

Urban Lifecycle Management: System Architecture Applied to the Conception and Monitoring of Smart Cities

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Abstract: At date, there is no standardized definition of what a smart city is, in spite many apply to propose a definition that fit with their offer, subsuming the whole of the city in one of its functions (smart grid, smart mobility...). Considering the smart cities as an ecosystem, that is to say a city that has systemic autopoietic properties that are more than the sum of its parts, we develop an approach of modeling the smartness of the city. To understand how the city may behave as a sustainable ecosystem, we need a framework to design the interactions of the city subsystems. *First* we define a smart city as an ecosystem that is more than the sum of its parts, where sustainability is maintained through the interactions of urban functions. *Second*, we present a methodology to sustain the development over time of this ecosystem: Urban Lifecycle Management. *Third*, we define the tasks to be carried out by an integrator of the functions that constitute the smart city, we assume public administration has to play this role. *Fourth*, we present what should be a smart government for the smart city and the new capabilities to be developed.

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