

Building the Future of Smart Cities: The Conceptual Framework of the GreCO Project

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Abstract:

The swift transformation of urban landscapes into tourist destinations presents considerable challenges in achieving sustainable development, particularly in emerging destinations characterised by underdeveloped planning infrastructures. This paper introduces the EUI-funded GreCO's project (Green Cultural Oases) methodological framework for sustainable urban tourism planning, emphasising the advancements of smart tourism destinations. It is meticulously aligned with the environmental, socio-cultural, and economic dimensions of sustainability, placing a strong emphasis on tourism marketing, management strategies, and the application of IoT technologies. GreCO's holistic methodological approach, integrates a variety of interconnected components into a cohesive system: a) facilitating culturally adaptive personalisation of tourist experiences, which enhances visitor satisfaction, reduction of cross-cultural conflicts, and enhanced memorable tourism experience, b) incorporating advanced digital technologies (e.g. AR, AI), real-time environmental sensing, and gamification, to promote environmentally responsible behaviour, enrich visitor engagement, and support ongoing learning, c) providing data-driven decision-making and data-driven mobility and congestion management tools to optimize urban flow, minimize environmental impacts, and enhance accessibility, d) promoting multi-stakeholder collaboration through participatory governance models and community-based educational initiatives, ensuring inclusivity and the long-term development of local capacities. The framework is empirically tested through its pilot application in an emerging coastal urban destination on the outskirts of Athens, the Municipality of Elliniko–Argyroupoli. This case study illustrates GreCO's capacity to implement sustainable development principles in actual urban tourism settings. By integrating technological innovation with cultural sensitivity and environmental

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stewardship, GreCO provides a replicable model for sustainable tourism planning in emerging urban destinations worldwide.

Keywords:

Sustainable urban tourism, smart tourism, cultural personalisation, stakeholder engagement, data-driven decisions, sustainable tourism behaviour.