Towards a new model for Government IT Management in Colombia

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ABSTRACT
In this paper we present an initiative aimed at building a smart government for Colombia through the construction of a new model for information technology management.

Categories and Subject Descriptors
K.4.1 [Computers and Society]: Public Policy Issues –regulation

General Terms
Standardization.

Keywords
Smart government, government enterprise architecture, information technology management, public policy.

1. INTRODUCTION
Nowadays, information technologies are not adding value on public agencies because of the disarticulation on technology and information management. This problem arises since public agencies make use of technology on processes unevenly and because technology is thought as a supporting service and not as a strategic factor. In consequence, contribution to agency growth and development based on information technology (IT) is almost inexistent. This conducts to low governability on IT decisions, interoperability cost overruns, low leverage on IT for conveying services to citizens, poor investment rationalization, low success rate of IT projects, lack of reutilization of IT knowledge, among other problems.

On that account, the Colombian State is requiring a new model for organizing, standardizing and orientating public agencies towards the construction of a smart government in which public agencies work together on fulfilling sector, region, and national goals through the proper IT management. To accomplish this need, the Ministry of Information Technologies and Communications (MINTIC) has committed on carrying out the required actions for building an IT Management policy for the Colombian State.

In this paper, we provide a strategy for defining the public policy that will contain the model constructs, guide and monitor public agencies during the adoption process. In the next section we characterize the Colombian context in which the strategy takes place. In section 3 we detail the activities that materialize the strategy. In section 4 we present the conclusions.

2. CONTEXT
The Ministry of Information Technologies and Communications is the entity in charge of designing, formulating, adopting and promoting policies, plans, programs and projects on the IT and communications sector, in line with the Constitution and the law, in order to contribute to economic, social and political development of the Nation and bolstering the welfare of Colombians, among other functions [1]. In December 2012, the structure of the Ministry is modified and the Vice Ministry of Information Systems and Technologies is created, which corresponds to the first technical instance allowing IT management articulation on public agencies. By the means of the Vice Ministry, MINTIC formulated the project “Strengthening of Information Technology in State and public information management” [2]. This said project contains the set of activities that materializes the strategy. The next section details the project and exhibits the impact of these activities in the construction of a smart government.

3. RELATED WORK
There are countries that have already implemented successfully IT management architectures, and have developed their own Government Enterprise Architecture Frameworks [3, 4, 5]. These reference architectures and best practices are taken as an input for building the Colombian government IT management model.

4. INFORMATION TECHNOLOGY STRENGTHENING
The overall project objective is to ensure that IT strategy is creating value for the sectors and institutions, and that IT management is well coordinated and efficient. The project has three specific objectives: (1) Ensure that Public Administration is efficient and coordinated by IT, (2) Ensure that in each sector, the administration serves the citizen effectively using IT, and (3) Support the development of public sector strategies with Information and Communication Technologies.
Within the course of the project, there are four main activities: (1) Formulating Public Policy, Standards and Guidelines for IT Management in the State, (2) Developing Skills for effective IT management, (3) Assist and facilitate adoption processes and implementation of good practices in IT management in state agencies and in different sectors, and (4) Communicate public policies and good practices, facilitate participation in IT management and patronize available IT services. Details for each of these activities are presented below.

4.1 Formulating Public Policy, standards and guidelines for IT management in the State
The Colombian State is requiring a new model for IT management that would favor the organization, standardization and institution orientation towards the use of technology as a strategic factor, allowing public agencies not only to fulfill institutional goals, but also to achieve a smart government where these agencies work together on fulfilling sector, region and national goals. For this reason, the Vice Ministry is designing and defining the Government IT Management Framework by which enterprise architecture standards and guidelines will be established for managing IT. This framework will be incrementally adopted by all public sector entities and will include the domains of Strategy, IT Governance, Information Systems, Information Technology Services and IT Use and Ownership.

In Colombia, we invest over a billion of Colombian pesos in technology [2]. However, according to IT suppliers and demanders, the IT procurement process has an inadequate structure and risk management, and an inadequate response to the client needs. Aiming to fulfill these needs, the Vice Ministry of IT is developing procurement guidelines for goods and services related to technology with the aim of generating more efficient and effective purchases. These guidelines include standardizing the documents associated to the procurement process, training public officials in the areas of information technology and procurement rules, establishing purchase price agreements and commodity exchanges, modifying current regulations to suit the needs of Information Technology, and the construction of an online IT store for supporting the procurement process through the State.

4.2 Developing Skills for effective IT management
The Vice Ministry has raised the need for establishing leaders within public agencies and sectors capable of generating strategic value from proper management of information and technology. We have implemented the National GCIO (Government Chief Information Officer) and we seek to develop and establish the figure of the Public Sector CIO, both in sectors as public entities. To structure, implement and sustain this function, we require a formal effort focused on building critical skills for developing IT strategic management in the public sector.

During the first quarter of 2013, we developed a set of workshops with IT leaders from the public sector to diagnose the current role of the CIO in Colombia and establish the network that will allow the adoption of the new IT management public policy. As a result, we discovered that most of the actual leaders are not well positioned neither formed properly at the professional level. Given that the United Nations University has a program for implementing the system of Public Sector CIO, we proposed a cooperation agreement with this entity and a set of Colombian universities to incorporate the training model and generate the training capacity through the higher education institutions.

4.3 Assisting and facilitating Adoption Processes and Implementation of Good Practices in IT Management
Assisting and continuous monitoring is required to ensure that the public agencies are effectively adopting the standards, guidelines and policies of the new IT management model. For assisting, the Vice Ministry provides the theoretical and practical guides for adopting the standards and works together with public agencies through the implementation process. For monitoring, relevant information about the implementation process is collected by the use of a report form and market research and then analyzed.

4.4 Communicating public policies and good practices, facilitate participation in management and patronize available services
The Vice Ministry uses socialization mechanisms, dissemination and promotion of the results achieved by the project, so that the community in general (users of services and each sector agencies) know, get involved and are committed to be part of the initiatives promoted by this project to.

5. CONCLUSIONS
In this paper we presented an initiative of the Ministry of Information and Communication technologies aimed at building a smart government for Colombia through the construction of a new model for information technology management which is composed by: (1) A framework for the entire state, to harmonize IT management. (2) Knowledge and tools available to agencies that would enable them to ease their management and Information Technology and (3) Adoption, assisting and monitoring processes of these best practices and standards. We expect that these results will transform sectors, government agencies and the services they provide, in line with the construction of a smart government that manages IT effectively for fulfilling sector-wide goals.

6. REFERENCES