

## Uraía Platform Inspiring Practices Catalogue

### SMART CLOUD: SOLUTIONS FOR SMART CITY MANAGEMENT COLOMBIAN FEDERATION OF MUNICIPALITIES (FCM)

#### About the FCM<sup>1</sup>

The Colombian Federation of Municipalities (FCM in Spanish) is the association representing Colombia local governments in the formulation and evaluation of public policies, with the objective of defending and promoting decentralization and local governance. FCM brings together efforts at international, national, sub-national and public-private level to reinforce municipal management in an integrate manner. Amongst other activities, the FCM: represents the interest of municipalities vis-à-vis the Congress of Colombia and the national government; offers legal advice and technical assistance for municipalities' projects; provides support to project design and identification of financial resources.



#### About SMART Cloud<sup>2</sup>

One of FCM mission is to encourage the use of technology into the Colombian local public administration to build intelligent and sustainable cities. In March 2016, FCM created the company "SMART Cloud" with the objective of technically support Colombian municipalities to manage services in a more efficient, effective and transparent manner, thanks to better access to data to facilitate accurate decision-making. SMART Cloud has two main characteristics. On one side, it constitutes a technological platform able to provide cloud based services supported by a physical data centre (TIER IV) composed of communications, servers and data storing and processing equipment. The centre contains a portfolio of tested online apps offered to municipalities covering all aspects of municipal responsibilities and administration of public resources. Those resources include water management, hospital management, financial planning, transport and mobility, e-government, digital certification, security, etc. SMART Cloud combines cloud computing, IoT (Internet of Things), big data analysis, Infrastructure as Service (IaaS) and Software as Service (SaaS). On the other side, SMART Cloud offers technical assistance and professional support for municipalities, thanks to the possibility to access a team of specialist consulting on the start-up of projects, monitoring, developing, etc. SMART Cloud facilitates the following:

<sup>1</sup> More info: <https://www.fcm.org.co/>

<sup>2</sup> More info: <http://www.SMART-cloud.co/>

- To transfer from a model of buying technology to a model of service delivery, where local governments can access a complete service without having to invest in technological infrastructure, using the one owned by SMART Cloud. The services are accessible to municipalities by subscribing a monthly fee that varies depending on the type of services and the size of the municipality.
- To shorten the contracting times, facilitating quick implementation of projects by offering flexibility thanks to the use of inter-administrative agreements.
- To provide services in a consistent and uniformed way, creating economies of scale. The solutions developed by SMART Cloud can easily been adopted by small municipalities who would not have the financial capacity to invest in such technological developments.

One of the services offered by SMART Cloud is the initiative “Cloud services from end to end applied to the public lighting system”.



### Context: municipalities and public lighting <sup>3</sup>

Colombia has 48 million inhabitants, 2/3 of them living in urban areas. The country has 1.101 municipalities and districts, and 90% of them have less than 100.000 inhabitants. In Colombia, 30% of the CO2 emissions come from the energy sector. In order to fulfil the commitment signed at COP21, the national government has identified priority actions to produce savings in the energy sector; one of them is the upgrading and technological transformation of public lighting, actually consuming up to 3% of the total energy of the country. Additionally, public lighting management represents a heavy burden to Colombian municipalities as the service delivery corresponds to an average of 5% of their income.



<sup>3</sup> Source : [http://www.upme.gov.co/Docs/PEN/PEN\\_IdearioEnergetico2050.pdf](http://www.upme.gov.co/Docs/PEN/PEN_IdearioEnergetico2050.pdf)

## SMART Cloud and public lighting renovation

To support municipalities in renovating their public lighting system towards greater efficiency, SMART Cloud offers two services: in a first phase, it offers support to modernize street lighting with LED technology and in a second phase it offers a tele-management and tele-measurement systems. To implement the solution, the municipalities must first conduct an audit about the energy solution more convenient for the municipality's need, then sign an agreement between the municipality and SMART Cloud including the services provided, the duration, the costs, etc. and finally implement the solution.

SMART Cloud is currently being implemented in six municipalities of Valle del Cauca. There is still no quantitative assessment of the initiative due to the short period since its inception in March 2016, but it is estimated that the average savings that will result from the initiatives will amount to 60%, thanks to the use of LED combined with tele-management and tele-measurement. The city of Bucaramanga<sup>4</sup> in particular estimates a 59% of energy savings, amounting to approximately \$ 2 million USD, with additional \$ 1.8 USD million savings in maintenance costs.

## Recommendations

According to Sandra Castro Torres, FCM's public policy advisor, the following actions are recommended to guarantee the success of this kind of projects:

- To adapt the institutional framework to technology, ensuring that the municipality has the necessary capacity to manage the project.
- To integrate the technological solutions into the overall management of the local government.
- To take the necessary time to dialogue with all the institutions involved.

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<sup>4</sup> Source : <http://alumbrado.bucaramanga.gov.co/files/documentos/InformeEficienciaEnergetica.pdf>