



Technological innovation and promotion of citizenship

Augusto Sherman Cavalcanti
Substitute Minister of the Federal Court of Accounts

Born in Natal (RN- Brazil), Augusto Sherman Cavalcanti has been a Substitute Minister of the Federal Court of Accounts (TCU) since 2001. He has a Bachelor in Law and in Electronic Engineering and a Graduate Degree in Process Control by the Federal University of Brasília (UnB). He was a Federal Government Auditor of TCU where he also held the position of Advisor and Chief of Staff of the Office of the Public Prosecutor. He was a graduate course professor at the Public Law Institute of Brasília (IDP) and at *Centro Universitário de Brasília (UniCeub)* in the fields of Financial Law, Constitutional Tax Law and Administrative Law. He is very active in matters regarding Information Technology Governance at the Court.

1. What kind of value must the Brazilian State aspire for the promotion of technological innovation policies?

Respect and value of citizenship. Other values would be economy, efficiency, efficacy and effectiveness, but, in my opinion, the greatest value to be sought is the promotion of citizenship. The State must use the existing technology in an intensive and responsible way and the technological innovation to expand and improve the services provided to citizens, offering services of different types in the broad spectrum of its operation, such as education, health, social security, transportation, security, social assistance and so forth in a fast and simplified way. Good quality services and with no need to stand in line.

2. How should social technological innovation - understood as new practices aiming at changing a social situation of exclusion and risk - be approached or inserted into public policies?

In an urgent and responsible way, prioritizing social sectors of greater risk. It is urgent because we know, especially this Court due to the audits it performs, the conditions of risk and social exclusion of great part of the Brazilian population. In a responsible way since technology and innovation must be used appropriately to produce adequate results, according to the technique and good practices that support them. The identification of priorities based on risk criteria is fundamental, once there is not enough human, technological and financial resources to face all matters simultaneously.

3. There is a common understanding that a country that does not have its own technology or does not have sound relations in this area with other

countries may become dependent in several aspects in a permanent manner. How is the State responsible for encouraging technological innovation and what guaranties must be sought in processes and partnerships of technology transfer?

Technology advances in an exponential speed. The country that does not invest in research, development and technological innovation and does not ally with other countries for that purpose is fated to being a backwards nation and permanently dependent. It is definitely the State's responsibility, as one of the development promoters and as an institution that communicates in an international environment with other national States, to provide the necessary encouragement to the sector, including the search for strategic partnerships. Nevertheless, this does not exclude nor suppress the participation of the private sector in the same search, which is many times necessary. On technology transfers, partnerships must prioritize full transfer of knowledge and internalization of products, materials and techniques of which they are composed.

4. Technology development has a considerable cost, which usually only great enterprises and the State can afford. How can one balance the need for technological development by the State and the apparent shortage of resources? Is it possible?

Balance is the result of priorities – if they are well defined. There is indeed the tradeoff between meeting current and urgent needs of the State and society and the necessary structuring for meeting future needs, which are usually greater. Creating this structure for the future necessarily involves development, acquisition and use of technology

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and innovation, which currently present high costs. Because of the shortage of resources, choices need to be made and priorities must be defined also considering the future, for this is what we are heading for. I believe that mechanisms of international funds may be useful for the solution of this dilemma. Moreover, several incentive public policies have been introduced in the last ten years to promote participation of the private sector, including in partnerships with institutions of education, research and development by granting fiscal incentives.

As examples, there is the law Lei do Bem (Law 11196/2005), which grants fiscal incentives to businesses investing in research, development and technological innovation, the Lei Rouanet da Pesquisa (Rouanet Research Law, 11487/2007), Innovation Law (Law 10973/2204) and the Information Technology Law (Law 8048/1991, which was amended by Law 11077/2004). These norms enable the reduction of taxes in exchange for investment in research and development, promoting partnerships among businesses and institutions of education, research and scientific and technological development. Under these conditions, I believe it is possible to solve the dilemma.

5. What changes may be identified in public administration because of the use of information technology (IT)? How can technological innovation contribute to a greater management efficacy and efficiency?

By generating new technologies or improving those that already exist, technological innovation significantly contributes to the performance of management activities. In my opinion, the main change which is currently visible in the administration is high dependency, which tends to grow in relation to the use of IT solutions in the accomplishment of the institutional mission. Almost all relevant management activities are supported by IT solutions nowadays. For instance, let's look at the social security, the fiscal, security, labor and employment and the social assistance systems, etc. They strongly depend on the good functioning of the IT solution that supports them. Why? Because when IT is properly used, it offers efficiency, agility, low costs, broader coverage of services, better control of activi-

ties and so forth. Therefore, there is a direct relationship between the adequate use of technology and the positive performance of the management activity with greater efficiency and efficacy.

6. Information Technology governance is a part of corporative governance, which seeks to ensure that the use of IT adds value to business at an acceptable risk level. It tends to avoid or reduce management weaknesses, which result in a loss of quality and efficiency of public services provided to society. How do you evaluate the current stage of IT governance of the Federal Public Administration?

Good public services to citizens, as previously mentioned, depends on the good performance of administrative institutions. Nowadays, good performance can be translated into good Corporative Governance, which involves good IT Governance due to the dependence mentioned before. Since 2007, the Federal Court of Accounts performs biannual audit surveys aiming at verifying IT Governance in the Federal Public Administration. The last survey was performed in 2014 and it presented an evolution in several aspects, as for example, in the planning, in the oversight of IT contracts and in the structuring of decision support boards. The number of federal public bodies that achieved an intermediate and advanced stage of the index measuring IT Governance (iGovTI) increased. In short, there was an evolution, which means that the public administration is concerned with the matter and has adopted measures to reduce weaknesses. There is still much to be done regarding IT personnel policy and the adoption of internal controls based on risks analysis. However, I believe that an impor-

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tant step was taken in the sense of raising awareness of the federal administration regarding the need to work to improve its Internal IT Governance.

7. How does the Court contribute to the promotion of improvements in governance and of information technology in the Federal Public Administration?

With audits and decisions – many of them are already consolidated by case law. For the audits and deliberations, the Court strongly lies in the systemic analysis and in the use of good international practices that rule the good IT Governance, in addition to legal parameters. Thus, these good practices become part of the everyday life of those under the jurisdiction of the Court, changing the reality of the federal public administration regarding the adequate use of IT. I must highlight the influence of the Court’s precedents in the issuance of the specific legal norm published by the Ministry of Planning to regulate the IT contracts in the federal administration. I would also like to highlight that the TCU offered an individual diagnosis to each body that took part in the biannual audit survey on IT Governance. The diagnosis shows the strengths and weaknesses in several parameters that rule Governance. Based on the diagnosis, the bodies had the opportunity to make the necessary corrections and amendments and, from there, improve their maturity in IT Governance. Therefore, the Court’s contribution derives from the joint performance of its Ministers and its technical staff, especially those who compose the Department of IT Audit (Sefti), Department of IT Infrastructure (Setic) and the Department of IT Solutions (STI).