

TeMA

Journal of
Land Use, Mobility and Environment

The concept of "Smart City", providing a the solution for making cities more efficient and sustainable has been quite popular in the policy field in recent years. In the contemporary debate, the concept of smart cities is related to the utilization of networked infrastructure to improve economic and political efficiency and enable social, cultural and urban development.

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SMART CITIES

RESEARCHES, PROJECTS AND GOOD PRACTICES FOR THE BUILDINGS

SMART CITIES:

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TeMA

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EDITORIAL PREFACE:

RESEARCHES, PROJECTS AND GOOD PRACTICES FOR THE BUILDINGS FOR THE SMART CITY

ROCCO PAPA

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During the last decades the concept of Smart Cities arose, according to which information and communications technologies might improve the functioning of cities, enhancing their efficiency, improving their competitiveness (Harrison, 2010). Within this general framework, the specific application of ICT in buildings is rapidly advancing in applications, with the aim of creating a more sustainable and resilient built environment, in particular for the managing of resources and energy. In fact energy use in cities has attracted significant research in recent years.

The world's energy demand is mainly characterized by urban demand and two thirds of the world's total energy consumption of 7908 Mtoe and 70% of the CO₂ emissions are attributable to cities. Covering only 2% of the world's surface, cities are responsible for about 75% of the world's consumption of resources (Pacione, 2009). In cities the building stock (domestic and commercial buildings) accounts for 61% of total energy consumption.

The theme of resource management and more specifically of energy saving is growing attention in research and in urban planning practice. In literature is growing the number of studies focusing on strategies and measures finalized at energy saving and in the practice field, energy savings require the development and usage of energy-efficient appliances and retrofitting of the existing building stock. Nevertheless, where energy is concerned, the neighbourhood or city cannot be considered simply as an aggregation of buildings, and emphasis is needed for more systemic, multi-scale and transverse approaches to deal with the intrinsic complexity of the urban fabric (Bourdic and Salat, 2012).

Within this framework this number proposes a focus on ideas, projects and good practices aimed at developing building stocks within the city capable of an effective interaction with urban context, capable of reducing energy consumption, optimizing the use of space, minimizing impacts on natural resources, assuring the safety of inhabitants, also through an efficient use of available technologies.

In the Focus section the issue proposes two articles. The first article by Francesco Domenico Moccia describes a particular application of urban planning at the municipal level within the Campania Region. The Agropoli plan, which is part of the wider system of actions taken by the City to achieve the objectives on the environment posed by the European Union with the Directive "Climate Energy 20-20-20", provides a series of actions aimed at containing the uses energy through measures to rationalize, do not waste and reduce the use of non-renewable resources. The second article by Arto Emerik Nuorkivi and Anna-Maija Ahonen is about the experience of a Pilot training of urban planners in five EU countries such Finland, Germany, Hungary, Spain and the United Kingdom to understand the basics of renewable energy sources (RES) and energy efficiency (EE) that has been carried out during 2011-2012 under co-financing of Intelligent Energy Europe.

In the LUME section this issue collects an article by Lina I. Shbeeb and Wael H. Awad on the walkability of school surroundings and its impact on pedestrian behavior, with an application in Jordan. The study looks into pedestrian environment in schools' vicinity. Seventeen schools were selected and 231 students were followed from school to home. Results showed that 15% of observed subjects were involved in conflicts. Average walking time is 17 minutes; almost half of this time is spent either by walking on street or crossing. Females are involved in less conflict and they spend less time in traffic. Drivers give priority to pedestrian in one-thirds of all observed crossing with preference to males.

The second article of the section LUME is by Ali Soltani, Davoud Karimzadeh and is titled "The Spatio-Temporal Modeling of Urban Growth Using Remote Sensing and Intelligent Algorithms, Case of Mahabad in Iran. The article aims at modeling and simulating the complex patterns of land use change by utilizing remote sensing and artificial intelligence techniques in the fast growing city of Mahabad, north-west of Iran which encountered with several environmental subsequences.

The article by Rosa Anna La Rocca starts from the consideration that the diffusion of new communication technologies (ICTs) is significantly changing the urban supply system of tourist services giving rise to new ways of enjoying the city and proposes some reflections about tourist dimension of smart city.

The article by Alessandro Bove, Carlo Ghiraldelli focuses on the relationship between new technologies and urban space, that has become, especially with the introduction of the concept of smart city, the key in the definition of management options in the city itself.

The article by Houshmand E. Masoumi studies the effects of neighborhood-level land use characteristics on urban travel behavior of Iranian cities in a microscopic scale. In this study the role of socio-economic factors is also studied and compared to that of urban form. Two case-study neighborhoods in west of Tehran are selected and considered, first of which is a centralized and compact neighborhood and the other is a sprawled and centerless one.

Finally the article by Grazia Brunetta and Valeria Baglione focuses on the epistemological dimension of the concept of resilience in spatial planning, and its purpose is to understand the extent of innovation in planning practices and urban governance. In particular, the first part of the paper provides a review of the theoretical framework of resilience and the second analyzes the Transition Towns movement, with particular reference to the role of stakeholders.

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