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SPACE FOR URBAN INNOVATION: A GLOBAL APPROACH TO DOWNSTREAM SECTOR

Abstract

Becoming a smart city is not a goal, but rather a necessity. The current world population of 7.6 billion is expected to reach 8.6 billion in 2030, 9.8 billion in 2050, most of whom will live in cities. In a society where people become more vocal and connected, it is necessary to leverage technologies and allow city systems and services to be responsive and act upon data in real time to meet the citizens needs. Smart cities are multi-actors ecosystems devoted to create sustainable and resilient urban areas to the benefit of the society and of the local and global economy. Space verticals have a key role to play in the overall value chain as a technological enabler, at the core of cost-efficient business models. Sensors use and satellite connectivity are the pillars of the smart cities grid market (e.g. smart transport, energy grid, waste management, connected vehicles...). Modern navigation systems have a key role in the transport and mobility sector (e.g. real time transport information, urban traffic modelling, autonomous and intelligent vehicles...). Earth observation data open to a huge portfolio of business opportunities in several sectors (e.g. urban planning, climate changes challenges, sustainable urban agriculture, infrastructure and building business as well as disaster and security issues). The European Space Agency has already a relevant position in the smart cities ecosystem with a portfolio of activities ongoing or planned in support. Considering the constant market growth both from a geographical and economic point of view ESA further reinforced its positioning in this sector through its Downstream Gateway. The Downstream Gateway is ESA tool to provide "One Space to Customer". One of the main objectives of the Downstream Gateway is to connect to new downstream communities and new actors to foster the benefit of Space for society and economy through an open innovation approach. In the smart cities ecosystem, as well as in others, ESA leverage its expertise (e.g. navigation, telecommunication, exploration and earth observation...), its actions and its support in a coordinated way to all the downstream communities. The paper provides an overview of the activities supported and planned by ESA to the benefit of urban innovation with a global approach, highlighting the axis of action, the business models and the benefits to the downstream communities.