government data has the following <i>defining</i> qualities: "Open" or "Accessible": Data must be online and available for free, in bulk, with no discrimination, and without the need to agree to a license that waives any rights the user might otherwise have. "Big Data" or "Analyzable": The complexity of today's governments necessitates the use of automation in any serious application or analysis of government data, such as to search, sort, or transform the data. Data must be machine-processable following the general guiding principle of making choices that promote analysis and reuse."	Tauberer (2012).
"What is Open Government data? By "open", we mean data that is open according to	Open Knowledge

the Open Definition. In essence, "open" data is free for anyone to use, re-use and re-distribute. By "government data" we mean data and information produced or commissioned by government or government controlled entities"	Foundation (2013).
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Source: Developed by the authors (2014).

Drawing on this table we can see that, generally, the definition of open government data is associated with the use and provision of data that is produced or controlled by public organizations, as well as identifying a number of features these datasets should have. The main characteristics found in the literature are that government data should be free from restrictions of use, updated, raw, processable by machines and freely licensed (Vaz et al, 2012).

Regarding the adoption of open government data by public organizations, Huijboom & Broek (2011) pointed out that national governments such as Australia, Denmark, United Kingdom and United States already have open data policies. The subnational entities such as states and municipalities in various countries have also created their own initiatives for open government data, such as, Chicago and New York in the United States and Amsterdam in the Netherlands.

Thus, policies of open government data are strategies that have been adopted by national and subnational government of various countries in order to promote the following benefits (HUIJBOOM & BROEK, 2011):

- Increasing transparency and accountability;
- Improvement of participation;
- Increasing government efficiency;
- Stimulating innovation in business;
- Creating new uses for government data, including the expansion of knowledge.

Therefore, the benefits of open governmental data are expected in at least three dimensions:

1. In relationships between the government and society (citizens, businesses and non-governmental organizations): the provision of open government data can generate a lot of activities related to the promotion of transparency, social control, participation and collaboration between public bodies and society (Vaz et al, 2012). For example, organizations that control public spending can use open data to create new forms of analysis of expenditure made by public bodies and improve their control activity of public actions;

2. The activities of government: another expected benefit in relation to the use of open data is the improvement of governmental activities as efficiency and public service delivery. Data exchange between different areas of public policy can generate new forms of use of public data, bringing more information for diagnosis and to support development of solution that improve government provided services;

3. In the expansion of knowledge: within the context of the information society in which enterprises or citizens can re-use available data in a myriad of ways, the existence of a policy of open government data can generate input for the construction of new applications, products, and research findings, among other things. This can enlarge the economic and social development of countries. For example, the use of public data can promote both innovation and improved academic research.

However, it is necessary to present the limits and possibilities of OGD policies. Zuiderwijk et al. (2012) point out many limits of open data policies, denominating these limits as socio-technical impediments. The emphasis on socio-technical factors means the authors have identified that limits often have two sides to them, the human and the technological. Between these two aspects of the impediments, the authors present three

dimensions with respective examples (Zuiderwijk et al., p. 160-164, 2012):

- **Data Access Impediments:** regarding to the challenges of creating, opening, finding and obtaining the data from the government. For instance, data is not available in the website or the information provided is incomplete;
- **Data Use Impediments:** related to the open data use restriction. These can occur due to a lack of quality information, or datasets that have restrictive licenses;
- **Data Deposition Impediments:** dealing with discussions about storing and providing feedback on datasets. Examples of such impediments are the lack of process for dealing with user inputs, or absent public participations mechanisms in OGD policies.

It is also important to highlight that the impacts of OGD policies are not yet clear. Despite the expected benefits there are few studies and evaluations of their own governments to measure the impacts of this type of initiative in the social, democratic and economic spheres (Huijboom & Broek, 2011). Another area not yet fully explored in the literature concerns political limits to adoption of OGD policies. In other words, are there barriers that are not related directly to the lack of technical and financial resources, but also the political will to implement the opening of government data in public institutions?

Huijboom & Broek (2011) presented four strategies that are generally used to implement open data policies:

- 1. Education and training** (knowledge exchange platforms, manuals, conferences , lectures and workshops);
- 2. Voluntary approaches** (general recommendations and programs);

3. Economic instruments (competitions, contests and financing of open data portals); and,

4. Legislation and control (laws, technical standards and monitoring strategies).

The existence of such strategies will be verified in the Brazilian study cases of the Opening Cities research project. In order to assess in more detail the nature of open government data initiatives in place in different cities, we draw in particular upon the eight principles of open data outlined by a group of activists in 2007 (Open Gov Data, 2007) and upon a model for the evaluation of linked open data proposed by Tim Berners-Lee (2010).

The eight principles of open government data suggest that OGD should be:

1. **Complete:** All public data are available. Public data is data that is not subject to valid privacy limitations, security or access control.
2. **Primary:** Data are presented such as those listed in the source , with the highest possible level of granularity and without aggregation or modification.
3. **Timely:** The data are made available as quickly as necessary to preserve its value.
4. **Accessible:** The data are made available to the widest possible range of users and to the largest possible set of goals.
5. **Machine processable:** The data are reasonably structured to enable automated processing.
6. **Non-discriminatory:** Data are available for all without requiring application or registration.

7. **Non-proprietary:** The data are available in a format over which no entity has exclusive control.

8. **License-free:** The data are not subject to any restriction of copyright, patent, intellectual property or trade secrets.

Besides checking the Municipality of Rio de Janeiro and the City Council of Sao Paulo comply with the eight principles, was analyzed at what level these policies are in line with the proposals in the five star review of connected open data model (Berners-Lee, 2010):

- The data are available on the web, regardless of format, using an open license;
- The data are available as machine-readable structured data;
- The format used is a non-proprietary format;
- The available data have structured URLs that allow its identification and referral;
- Data offered are connected to other data publicized by other actors, which allows providing context.

2 Open Government Data in Brazil: the case of São Paulo City Council

São Paulo City Council adopted an open data public policy in 2011. This OGD initiative was named "Programa de Dados Abertos no Parlamento" (Open Data in Parliament Program).

The introduction of this program can be attributed to the former City Council President, José Police Neto¹ who promoted during his presidential campaign a promise of mandating and guaranteeing transparency of the legislature. One of the means chosen to promote that transparency was Information and Communication Technologies (ICTs) and in particular the use of the Internet and the City Council Web Portal.

To promote transparency in the legislature as Police Neto had promised in his campaign Act 1156 was enacted in June 20, 2011. The Act contains the basis for implementation for the Open Data in Parliament Program such as objectives, principles, concepts and limits. The objective of the open data program is to offer resources to society for monitoring the legislature, and for participation in the political-administrative decisions of the legislature through the availability of databases with non-confidential information in electronic form and open formats. The program adopted the following concept of open data: data that citizens can use, reuse and distribute freely, subject to a maximum requirement of all attribution and sharing, in accordance with standards and definitions adopted by the world community, especially the Open Knowledge Foundation (OKF) and with recommendations issued by the International Consortium W3C.

¹ José Police Neto was the president in 2011 and 2012.

For the implementation of the program, a web page was created in the City Council Web Portal² containing data of the Parliament in open formats. For example, the Portal provides data on bills, personal information of aldermen and human resources. The City Council of São Paulo furthermore proposed two activities to promote the use of open data in the legislature: a) a seminar on “The Era of Open Data” on October 7, 2011; and, b) a Hackathon on May, 2012.

Before detailing in depth the open data program and its policy design, it is important to highlight the main factors and actors that were responsible for the adoption of OGD in São Paulo City Council. According to the interviewees³, the open data policy was adopted by influence from many actors from government and civil society. Firstly, the presidency of Police Neto in the City Council. Police Neto is credited as the main person responsible for the open data initiative. Proposing transparency as one of the pillars of his mandate he created a program of open data for the City Council through an Act; and established the open data webpage on the City Council Portal along with the implementation of the first Hackathon proposed by a public organization in Brazil. During our interviews, Police Neto cited some actors that helped to implement the open data policy in the legislative. In the City Council, technical consultants from many areas including economy, urbanism and communication participated in the open data program. However, the main area that participated most in this program was the Department of Information Technology.

Eduardo Myiashiro, the director of Department of Information Technology between 2011 and 2012 had heard of open data in a conference sponsored by the Federal Government in 2010. When Police Neto decided

² The City Council Open Data Portal is available at http://www.camara.sp.gov.br/index.php?option=com_wrapper&view=wrapper&Itemid=219. Accessed on: September 10, 2013.

³ The list of interviewees can be found the end of this document.

to increase transparency in the City Council, Miyashiro was the official responsible for implementation of the technical part of the open data policy. During the interviews, both government and civil society indicated that the active participation of the area of information technology was one of the factors that explain the successful implementation of the open data policy in the legislative.

On the other hand, the civil society organizations were considered by the policymakers very important in this process to put pressure on the legislative bureaucracy as well as to present the benefits of open data policies. Police Neto noted that there was a resistance in a part of the legislative employees about necessary actions to promote transparency and open data, such as resistance to the disclosure of the salaries of public servants in the Internet. Civil society involvement was important in countering this.

Three groups/individuals from civil society can be identified as main participants of the process of establishing OGD in São Paulo: Everton Zanella (Open Knowledge Foundation Brazil), the World Wide Web Consortium Brazil (W3C Brazil) and Transparency Hacker Community.

Everton Zanella Alvarenga started to discuss open data with Police Neto when he was working in 2011 for another alderman (Floriano Pesaro) on issues related to transparency in the legislature. Before that, he was already participating as activist in the project "Adopt an alderman"⁴. Because of this project and his work with the alderman Floriano Pesaro, he was known by many aldermen as a transparency activist. In the case of the Open Data in Parliament Program, Alvarenga helped with the definition of the open data policy and its implementation, presenting technical aspects and suggesting initiatives (a seminar on open data and a

⁴ It is a project that encourages Brazilian citizens to blog about the work of their local elected officials, especially the City Council, in order to hold them accountable (TECHNOLOGY FOR TRANSPARENCY, 2011).

hackathon) to promote the use of the data. In the case of the Hackathon, he participated directly of the implementation as member of the Open Knowledge Foundation Brazil that supported this initiative in 2012.

W3C⁵ Brazil is other actor cited by interviewees because of its role in the City Council policy. Initially, the standards of W3C on open data were references for the policy design in the legislative as mentioned in Act 1156 and on the Open Data Portal. In Brazil, W3C promotes the dissemination of OGD principles through conferences, working groups, courses, and hackathons. São Paulo City Council participated in many W3C projects such as the Working Group on Open Government Data. The goal of this Working Group is to discuss the concept and the social impact of open government data and to initiate joint activities around the data demanded by civil society. The Working Group on Open Data seeks to provide guidance to government initiatives and society in the publication and use of open government data (W3C Brazil, 2013). Furthermore, W3C Brazil was one of the supporters of the Hackathon promoted by the City Council in 2012.

The Transparency Hacker is a web community created in 2009 after the first Transparency Hackday⁶ in Brazil. It is an open collaborative community. The main mean of communication among members is an electronic mailing list on Google Groups called Thackday⁷. In 2010 and 2011, some members of the group visited many governmental

⁵ The World Wide Web Consortium (W3C) is an international community where Member organizations, a full-time staff, and the public work together to develop Web standards (W3C, 2013).

⁶ The Transparency Hackday is based on an event that already occurs in the United States which aims to discuss the creation of new interfaces for access to databases of government agencies, making access to information easier and more democratic (RIBEIRO; VAZ; MATHEUS, 2012).

⁷ Available at: <https://groups.google.com/forum/#!forum/thackday>. Accessed in 10.september.2013.

organizations to promote transparency and open data policies including a visit to Sao Paulo City Council. They were also invited to help in the organization of the seminar on open data and the Hackathon. The City Council has also signed a protocol of intent for improving its open data policy, and the Transparency Hacker group has a letter of intent signed with São Paulo City Council to collaborate with the OGD policy.

Thus, the open government data in São Paulo City Council emerged from a political will because the commitment of the president to transparency and open data. Police Neto drew upon the information technology area in the government who were committed to the issue of open data. The Information Technology Department participated in several meetings and discussions on the topic although sometimes the Information Technology Director faced resistance from civil servants, for example, when they decided to put the wages on the Internet. At the same time, groups and members of civil society helped in the definition and adoption of open data practices in the City Council. Concerning the importance of civil society in the process, Policy Neto said:

Eduardo [Director of Information Technology in 2011 and 2012] could not do these things without the support of these organizations because the bureaucracy did not support him. Then, he began to attend meetings, conferences. The meetings gave him conditions to bring out innovations and shows to bureaucracy that they are good.

2.1 Policy Design

Act 1156 determines the publication of data from São Paulo City Council in open formats, and calls for it to be accessible through the web portal. According to this Act, the implementation of the Open Data Parliament Program must observe in the provision of its data and information:

- Complete information and a reasonable reproduction cost, preferably downloading via the Internet with a convenient and modifiable form;
- Permission for free use, reuse, crossing with other data and redistribution, without any form of discrimination against groups or individuals, although there may be a requirement for attribution and sharing;
- Structured data in open format and readable by machine, with the possibility of access and automated processing by software and external systems;
- Primary data without aggregation or formal modifications;
- Reports, statements, balance sheets, studies, lists of services, lists of addresses, maps and other publications;
- Data should be updated;
- Data available should be available for all, without registration or any other procedure that impedes access;
- Access to information should be objective, transparent, clear and comprehensive language;
- Adoption of electronic formats with the characteristic of being open and non-proprietary, in order to facilitate the analysis of information;
- Detailed disclosure of the formats used for structuring information;
- Accessibility for people with disabilities.

Therefore, all data produced by São Paulo City Council should follow these principles. For this, it was created in 2011 a project to guarantee that all data would have an open format. In other words, all information will be produced directly in open format and available via downloading through Internet. Though the project envisaged that these objectives would be achieved progressively: the project has not arrived at its final stages. In this paper we present the phases that are already underway.

The main activity of the Open Data Parliament Program was the implementation of the São Paulo City Council Open Data Portal. The

Portal was launched on September 2011. The Portal presents (Ribeiro, Vaz, Matheus, 2012):

- International manuals of open government data such as the Open Data Handbook and W3C Manuals;
- Explanation about how civil society can open and use archives in open formats;
- City Council data in open format.

The Department of Information Technology and the Department of Communication are responsible for the Portal. The first one guarantees the infrastructure and technical issues, while the communication area defines the content.

The main characteristic of open data policy in São Paulo City Council is the implementation through phases, especially the technical part by the Department of Information Technology. Despite the goal of guaranteeing all City Council data follow the open data principles the policy design still limits these possibilities. Only part of the information produced is in open format because the project stopped since the City Council changed its presidency.

The decision about the data that would be open can be divided in phases. Firstly, implementation focused on information that was in open formats, but it was not available on the Web. Therefore, the project team decided to put on the Internet information that they had available according to the open data purposes. They chose the XML format because the technology area knew how to use it. From this first moment the budget and general information about the legislative become available. Then, during the hackathon, they received suggestions to increase the number of datasets and so added, for example, the list of aldermen since 1948 with their respective parties.

Besides the participation of citizens through the hackathon, the São Paulo policy does not define a formal manner to guarantee civil society participation in the policy. It is important to highlight that the decisions about OGD are top-down. This means that all decisions about what data to supply and how to supply it are defined by governmental organization. Even in the City Council they do not have a rule for data that will be available in open format or in the Portal on the Internet.

When it comes to technical aspects of implementation, São Paulo City Council has its own team of information technology⁸ specialists who collect data on the legislative process such as bills, other propositions and data collected during the legislative process (reports, opinions of technical committees, voting). The objective is to put on the Internet in XML format all information produced by the legislative.

Although Act 1156 defines the principles of open data policy, the implementation of OGD policy is not so clear in the City Council structure. The main goal is to produce all data in a format according to open data principles. However, the project stopped with the transition to a new president⁹ in 2013.

2.2 Information Provision and Resources

In October 2013, it was possible to access the following information in the Open Data Program:

- Legislative activities: a) presence of aldermen in Plenary, Ordinary and Extraordinary Sessions; b) voting in Plenary, Ordinary and

⁸ The team works with the following information technology enterprises: Microsoft, Oracle, PRODAM, Wiz, SISP, Visual and Mauell.

⁹ José Américo is the president since 2013.

- Extraordinary Sessions; c) bills processing; d) legislative production; and, e) information about the aldermen;
- Collection of digitized processes of legislative activity such as bills and other documents;
 - Human resources: the list of City Council employees;
 - The budget and the budget execution of the City Council;
 - The budget of the city of Sao Paulo (Executive Branch).

In assessing this we can note that, firstly, the datasets presented on the Portal do not include the majority of the information that City Council keeps digitally. All our interviewees declared that the Portal does not have all information that could be presented through the Internet. In a summarized manner, the information systems of the City Council have the following data: 1) Core activities: legislative process, budget amendments, indications; and, 2) Support activities: human resources, accounting, financial controls. The reasons that these datasets are not all available in the Portal include:

- Technical limits: a scarcity of civil servants in the information technology area¹⁰ and infrastructure problems, especially with information systems that are not prepared to guarantee the open data standards;
- Political limits: the resistance of civil servants and politicians to the idea of open data because of sensitive datasets such as the publication of wages on the Portal; a lack of information between the departments about the organization of information systems; and, the discontinuity of the project to guarantee the data produced by City Council is in open data when the presidency changed.

¹⁰ The team was composed by 18 employees (2 supervisors, 4 leaders and 12 analysts).

It is important to highlight the last point. Open data policy did not finish, but Police Neto and Miyashiro pointed out that they do not have expectations of improvements such as increasing the number of datasets in the Portal or a new hackathon for the next months.

To explore issues of data quality we used two methods to evaluate the Portal of Open Data Parliament Program. The methods were the adherence to the eight principles of open data¹¹ and the five stars of linked open data¹². We verified only the Open Data Portal. Assessment of others São Paulo City Council webpages might obtain others results.

In the case of the eight principles of open data, the Portal did not attend completely four principles:

- Data must be complete: the Portal did not contain all information available as we mentioned above. The published list is still small compared with the datasets produced by City Council;
- Data must be primary: there is aggregated data;
- Data must be machine processable: the most part of the datasets are in XML or TXT formats. However, it is possible to find many documents in PDF such as bills and requirements;
- Data must be non-proprietary: it still remains some documents in PDF.

The Open Data Portal achieved the principles of timely, accessible, non-discriminatory and license free data. On the five stars of linked data, we judged that the Portal deserved three stars. This means that the Portal use mainly non-proprietary archives such as XML, CSV and HTML and also allows data on the Web in machine-readable format, even if not all data

¹¹ More information: <http://www.opengovdata.org/home/8principles>

¹² More information: <http://www.webfoundation.org/2011/11/5-star-open-data-initiatives/>

reaches these standards. Regarding to the five stars evaluation the City Council did express interest in achieving the maximum of stars. They created a blog to receive messages from users that would help to improve the Portal. However, the blog has since been disabled because of the lack of participation.

2.3 Users

The main activity that the City Council proposed to promote the use of the data by civil society was a Hackathon. The first and only Hackathon that was promoted by City Council occurred on May 2012.

The event was denominated 1st São Paulo City Council Hackathon "Open Data Challenge – Apps for São Paulo". The event was divided in five phases between May and June:

1. Registration of teams that would create Web applications developed with the use of data series published by the City Council of São Paulo in an open format on its portal;
2. Proposals for applications: participants spent a weekend camping in City Council defining applications. Proposed applications could require additional data beyond the available on the Portal;
3. Teams should finalize the proposed apps in ten days after the camp and send it to the jury along with the link to a repository in which the latest version of the proposal and the technical documentation could be found;
4. Period of evaluation by jury and the public through Internet voting;

5. Announcement of winners on June 6, 2012.

The sponsors of the event were the Open Knowledge Foundation and Brazil World Wide Web Consortium (W3C Brazil). The winners were¹³:

1. Siga os vereadores de São Paulo ("Follow aldermen from São Paulo"): this project aimed to create a platform with the actions of the current aldermen, allowing users to follow the alderman selected;
2. Radar Parlamentar ("Parliamentary Radar"): mathematical analysis of the data from bills that determines "similarities" between parties in parliamentary action. These similarities are presented in a two-dimensional graph, in which circles represent parties and the distance between these circles represent how similar these parties vote. It made use of open data available on voting in 2010, 2011 and 2012;
3. CMSP Wiki ("São Paulo City Council Wiki"): an application that generates content in wiki format, and can automatically publish on a specified wiki page.

We asked all the interviewees about who are the users of Open Data Portal. The interviewees could not identify a main user of legislative open data beyond hackathon participants or members of the Transparency Hacker Community. The Transparency Hacker Community is always asking for more data from the City Council such as the necessary information for the project Monitor Legislativo (Legislative Monitor). They are creating a website that intends to map and monitor the legislative process. We also checked among the members from this community if they used or knew

¹³ The awards were 7000 reais for the first place (US\$ 3044,00), 2000 reais for the second one (US\$ 870, 00) and 1000 reais for the third one (US\$ 435,00). The prize was offered by Itau Bank.

someone that used the data from São Paulo City Council through a survey in September 2013. We received five responses and only one person has used City Council data before the creation of the open data portal. Another respondent did not use the information because the data he needed was not available.

Most of the projects that participated of the Hackathon are no longer updated and we could not contact them. We interviewed one of the finalists from the Hackathon, Diego Rabatone. His project (Parliamentary Radar) is still using the data from City Council, but the data that drives it is only published semiannually. Parliamentary Radar was initially created by an advocacy group at the University of São Paulo who were focused on open source software. The project previously used only data from the Chamber of Deputies in Brazil. When the City Council announced the first Hackathon, they decided to create a local version of the project. The main difficulty they encountered was the lack of a historical series of data which they needed: in São Paulo they only had available to use information from the last two semesters. According to Rabatone, the City Council justified the lack of this information explaining that data about other periods were only on paper and was not digitized.

It is important to note that not all civil society were advocates for the open data initiative. Police Neto presented one example of resistance from civil society around the open data policy. The traditional groups that monitor the City Council and are not related to technology and open data movements felt cheated because they did not understand how to use the data available on the Open Data Portal. Because of that, the City Council created other initiatives to promote its information such as a newsletter that presents, in an accessible way, the main data of the organization.

2.4 Impacts

The main impact of the OGD policy was the use of data in the Hackathon on May 2012. The participants created eight initiatives based on legislative data available.

Table 2: Hackathon Finalists

Team	Project	Description	Working	Updated
PoliGNU	Radar Parlamentar ¹⁴	Mathematical analysis of the data from polls of bills in the chamber that determines "similarities" between parties in parliamentary action presented in bi-dimensional graphics.	Yes	Yes
Manuel Guerra e Alexandre Campos	Visual Chamber ¹⁵	App that gives users interactive visualizations of some crosses of data, such as map and graph affinities.	Yes	No
Aeronautics	SpitFire ¹⁶	API in REST (format access) to export RDF in future.	No	No
Jonny Data	Know your Alderman ¹⁷	Send a summary of all the information coming out in the media about your Alderman.	No	No
Equipe de Três	Accounts Redone ¹⁸	Presentation of financial data of the City Council.	No	No
Lucas Nemeth	Speak, Chamber ¹⁹	The project will present the result of	Yes	No

¹⁴ <http://radarparlamentar.polignu.org/>

¹⁵ <http://camaravisual.macroscopio.com/#sthash.f45VaO6q.dpuf>

¹⁶ <http://datagov.net.br/#sthash.f45VaO6q.dpuf>

¹⁷ <http://conhecaseuvereador.com.br/#sthash.f45VaO6q.dpuf>

¹⁸ <http://www.contasrefeitas.com.br/>

¹⁹ <http://lucasnemeth.pythonanywhere.com/#sthash.f45VaO6q.dpuf>

		algorithmic analysis made on the textual data of the Municipality of São Paulo.		
Capital PHP	Wiki Chamber ²⁰	Application that generates content in wiki format information of Aldermen.	No	No
Chutaum	Follow São Paulo Aldermen ²¹	The site aims to create a platform timeline of the actions taken by the current Aldermen.	Yes	No
Wouseija	Geolocation of Bills ²²	System that shows on the city map where the investments are (bills) of the city approved by the aldermen.	Yes	No

Source: Developed by the authors (2014).

Despite these results, eighteen months after the Hackathon, five initiatives are available, but only one are updated. The City Council are not verifying the possible uses of these initiatives or following their founders.

According to Vagner Diniz, Manager of W3C Brazil, the main problem of a Hackathon is to guarantee the sustainability of the projects created through this kind of activity. Furthermore, Diniz said the participants of hackathons, generally, are not consumers of that information. It means that people from information technology backgrounds do not work directly with the data presented, despite knowing the technical side to propose new uses that information. Generally, organizations from advocacy, monitoring and social control do not participate of hackathons, even if data used in these events could help their activities.

²⁰ <http://www.capitalphp.com.br/wiki#sthash.f45VaO6q.dpuf>

²¹ <http://www.veredores.org/#sthash.f45VaO6q.dpuf>

²² <http://geoleis.herokuapp.com/#sthash.f45VaO6q.dpuf>

On the other hand, Everton Zanella from Open Knowledge Foundation Brazil suggested that it is still necessary to create a transparency and open data culture in Brazil. He believes hackathons are very important to disseminate the open government data cause. Eduardo Miyashiro from the Department of Information Technology pointed out as an impact of the project that other governmental organizations have visited and asked the City Council about its open data policy. In his opinion, these organizations may launch new open data initiatives drawing on the experience in the legislative.

Ultimately, the City Council did not define a method to evaluate the impacts of its open data policy or even to discuss with civil society organizations the use of City Council Data.

3 Conclusions

São Paulo City Council innovated in 2011 when decided to initiate one of the first open data policies in Brazil. Starting from its own datasets that were already available in open formats or that could very easily be made open, the open data portal was launched on September 2012. Aiming to promote the use of data on the portal, São Paulo developed the first hackathon organized by a government institution in Brazil.

The open data policy was implemented through cooperation between the City Council and civil society persons and groups that were involved with this thematic. These persons and groups helped to define the concepts and stages to guarantee an effective open data policy. Institutionally, the open data policy is present through the existence of the Act that created the Open Data in Parliament Program and through the open data portal and two work of the departments responsible for the portal maintenance.

On the other hand, the initial idea of producing all City Council digital content as open data stopped with the new presidency of the City Council in 2013. There is a consensus among the interviewees that since its launch in 2011 the open data portal has changed little. Furthermore, the City Council did not create initiatives to monitor usage or impacts of the Open Data in Parliament Program. Thus, even with impacts from the hackathon, it is not possible to guarantee the public policy continuity.

Using Huijboom & Broek's (2011) approach, it is possible to define the strategies of open data policies in the Sao Paulo City Council as presented in the table below:

Table 3: Sao Paulo City Council's open data strategies

Type	Strategies
Education and training (knowledge exchange platforms, manuals , conferences , lectures and workshops)	<ul style="list-style-type: none"> • Organization of workshop on open data in 2011 • Participation in working groups and conferences on open data • Open Data Manuals from International Organizations available at the open data portal
Voluntary approaches (general recommendations and programs)	<ul style="list-style-type: none"> • Cooperation with civil society organizations for promoting open data
Economic instruments (competitions, contests and financing of open data portals)	<ul style="list-style-type: none"> • Hackathon in 2012
Legislation and control (laws, technical standards and monitoring strategies)	<ul style="list-style-type: none"> • Act that regulates Open Data in Parliament Program

Source: Developed by the authors (2014).

The case study shows us that it is necessary to study more what factors can allow initial progress towards open data to secure greater continuity. It also explores the important role of civil society in open data. In São Paulo civil society was not an official actor in the policy. Although members or organizations from civil society appeared as crucial for the open data development, Sao Paulo City Council has not created any official forum through which to hear from them about its open data policy.

As perceived by Janssen et al (2012), even with the increasing of open data policies between governmental organizations these kinds of policies are not paying attention to overcoming the impediments of the use of open data or the user perspective. In future studies, it is important to connect the findings of the case study with developing theories of effective open data, and to refine an understanding of the factors that guarantee effective open government data policy. This means policy whereby governments really publish their data according to the full open data principals, as well as where civil society use and benefit from it.

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5 Annexes

5.1 List of Interviewees

- José Police Neto, Alderman of São Paulo City Council
- Eduardo Miyashiro, Technical Analyst at São Paulo City Council
- Diego Rabatone, member of POLIGNU and one of the winners of the Hackathon promoted by São Paulo City Council
- Vagner Diniz, manager of World Wide Web Foundation Brazil
- Everton Zanella Alvarenga, Open Knowledge Foundation Brazil Coordinator

5.2 Information available

Below is presented the formats and updating of these documents of the program in the Open Data Portal²³:

Document	Period of Time	Format	Last update
Presence of aldermen in Plenary, Ordinary and Extraordinary Sessions	2012-2013	XML	September 2013
Vote in Plenary, Ordinary and Extraordinary Sessions; c) details of processing of the Bill	2012-2013	XML	September 2013
Details of processing of the Bill	-	TXT/PDF	-
Legislative production	-	TXT	-
Information about the aldermen	-	TXT	2013
PL – Bills	1948-2013	PDF	September 2013
PDL - Legislative Decree Projects	1949-2013	PDF	September 2013
PR-Draft Resolutions	1948-2013	PDF	August 2013
PLO - Draft Amendment to the Organic Law	1990-2013	PDF	
MOC – Motions	1950-2013	PDF	
RPP - Requirements with Process P	1949-2012	PDF	
RPS - without P Requirements Process	1991-2012	PDF	
RDP - Requirements with Process D	1957-2013	PDF	
RDS - without D Requirements Process	1995-2013	PDF	
REC - Resources	1948-2006	PDF	
IND - Indications	1948-2012	PDF	
RSC - Submission Requirements	2011-2012	PDF	
List of employees	2013	XML	October 2013
City Council Budget	2011-2012	XML	2012
City Council Budget Execution			
Executive Branch Budget	2012-2013	XML	2013

²³ Data available on September 2013.