

Smart Cities and Urban Engineering: Balancing Tradition, Sustainability, and Technological Integration

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Abstract : As cities worldwide rapidly transition into "smart cities," urban planning faces both challenges and opportunities in integrating advanced technologies. This paper investigates how smart city infrastructure can incorporate cutting-edge technologies while preserving traditional values and ensuring environmental sustainability. By drawing on the principles of intelligent urbanism, it proposes a framework for developing smart cities that balances economic growth, social accessibility, and cultural heritage conservation. The framework emphasizes the need for urban planning that integrates efficiency, human-scale infrastructure, and regional cooperation to foster inclusivity and equity. Key to this approach is using appropriate technologies that enhance urban systems without compromising natural resources or cultural identities. Moreover, the paper highlights the importance of creating smart cities that prioritize human well-being through accessible social spaces and sustainable transit. This integrated approach to urban design ensures that technological advancements support not only the efficient functioning of cities but also their role as vibrant, sustainable communities. The paper advocates for policies and strategies that allow smart cities to thrive while maintaining a strong connection to both their heritage and the environment, ensuring that they meet the needs of current and future generations.

Keywords : smart cities, urban engineering, sustainability, technological integration, heritage conservation, intelligent urbanism

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