



# Brazil in Search of Transparency E-Gov

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## KEYWORD

*E-gov electronic government; free software; e-government transparency; mobility lab*

## ABSTRACT

*This article discusses the public administration strategy in the creation of electronic government (e-gov) Brazilian and interactivity of its population with this important way Shows trends and the consequences of its implementation, and the importance of its tools in disclosure and guidance to the population that public services and the relevance of the free software use as a government strategy. It also brings a reflection on the importance of transparency of government actions and commitment of resources of public administration. Also has the experience of São Paulo, in the urban transport sector in tires and the tools available to the user population. And it shows the valuable innovation to create Mobility Lab (MobLab), making the collaboration of the scientific community in city management.*

## 1. Introduction

It is known that the quality of displacement, variable dependent on the characteristics of passenger transport systems, is of utmost importance as characterizing the quality of life in cities. Its main mission is to allow citizens the right to access, or the ability to access goods, services, activities and desired destinations.

Law 12.587, signed in 2012, known as the Urban Mobility Law, clearly defined the mobility prerogatives: "Transport is an important steering instrument of urban development of cities. Urban mobility well planned, with integrated and sustainable systems, ensure citizens' access to the cities and provides quality of life and economic development."

Among various rights, the law is clear when it comes to information: "Users should be informed of the pre-established standards of quality and quantity of services provided, including information made available at points of embarkation and disembarkation as routes, schedules and fares."

Electronic Government (e-government) in Brazil defines a large initiative with regard to the task of a government to promote it. It can be said that this task is of gigantic proportions, almost like building a new country.



Even under implementation, its impact in various areas of the state and the community already noted, as well as its subsequent consolidation as a political project in the field of digital information and services resulting from this.

Various companies are using technology developments in an original way in their day to day. Investments in Information and Communication Technologies (ICT) can contribute to the progress in improving the life quality of life on the planet and its civilizations. Even when the investment priorities are others, investments in ICTs end up boosting the status update, especially in developing countries like Brazil.

One cannot imagine the "state reform" in Brazil, and the approach of public services to the needs of the population without the innovation of e-government, with its potential for organization and acceleration of public services production processes and the strategic need for public control of the state machine the ordinary citizen.

Free software is also a Union strategic choice to reduce costs, increase competitiveness, create jobs and improve the knowledge and develop the area in the country.

In order to encourage the use of free software, the government causes enterprises in the sector, aimed at the use of open standards, free licensing of software and the organization of groups concerned with the issue. [GOV.BR, 2015].

This article is a reflection on these issues and the importance of using technology in public administration, not only in the facilitation of public services as well as the reverse question is one of the most debated topics today in Brazil and worldwide, which is control by society of the acts of public administration.

Transparency about the actions of governments is of paramount importance today, since the community should and need to participate in decisions of public officials at all levels of power. But even despite the goodwill of the community, governments and authorities, there are still gaps, bureaucracies and not as clear forms that allow openings for non-clear and transparent monitoring of implementation of projects delivered and their respective payments, leaving sometimes criminal discrepancies open, as if the promised product had actually been delivered.

We also show by way of example, the electronic services offered in the city of São Paulo to the Government in case the Municipality has effective tools to manage and make decisions within their competence with respect to the issue of urban transport service about tires and cooperation of the scientific community.

Some studies show that in spite of the opinion that the simple implementation of e-government will increase the effectiveness and efficiency of public authorities, improving decision-making and service delivery, it by itself is not enough, and it is worth remembering that the e-gov comprises a much larger than this field. [LINNEFELL et al, 2014]. In Brazil, the historical process turns out to have fundamental importance, as Dantas [2011]:

The principle of efficiency, even though some scholars had by implicit in the constitutional law, only emerged as expressed principle of public administration from the Constitutional Amendment. 19 of June 4, 1998.

Those who claimed that the Constitution already harbored this principle, even before the Amendment. 19/98 drew their existence to art. 74, section II of the 1988 Constitution which states the following:

"Art. 74. The Legislative, Executive and Judicial Branches maintain an integrated way, internal control system in order to:

I - (...);

II - check the lawfulness and evaluating the results, as to the effectiveness and efficiency of budgetary, financial and property management in the agencies and entities of the federal administration as well as the use of public resources by private entities."



The introduction of expressly in the Constitution the principle of efficiency as a principle of public administration was due to the new global economic and political environment that, with globalization and neoliberalism, set a minimum state model. According to this model, it sought to confine the state role in "essential public service provider, such as those related to homeland defense, public security, the administration of justice, or even the collection of taxes."

Returning to analysis Linnefell [2014], it indicates that there is a need for a more detailed interdisciplinary research agenda in the field of e-government, and that research on e-government will bring benefits in terms of increased capacity to assess and describe all dimensions of e-gov

We can see especially in the Brazilian case, the use of government sites in Brazil presents significant numbers among the developing countries with e-gov programs.

According to the survey by IBOPE [SERPRO, 2004], in residence, the proportion of Brazilians who used sites of governments (federal, state or municipal) had no comparison with any other country, reaching almost 39% of all active members, about 4.8 million Internet users.

However, the electronic address most sought during this period was the Internal Revenue Service, to download the PIT program, however, it must have been looking for sites almost all state governments, such as SP, RJ, RS, PR, MG, BA, SC, and addresses STJ (Superior Court), Security, Ministries, Presidency of the Republic, and the most diverse sites for specific services, such as: Detrans, municipalities, departments, Subways, Procons, Febem, Poupa-Tempo, Cetesb, among others.

Therefore, it is important that we know some of the e-gov implementation of history in Brazil, to be able to reflect on the questions therein.

## 2. Description empirical study and review of the literature

In 2000 the Brazilian government laid the foundations for the establishment of a digital society to appoint an inter-ministerial working group with the purpose of studying and present policies, guidelines and relevant provisions of the new electronic technologies commonly used by the Presidential Decree of 03 / 04/2000. By decree of the President of the Civil House of the Republic No. 23, 12/05/2000, the shares were set to be developed by the Working Group on Information Technology (ITWG) incorporated into the Information Society program (SI), coordinated by the Ministry of Science and Technology (MCT).

This work was focused on three program lines [GOV.BR, 2015]:

- Universal services;
- Government available to all;
- Advanced Infrastructure.

This delegation proposed a modern mutual influence policy of the Government to society, presenting a situation analysis of the supporting foundations of the services provided by the federal government and the legal issue surrounding the issue.

This time it launched the Green Paper [TAKAHASHI, 2000], for Information Society in Brazil, where are placed the skills and government responsibilities in relation to information and services to citizens, as well as issues of Government Applications, Network Infrastructure for Government and Technical Guidelines.

The book also features an extensive analysis of the various aspects of the theme from socio economic impact in the world today showing Brazilian and international issues to the challenges for the future. In September, the ITWG presented the document, "Proposal for e-gov policy for the Federal Executive Branch," and on 18 October, the government issued a decree instituting the Executive Committee of e-gov (CEGE), for purposes to establish policy guidelines, coordinate and articulate the deployment operation of e-gov.



The creation of CEGE can be reflected as one of the great landmarks of the Government's commitment to support the development of services and information to citizens.

The Ministry of Planning in 2002, through the Secretariat of Logistics and Information Technology and with the cooperation of the participants of the Executive Committee, published an assessment of the actions of the two years of existence of the e-gov, which describes the first future developments and challenges

In 2003, the decree of October 29, formed eight committees CEGE technicians and it's up to the powers of Executive Secretary to the Ministry of Planning, through the Secretariat of Logistics and Information Technology, which is replaced by technical support assignments administrative and supervision of the work before such Committees:

1. Free Software implementation;
2. Digital Inclusion;
3. Systems Integration;
4. Legacy Systems and Software Licenses;
5. Sites Management and Online Services;
6. Network Infrastructure;
7. Government to Government - G2G;
8. Knowledge Management and Strategic Information.

In 2004 it was established the Department of e-gov, by Decree No. 5134 of 07 July, in charge of the acts associated with e-gov.

And the same year was released the first version of the document: Interoperability Standards in e-gov (ePING) - now in version 2015.

In the following year it is the turn of the appearance of the Accessibility Model of e-Government (e-MAG), which supports the accessibility to portals and electronic sites of public administration for the use of people with disabilities, extremely important measure and overcrowded by industry organizations. In 2007, it has become indispensable in the sphere of Management of Information Technology Resources System (SISP), through Ordinance No. 03 of May 7, 2007.

In July 2005 it published Decree No. 5450 which made it necessary for the federal public administration to use trading in purchases of goods and public services contracts and determined that the electronic form should preferably be adopted.

Other government attitude was the creation in 2006 of the Digital Inclusion Portal, with actions aimed at poor communities and bringing together information on different government projects in this field. Unfortunately the site has been disabled and its inclusion of digital content is the responsibility of the Ministry of Communications.

In 2007 the first evaluation of e-gov services was made through research that sought to analyze the quality of the electronic services provided by governments at all levels, as required by the citizen.

In 2008 the first primer coding was launched, aiming to improve the dissemination and transmission of information and services offered by Union bodies. At the same time, opened the Covenants Portal for the realization, over the internet, agreements, covenants and contracts to facilitate the transfer with voluntary funding from the federal government, so modernizing the relationship between the federal government and other federal entities.

From the normative instruction No. 01 of 2010 with now precepts of sustainability, the Secretariat of Logistics and Information Technology advised that public bodies purchase less polluting computers to the environment. This advice is in order that electronic equipment are free of lead and employ amounts contained iron, aluminum, copper, zinc, tin, nickel, etc.



### 3. Difficulties faced by the e-gov

One of the major difficulties faced in the first phase of implementation of e-government in seeking to offer interactive services to citizens via the Internet, output, was the socioeconomic boundaries that hindered the entry of most of the population to telephony systems and equipment computer.

The guidelines that have guided the design of the implementation of e-government in Brazil were: citizen participation; improving the state of the internal management; and integration with partners and suppliers. Therefore, the initiatives of e-gov program agreed to prioritize the use of information and communication technologies (ICTs) to democratize access to information, seeking to increase the debate and the interactivity of the population in the establishment of policies, as well as improve the quality services and public information provided.

### 4. An experiment on the right way - a case study

Interesting to be shown is the experience of São Paulo Transporte SA (SPTrans), governing body of urban transport on tires of São Paulo, who popularized in a way, their relations with the public user system through the electronic media and services provided by the company to the general public. These measures showed a good acceptance and use by the user population this type of service.

The Single Ticket (BU) had its deployment in the city of São Paulo bus system in 2004 and, since 2005, has been expanded to the metroferroviários systems. According to Sousa [2012], the numbers were great and worth playing them:

- Distribution and sale of R \$ 5.7 billion a year in "electronic money";
- 12.5 million of transactions per business day, on 15 000 buses and 153 stations of the Metro / CPTM;
- Average 650,000 online refills per working day (peak 1 million);
- 70 to service stations, connected via Web;
- Issue and distribution of 4 million cards per year;
- 10,000 sales outlets of electronic credits, spread over the entire city and MRSP;
- 23,000 recharging machines (local + public companies);
- More than 300,000 visits / day to web pages;
- Compensation in the amount of approximately R \$ 20 million per working day, the operators of the municipal transport, the Metro and CPTM. [SOUSA, 2012, p. 146]

Another aspect that should be considered are the use of social networking tools as drivers of the use of public services.

According to Lima (2009), considered the government relations, e-government is defined by the government's relations with citizens (society), companies, investors and the government itself. Still, he said that the e-gov can be recognized (sic) as an opportunity to rethink how governments provide services to citizens, serve the needs of government information to users and create environments with a high degree of accountability in the conduct of public policies.

In relations with social media, the experience of SPTrans also surprising, in 2012, said Pelegi [2012, p 152-160]:

Over the past three years more than 45 million Brazilians belong to the middle class began to access the internet. It is important to note, in this universe, that among the mobile phone users 35% have web access.

But most important to note is that while the class A is adept exclusivity, Class C seeks inclusion, which shows a greater potential for activity on social networks.

Given these data, it seemed inevitable that SPTrans were in the same universe where they are, if not most, of them young.



Today we can say that increases the interactivity of the company with the population through social media. Examples are the page numbers on Facebook or Twitter and the fact that many users avail themselves of these means to get their information or forward any complaints, as shown in Tables 1 and 2.

FACEBOOK	People talking about it	Total tanned the page	New tanned on the page
	2,125	23,812	139

Table 1: Access to Facebook data. Source: SPTrans, 2015 (16/7/2015 day situation)

TWITTER	Twitter	Followers	Likes on day
	40,5	364	103

Table 2: Access to Twitter Data. Source: SPTrans, 2015 (16/7/2015 day situation)

## 5. System on-line to user information

For a while it was almost a dream to imagine that you have a card you would use to pay for your bus, and that this would still give you the benefit of being able to transshipments, up to 4 (four) integrations in the period of 2 (two) hours, the public transport system on tires in Sao Paulo. Today, moreover, due to the Single Ticket, yet we have a computerized system which provides individual bus users the ability checks online about the availability of transport services for urban bus and recent news on the operational handling of situation of exclusive lanes (BRT - Bus Rapid Transit) and main roads.

The suggestive name of Get Smart [SPTrans, 2014] is the interface that the bus user uses the monitoring SPTrans system, where it can verify speed corridors, forecast stop time at the point of corridors and lines and view the positioning of the vehicles in its path.

Between 2005 and 2008, to deal with the complexity of the operation and assist the management of the public transport system by bus, SPTrans developed and implemented for the fleet of the municipal system resource monitoring and gathering information based on onboard electronics technology (LAV - Automatic Vehicle Locator). These features, combined with the technology of electronic fare collection (electronic ticketing), now part of the Intelligent Transport Systems (ITS - Intelligent Transportation System).

Simultaneously, developed in conjunction with Microsoft's Brazil, a robust system of communication, interpretation, processing and storage of data collected online operation of transport services. This system, called Interconnected System Monitoring - Yes, operates in the operational, tactical and strategic, day-to-day operations, configuring itself as the main computer system management support services. [FERREIRA, 2012, p 122 -. 123]

The SIM system, in July 2015, is used in the pilot project of the new bus operating model, "controlled operation", the city of São Paulo. It is a tool, still precarious, so that the system manager has some level of control over the same. It is developing a new system to be attached to this, to not only allow monitoring as well as full control of the complete system.

Importantly, the Operating Subsidiary model brings back to the government the effective management system and, therefore, needs all possible technological tools to control the vehicles in operation, and their



embedded devices, the connections and terminal points intermediate control. To this end, the city of São Paulo has relied on the expertise of its employees and received significant support from the scientific community.

## 6. The community contribution of innovation scientific

When in 2013, there were demonstrations of protest in several Brazilian cities, making Brazil headlines in the world press. In Sao Paulo City Hall faced a movement motivated by the announcement of the increase in bus and subway fares, transport which directly serve the city. As reported by Tartaroti [2015]

Expressions of June 2013, took place in São Paulo, in just 13 days claimed victory, influenced and put a priority public transport policies at the expense of individual transport decisions on the agenda of the municipal government.

The protests reached their main goal: the revocation of the tariff increase. But more than that, allowed guide the government's agenda, society and the media, which contributed to a number of actions were taken by the city. The concession contracts and permission to operate the bus, which was in force for 10 years, mature in July of that same year and the new invitation to bid for the next 15 years, which had been published, he was suspended and extended contracts, enabling new studies were performed in order to adopt a new concession model and operation of municipal public transportation system

With the demonstrations of June 2013 it opened a window of opportunity, being utilized in the following years by the municipal government implemented several actions in favor of public transport and non-motorized. However, a complete overhaul in the São Paulo bus system is also essential because, after 12 years of the last model implemented in the city, there is a favorable political climate to rethink the concession model as a whole and promote the changes desired by users. [TARTAROTI, 2015 p. 13]

The Municipal Transport (SMT), the body responsible for the management of urban mobility through the municipal companies, CET - Cia. Traffic Engineering, manager of transit and SPTrans - São Paulo Transporte SA, urban public transport. Adopt public policies towards improving the average speed of buses and deploys dedicated lanes for buses, giving priority to public transport. Creates the City Council Traffic and Transportation (LMCC), promoting social participation and announces the opening of data and information of public transportation, giving transparency to the management.

In October 2013 during the first Hackatona promoted by SPTrans, which provided for api (Application Programming Interface) information in real-time bus (location and characteristics of the 15,000 buses every 40 seconds) and helped startups to develop applications that facilitate life of the users of the municipal bus system, saw the first opening data. The second Hackatona was organized by the Traffic Engineering Company (CET) in March 2014, with the same data openness principle, this focused on transit and movement of citizens. Concurrently with the success of the experiments, visualized if a high quality of the solutions proposed, evidencing the demand of government to innovate and develop solutions to users and internal management.

It was then established in March 21, 2014 by the Municipal Transport (SMT), in São Paulo the Technology Laboratory and Open Protocols for Urban Mobility (CETSP, 2015), which aims to design and prospecting solutions for improvement in public transport management, traffic, urban mobility and make available to the general public reports on these sectors.

This lab is the result of the union of municipal public sector (Department of Transportation, CET, SPTrans and Prodam), private companies, University of São Paulo (via the Support USP Foundation) and Massachusetts Institute of Technology (MIT).

University of São Paulo, through its Foundation, has partnered with the city of São Paulo, through the SMT, for purposes of the Laboratory. Due to this partnership the educational institution search as a research project to develop open line protocols in software that is developed for the integration of public



transport management and traffic lights. There are five lines of research to be developed: data storage, migration of data, the user products, functional validation of equipment and open protocols studies.

The work is done together so that groups with different focuses in mobility Transport and transit occupy the same physical space, interacting and sharing data and knowledge. The laboratory known as MobiLab is located on the premises of SPTrans, received the following awards:

- Mobiprize 2014: 1st place for the recognition of initiatives implemented in Mobilab during the World Congress on Intelligent Transportation Systems (ITS), held in Detroit - USA, in 2014.
- SustainableTransportAward 2015 (Organized by ITDP): 1st place along with Rio de Janeiro and Belo Horizonte.
- It was also a finalist in the competitions: Wego Governarte 2014 and 2014.

## 7. Considerations and some results

The actions of e-gov in Brazil offer vast conveniences in the direction of improving the management of information in favor of maximum efficiency and state efficiency and social use of government information, even that still shows the need to have a research agenda Interdisciplinary more detailed in that field.

We must highlight the important innovation in the participation of the academic community in this effort to build e-government in the city of São Paulo, as this has shown points of high relevance and high productivity. Meaning a great example to follow.

Political, technological, organizational and human resources have been mobilized in an unprecedented proportion in the Brazilian state to undertake projects in such broad scale.

Much would still have to speak of the efforts and the search for innovations in Brazilian municipalities and state governments. But when it comes to the development of the tool itself, there is only to point out that despite the adopted democratic politics, still appears with great evidence the problem of budget constraints and lack of resources.

As regards transparency afforded by e-government, it is worth mentioning that this allowed the Brazilian population the possibility of finding where financial resources are allocated and what priorities have been established within the government. And it should allow further monitoring of the implementation of these priorities and the delivery dates of the works and projects and their reciprocal payments, for the avoidance of gaps and omissions criminal.

From the point of view of teaching and developing research and information science, there is an evident demand for new results and positive results thus far have been observed, given the participation and the proper involvement of the academic community in the Mobility Lab experience. To sponsor the search for innovative solutions to the development of the Brazilian e-gov. This powerful democratic tool has been served and a great encouragement and inspiration for the evolution of transparency in Brazil.

Within the applied sciences, focused on public administration this article admits that new research on e-gov have to come to add, and are lacking in public knowledge management gap of the Brazilian population as shown has grown exponentially in using this medium. And even as it was shown on innovation and strategy of the scientific community contribution in the case of São Paulo.

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#### Acronyms and Abbreviations List

- MobLab - Mobility Lab
- ICT - Investments in Information and Communication Technologies
- IBOPE - Instituto Brasileiro de Opinião Pública e Estatística
- ITWG - Working Group on Information Technology
- SI - Incorporated into the Information Society program
- MCT - Ministry of Science and Technology
- CEGE - Executive Committee of e-gov
- ICTs - Information and communication technologies
- SPTrans - São Paulo Transporte SA
- SISP - Sphere of Management of Information Technology Resources System
- BU - Bilhete Único
- CPTM - Companhia Paulista de Trens Metropolitanos
- BRT - Bus Rapid Transi

