

Is Brazilian Open Government Data Actually Open Data? An Analysis of the Current Scenario

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ABSTRACT

Open Government Data (OGD) hold great promise for transforming the efficiency and effectiveness of public services through the ease of publishing and access to government public information or through the offer of new kinds of services, such as smart cities services and applications. In this work, we analyze the Brazilian OGD current scenario and the main difficulties and challenges of developing applications using that data. First, we performed a structured analysis of Brazilian OGD repositories according to OGD definitions. Then, we analyzed the development of two similar applications that use the OGD of two main Brazilian cities and were submitted to different cities' application contests and were well evaluated in both of them. Based on the analysis, this work concludes that Brazilian OGD initiatives have to resolve some issues before being considered truly open data for use in application development at large.

Keywords: Brazil, Digital Society, E-Government, Open Cities, Open Data, Open Government Data, Open Government Partnership, Smart Cities

INTRODUCTION

In the current information era, which is based on real-time worldwide communication, the increase in the capacity for both governments and citizens to publish and consume data is changing the ways in which governments operate, how and what the public sector provides,

and ultimately how governments interact with and engage their citizens. This new context, also called "Open Government" has been currently described as "the use of technology—especially the collaborative technologies at the heart of Web 2.0—to better solve collective problems at a city, state, national and international level" (O'Reilly, 2011), and can be used as the basis of

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development of “smart” application domains, such as smart cities, smart governments, and smart citizens (Allwinkle & Cruickshank, 2011).

To take advantage of this new context, many governments around the world have been making efforts to benefit from Web technologies. The Open Government Partnership (Partnership, 2011) is concrete proof of that. It was launched in 2011 by eight founding governments (Brazil, Indonesia, Mexico, Norway, the Philippines, South Africa, the United Kingdom, and the United States), and rapidly increased to 63 countries that endorsed the Open Government Declaration.

Different governments launched distinctive approaches to achieve their goals. For example, in February 2014, the U.S. government had six current commitments and launched an open-data portal that contained nearly 89,000 datasets; the United Kingdom also had six current commitments and a portal with about 13,000 datasets; and the Brazilian government had 22 current commitments and an open-data portal containing about 200 datasets.

Although the literature shows that it is possible to take advantage of e-government and open-data initiatives (Andersen, 2009; Bertot, Jaeger, & Grimes, 2010; Kim, Kim, & Lee, 2009; Picazo-Vela, Fernandez-Haddad, & Luna-Reyes, 2013; Sayogo & Harrison, 2012; Wong & Welch, 2004), some challenges ranging from cultural to technological (Dada, 2006; Hung, Chang, & Yu, 2006; Jho, 2005; Piotrowski & Van Ryzin, 2007) have to be considered in order to actually achieve the goals of open government. Primarily, the use of information and communication technologies (ICT) remains largely focused on supporting reporting functions (Linders, 2012), overlooking the wealth of opportunities to employ ICT to improve the effectiveness of strategic planning and aid management as well as to promote public health (Picazo-Vela et al., 2013). In addition, the challenges are bigger for developing countries (Dada, 2006; Wahid, 2012).

The big investments made by the governments of many countries for the development

of open government data (OGD) infrastructures makes it necessary to evaluate them systematically in order to better understand and assess the various types of value they generate, as well as identify the required improvements for increasing this value. However, as noted by (Ubaldi, 2013), “So far, little has been done to analyse and prove the impact and accrued value of these initiatives.” Despite the existence of some studies regarding to evaluate OGD portals, in general they: (i) do not follow the same evaluation framework, allowing comparisons with other studies; (ii) focus only on federal governments’ OGD portals, taking no account of the value of municipalities’ portals for the context of smart cities; and (iii) undervalue the point of view of software developers who use that data.

In this context, this work aims to analyze the current scenario of the Brazilian OGD portals, along with the main difficulties and challenges of developing applications that use such data according to software developers’ point of view. To achieve these goals, we first used the principles of OGD to analyze two current and active portals launched by Brazilian municipalities, comparing them with each other and with the National Brazilian OGD Portal. Next, we developed two applications using data from the analyzed portals, submitted them to different cities’ application contests (one application was the winner of one contest) and then interviewed the developers regarding their point of view about OGD portals used on the development.

The reminder of this paper is organized as follows. First, we outline an overview of the theoretical background and definitions about OGD, OGD portal evaluation, and the Brazilian OGD scenario. Then, the research methodology used in this paper is described. Next, the results and findings from the analysis of OGD portals, according to OGD principles, are presented and discussed, followed by the analysis based on the developers’ point of view. Next, the results of both approaches are discussed and related to each other. Finally, conclusive remarks end the paper.

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