Technological innovation, open data and big data: a new moment to carry out social control

With the advances in information technology, activities such as going to the bank, watching movies, shopping, monitoring legal procedures, distance learning and requesting services are being carried out using a simple smartphone. Technology has changed our notion of time, distance and space and produced great impacts that affect the way people relate to each other, the way we work, produce, communicate and have fun. It is no wonder that, parallel to the real world, there is a world that is represented virtually – the so-called "cyberspace" – with codes

and a language of its own but that is greatly interrelated with the real world.

Today, this interdependence between the real and virtual worlds is so Strong that it is hard to imagine that one can exist without the other. Public administration also is more and more immersed in this world. So much so that the use of technology has enabled the expansion and improvement of services offered to society and changed the way the government works and relates to the public.

In the 60s, the Federal Data Processing Service was created (Serpro). It is a company linked to the Ministry of Finance with the objective of modernizing strategic sectors of Brazilian public administration and making them more agile. Together with Serpro, the National Treasury Secretariat created the Integrated Financial Administration System of the Federal Government (Siafi), which was implemented in 1987 with the purpose of integrating the systems of financial programming, budget execution, and internal control of the Executive Branch.

After Siafi, other programs and actions were made possible by using ICT, such as the Control System for Agreements and Transfer Contracts (Siconv) and the Sole Registry. These programs improved the operation of programs in several areas, including the social area. These measures were reflected both on the daily life of the population, in such areas as procurement, logistic, storage and control of data related to government actions.

The innovations have also required that the public administration take measures in the area of IT resources, which involves data collection and storage processes, equipment, computer programs, investments and training of personnel. Therefore, one notices that technology applied to information influences the bureaucratic organization of the Government from planning, to control, to the execution of public policies, the manner and possibilities of service delivery, and dialogue with society. In addition, it proposes new directions for government action, aimed at promoting and disseminating the social impact of technological development.

As an oversight body, the Federal Court of Accounts of Brazil (TCU) monitors the technological advances of the federal public administration and carries out audits aiming to, above all, contribute to the sound use of public resources and to the improvement of the use of technology to favor the delivery of quality public services to the population.

Among the numerous oversight actions performed by the Court in this area we can mention TCU's monitoring of the development of the new Siafi, the audit of the Sole Registry of the Social Programs of the Federal Government, the audits of the Contract Monitoring Systems of the National Transportation Infrastructure Department (Dnit) and of the Siconv data base. Other examples are the monitoring of the Fingerprint Identification Automated System (Afis), used by the Federal Police Department. Another activity carried out by TCU was a diagnosis of 448 federal public organizations, from the three branches of the Republic, and one of the Federal Public Ministry. This diagnosis had the objective of understanding the quantitative and qualitative aspects of the human resources structure in the area of information technology.

Minister Raimundo Carreiro was the rapporteur of the diagnosis and Substitute Minister Augusto Sherman was the reviewer. The diagnosis pointed out gaps and opportunities for improvement and disseminated the good practices
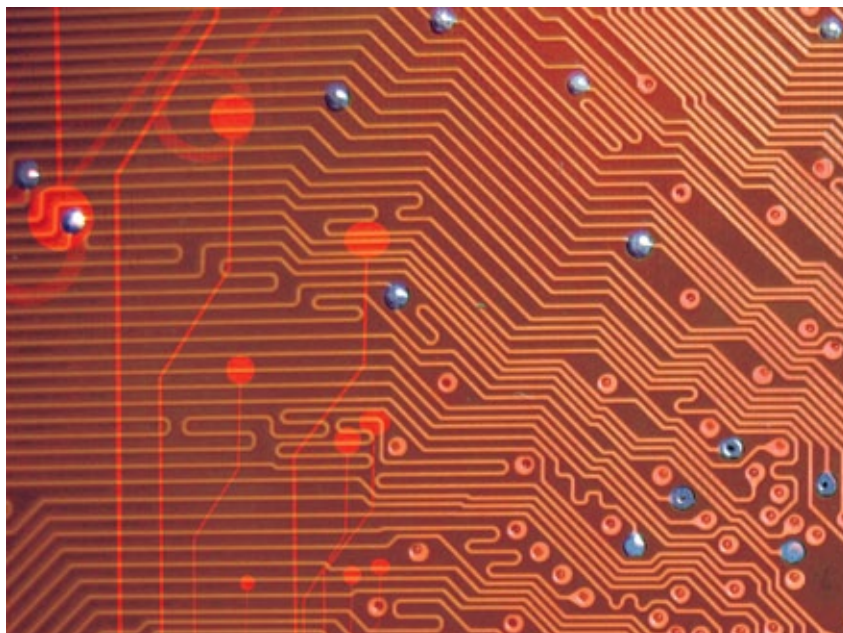
found, capable of making IT good governance feasible, aiming at improving the IT human resources structure as well as the effectiveness of government performance. Based on this work, TCU issued alerts to the National Justice Council, to the Public Ministry Council, Planning Ministry and Department of Coordination and Governance of the State Enterprises, stating the need to reformulate the policy related to the IT personnel policy. Among the recommendations are the creation of specific IT positions, distributed in careers; appointing exclusively tenured IT employees to perform managerial functions; establishment of a remuneration that is coherent with the relevance of the activities performed; and permanent capacity building activities for employees.

According to TCU President, Minister Aroldo Cedraz, information technology covers all areas of public management and can contribute to the oversight activities of TCU as well as of the agencies that execute public policies. "TCU is committed to giving this contribution to the Brazilian State so that citizens can truly feel that the public resources are being spent in a more efficient and effective way", he stated.

This transformation in society makes it possible even to use information technology to increase citizen participation in building and executing new public policies. This shows that social control has advanced. The initiatives that illustrate this new reality are related to open data, which is a global movement that states that government data, because they are public, should be available to everyone.

In view of this new context, TCU carried out a survey to find initiatives of publication of open data in federal public administration, taking into consideration how the government and society used the solutions of collection, storage and processing of big data as strategies to achieve transparency and modernization in public management. The rapporteur of this survey case was Minister Benjamin Zymler. The survey found that in order for a government to be considered open, it should be committed to increasing the availability of information on government activities; to supporting social participation; to implementing the highest professional standards of integrity possible in the Administration; and to increase access to new technologies that promote transparency and accountability. For Aroldo Cedraz, "Before, the work in the area of information technology was linked to structured data. Now, through non-structured data and new Technologies, such as big data and data mining, it will be possible to render services more transparent, more agile and, above all, the State will be able to have more effective control over its public policies".

TCU found that there are already actions in place in Brazil that make government information available through open data thus promoting transparency, accountability and popular participation in public administration. Some examples are the creation of the Transparency Portal; the Access to Information Law (12.527/2012); participation in an International initiative that disseminates and promotes globally government practices related to transparency; and the creation of the Open Data

National Infrastructure (Inda) and of the Brazilian Open Data Portal (dados.gov.br). Despite the initiatives, according to the court, the actions adopted are still not sufficient to implement and popularize open government in the federal scope.

The work performed by the court also brought to light an International panorama of making government data available in open formats and presented a set of technological solutions implemented in other countries to solve different problems in society. These solutions were built based on private or governmental initiatives. As an example, Minister Benjamin Zymler mentioned the solution adopted by the English government called FindTheBestHospitals. This solution "makes it possible for the citizens in London that need medical assistance to better identify the best and nearest hospital by comparing indicators based on evaluation made by patients, medical staff, surgery statistics, mortality rates and average treatment time, among others", he stated.

President Aroldo Cedraz believes that, when public administration is opened, the possibilities of creating solutions to improve public service delivery by the government and by society itself will increase. Cedraz reasserted that that, in this new framework, TCU is enhancing its knowledge in the area of new technologies in order to apply them when carrying out oversight. "In order to have a permanent exchange of information with society and to inhibit corruption, we need to use immediately these new technological tools, especially the ones related to open platforms. All this to increase transparency and strengthen social control", Cedraz highlighted.