Uraía Platform
Inspiring Practices Catalogue

Interview with Victor Gancel, Programme Manager
Climate KIC, Low Carbon City Lab

About Climate Kic and the Low Carbon City Lab project:[1]

The Climate-KIC is one of three Knowledge and Innovation Communities (KICs) created in 2010 by the European Institute of Innovation and Technology (EIT); a European Union body whose mission is to create sustainable growth. Climate-KIC addresses climate change mitigation and adaptation. The Low Carbon City Lab (LoCaL) is a Climate-KIC programme that aims to bridge the climate-funding gap for cities by providing cities and investors with training, project preparation, investment mechanisms and impact assessment tools. Since 2015, LoCaL has built a portfolio of 13 projects and created a collaborative ecosystem of more than 30 Climate-KIC partners, cities and international initiatives.

1. **From your point of view, how fighting climate change can have positive impacts on the environment and on local governments´ finances?**

Climate innovation offers many paths to positively impact municipal finances. One straightforward and obvious way of fighting climate is to reduce energy consumption with efficiency measures, which will reduce the city's energy bill. At a different level, designing high-quality environmental projects also enable cities to access new sources of funding, the so-called "climate finance". Several schemes and frameworks are being developed and piloted at a global scale: city green bonds, city voluntary carbon markets and project preparation facilities, among others. This expands and diversifies cities' sources of funding while

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[1] For more information about LoCal and Climate Kic: www.local.climate-kic.org

providing a framework to design, develop and operate climate solutions. In addition, these projects can contribute to strengthening cities' profile and attractiveness globally.

2. How can local governments use SMART technologies to implement policies that will fight climate change and reduce municipal expenses?

By their nature, SMART technologies help mainstreaming data collection, analysis and generate information that can be used in a climate context in order to help cities make better and more cost-efficient decisions, leading to increased revenues in the long term.

3. Could you mention a few activities of under the Low Carbon City Lab programme on these topics?

We have a full set of activities using SMART technologies in a climate change context. For instance, the use of mobile phone signals for cheaper and more accurate traffic monitoring; open-source GHG sensors' networks to produce cheaper and more accurate emission inventories; 3D city models with GHG fluxes information; online decision making tools for low carbon investments within cities, etc. All these activities are piloted and designed in collaboration with cities. Sometimes cities can also be the technology developer. It is the role of the Climate-KIC and LoCaL to help them designing and scaling the solution.

Knowing the quality and energy performance of residential housing is crucial for city planners and real-estate investors. However, this information is costly and hard to generate. One of our projects, the "3D GPC" is developing an application that automatically extracts building energy performance from online real-estate platforms. Making such performance assessment known prior to any transaction becomes the norm in an increasing number of countries across the world. By collecting this information automatically, we enable cities to update their databases frequently at a lower cost, with greater accuracy, report automatically to a various set of emission standards and finally make better informed decisions. A pilot project has been implemented in Potsdam, Germany, and is on its way to be implemented in other European cities.

Municipal GHG emission data repositories are expensive and time-consuming to build, maintain, validate and evaluate. However, they are key to cities since the absence of detailed cost/benefit measurements make difficult to understand results of mitigation strategies. The Carbon Track and Trace (CTT) project aims to develop an automated system for GHG emissions monitoring in real-time. The system will enable a municipality to automatically log and analyse calibrated measurements of their direct GHG emissions. This data will allow municipalities to develop evidence-based policy for mitigation strategies, linking specific actions and strategies to real data on reductions. This GHG software system is composed of an Internet of Things (IoT) sensor network that collect real time measurements about GHG levels, which are than relayed by gateways communication technologies to an open cloud platform allowing for easy integration with other applications. Afterwards, tailored data analysis integrates the sensor measurements with other open data sources to generate new insights and city-level emission overviews. The results of the analysis are visualized to different stakeholders.
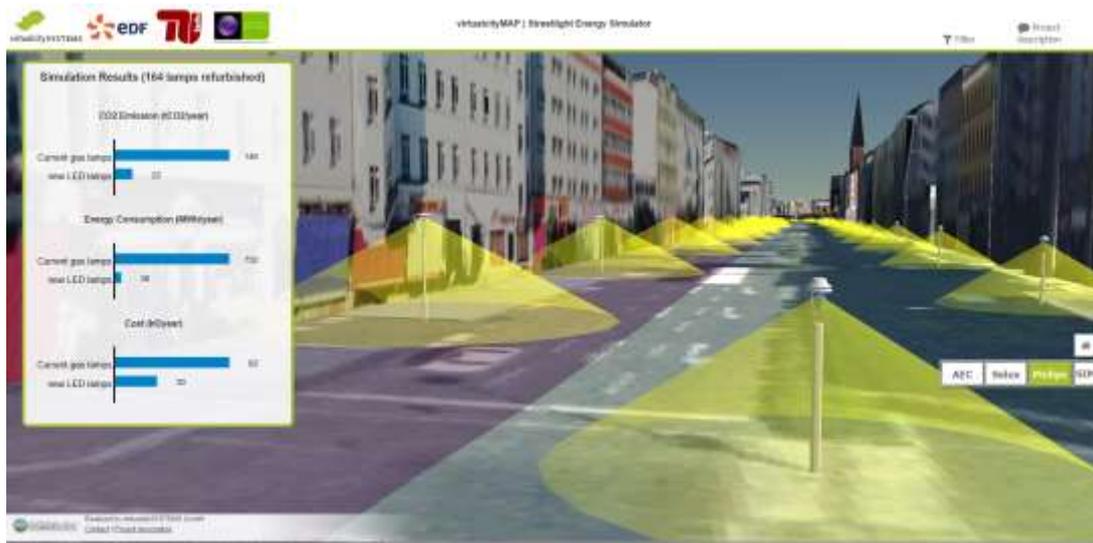
4. **In your opinion, what are the main obstacles and challenges encountered by local governments to use SMART technologies to fight climate change?**

Beyond the (often prohibitive) upfront investments needed, cities lack the internal capacity or knowledge to integrate SMART technologies into their workflows. Cities often operate in tailor-made or unique IT and process environments, with long time frame between each purchasing cycle. These factors, coupled to a perceived lack of mandate from the electorate to act against climate change can hinder the adoption rate of SMART green technologies within cities.

5. **What recommendations would you give to local governments? What are the key elements that ensure the success of such projects?**

Cities sometimes feel a bit "bullied" by innovative solution providers knocking on their door. There is a cultural push towards adopting new SMART technologies. On top of their usual selection criteria (improvements compared to the existing solution, value for money, operational costs...) cities should really assess to what extent the solution can be integrated into their operations. Moreover, cities should be cautious about the viability of the technology provider. Many SMART technologies today are relying on unique competences, reducing the chance for cities to find other providers to maintain their SMART systems if the original developer disappears. If cities feel that they do not have the proper capabilities to assess the performance of the technologies they are being proposed, they should not hesitate to contact national/international schemes related to technology transfer. As an example, Climate-KIC can accelerate both developers' solutions uptake while helping the city to integrate it.