A Needs-Based Top-Down Approach for a Tailor-Made Smart City Roadmap

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Abstract : All megacities are not only under the pressure of common urbanization and growth problems but also dealing with different challenges according to their specific circumstances. However, the majority of cities focuses mainly on popular smart city projects, which are usually driven by strong private sector, regardless of their characteristics, each city needs to develop customized projects within a tailor-made smart city roadmap to be able to solve its own challenges. Smart city manifest, helps citizens to feel the action better than good reading smart city vision statements, which consists of five elements; namely purpose, values, mission, vision, and strategy. This study designs a methodology for smart city roadmap based on a top-down approach, breaking down of smart city manifest to feasible projects for a systematic smart city transformation. This methodology was implemented in Istanbul smart city transformation program which includes smart city literature review, current state analysis, roadmap, and architecture projects, respectively. Istanbul smart city roadmap project followed an extensive literature review of certain leading smart cities around the world and benchmarking of the city's current state using well known smart city indices. In the project, needs of citizens and service providers of the city were identified via stakeholder, persona and social media analysis. The project aimed to develop smart city projects targeting fulfilling related needs by implementing a gap analysis between current state and foreseen plans. As a result, in 11 smart city domains and enablers; 24 strategic objectives, 50 programs, and 101 projects were developed with the support of 183 smart city stakeholder entities and based on 125 citizen persona profiles and last one-year social media analysis. In conclusion, the followed methodology helps cities to identify and prioritize their needs and plan for long-term sustainable development, despite limited resources.