Synthesising Smart City and Smart Port Concepts: A Conceptualization for Small and Medium-Sized Port City Ecosystems

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Abstract: European Ports are about to take an important step towards their future economic development. Existing legislatives such as the European Green Deal are changing the perspective on ports as individual logistic institutions and demand a more holistic view on ports in their characteristic as ecosystem involving several different actors in an interdisciplinary and multilevel approach. A special role is taken by small and medium-sized ports facing the same political restriction and future goals - such as reducing environmental impacts with 2030 and 2050 as targets - while suffering from low financing capacity, outdated infrastructure, low innovation measures and missing political support. In contrast, they are playing a key role in regional economic development and cross-border logistics as well as facilitator for the regional hinterland. Also, in comparison to their big counterparts, small and medium-sized ports are often located within or close to city areas. This does not only bear more challenges especially when it comes to the environmental performance, but can also carry out growth potentials by putting the city as a key actor into the port ecosystem. For city development, the Smart City concept is one of the key strategies currently applied mostly on demonstration level in selected cities. Hence, the basic idea behind is par to the Smart Port concept. Thus, this paper is analysing potential synergetic effects resulting from the application of Smart City and Smart Port concepts for small and medium-sized ports' ecosystems closely located to cities with focus on innovation application, greening measurements and economic performances as well as strategic positioning of the ports in Smart City initiatives.

Keywords : port-city ecosystems, regional development, sustainability transition, innovation policy **Conference Title :** ICSCP 2023 : International Conference on Smart City and Performance **Conference Location :** Lisbon, Portugal **Conference Dates :** September 18-19, 2023

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