

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.

Tema is the Journal of Land use, Mobility and Environment and offers papers with a unified approach to planning and mobility. TeMA Journal has also received the Sparc Europe Seal of Open Access Journals released by Scholarly Publishing and Academic Resources Coalition (SPARC Europe) and the Directory of Open Access Journals (DOAJ).



SMART CITIES

RESEARCHES, PROJECTS AND GOOD PRACTICES FOR BUILDINGS

SMART CITIES:

RESEARCHES, PROJECTS AND GOOD PRACTICES FOR BUILDINGS

2 (2013)

Published by

Laboratory of Land Use Mobility and Environment
DICEA - Department of Civil, Architectural and Environmental Engineering
University of Naples "Federico II"

TeMA is realised by CAB - Center for Libraries at "Federico II" University of Naples using Open Journal System

Editor-in-chief: Rocco Papa
print ISSN 1970-9889 | on line ISSN 1970-9870
Lycence: Cancelleria del Tribunale di Napoli, n° 6 of 29/01/2008

Editorial correspondence

Laboratory of Land Use Mobility and Environment
DICEA - Department of Civil, Architectural and Environmental Engineering
University of Naples "Federico II"
Piazzale Tecchio, 80
80125 Naples
web: www.tema.unina.it
e-mail: redazione.tema@unina.it

TeMA

Journal of
Land Use, Mobility and Environment

TeMA - Journal of Land Use, Mobility and Environment offers researches, applications and contributions with a unified approach to planning and mobility and publishes original inter-disciplinary papers on the interaction of transport, land use and Environment. Domains include: engineering, planning, modeling, behavior, economics, geography, regional science, sociology, architecture and design, network science, and complex systems.

The Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR) classified TeMA as one of the most highly regarded scholarly journals (Category A) in the Areas ICAR 05, ICAR 20 and ICAR21. TeMA Journal has also received the Sparc Europe Seal for Open Access Journals released by Scholarly Publishing and Academic Resources Coalition (SPARC Europe) and the Directory of Open Access Journals (DOAJ). TeMA publishes online under a Creative Commons Attribution 3.0 License and is blind peer reviewed at least by two referees selected among high-profile scientists. TeMA is a four-monthly journal. TeMA has been published since 2007 and is indexed in the main bibliographical databases and it is present in the catalogues of hundreds of academic and research libraries worldwide.

EDITOR- IN-CHIEF

Rocco Papa, Università degli Studi di Napoli Federico II, Italy

EDITORIAL ADVISORY BOARD

Luca Bertolini, Universiteit van Amsterdam, Netherlands
Virgilio Bettini, Università Iuav di Venezia, Italy
Dino Borri, Politecnico di Bari, Italy
Enrique Calderon, Universidad Politécnica de Madrid, Spain
Roberto Camagni, Politecnico di Milano, Italy
Robert Leonardi, London School of Economics and Political Science, United Kingdom
Raffaella Nanetti, College of Urban Planning and Public Affairs, United States
Agostino Nuzzolo, Università degli Studi di Roma Tor Vergata, Italy
Rocco Papa, Università degli Studi di Napoli Federico II, Italy

EDITORS

Agostino Nuzzolo, Università degli Studi di Roma Tor Vergata, Italy
Enrique Calderon, Universidad Politécnica de Madrid, Spain
Luca Bertolini, Universiteit van Amsterdam, Netherlands
Romano Fistola, Dept. of Engineering - University of Sannio - Italy, Italy
Adriana Galderisi, Università degli Studi di Napoli Federico II, Italy
Carmela Gargiulo, Università degli Studi di Napoli Federico II, Italy
Giuseppe Mazzeo, CNR - Istituto per gli Studi sulle Società del Mediterraneo, Italy

EDITORIAL SECRETARY

Rosaria Battarra, CNR - Istituto per gli Studi sulle Società del Mediterraneo, Italy
Andrea Ceudech, TeMALab, Università degli Studi di Napoli Federico II, Italy
Rosa Anna La Rocca, TeMALab, Università degli Studi di Napoli Federico II, Italy
Enrica Papa, Università degli Studi di Roma Tor Vergata, Italy

ADMINISTRATIVE SECRETARY

Stefania Gatta, Università degli Studi di Napoli Federico II, Italy

SMART CITIES: RESEARCHES, PROJECTS, AND GOOD PRACTICES FOR BUILDINGS 2 (2013)

Contents

EDITORIALE Rocco Papa	143	EDITORIAL PREFACE Rocco Papa
FOCUS		FOCUS
Resources and Energy Management The Case of the Agropoli Urban Plan Francesco Domenico Moccia	145	Resources and Energy Management: the Case of the Agropoli Urban Plan Francesco Domenico Moccia
Urban Planners with Renewable Energy Skills. Training Description Arto Nuorkivi, Anna-Majja-Ahonen	159	Urban Planners with Renewable Energy Skills. Training Description Arto Nuorkivi, Anna-Majja-Ahonen
LAND USE, MOBILITY AND ENVIRONMENT		LAND USE, MOBILITY AND ENVIRONMENT
Walkability of School Surroundings and Its Impacts on Pedestrian Behavior Lina Shbeeb, Wael Awad	171	Walkability of School Surroundings and Its Impacts on Pedestrian Behavior Lina Shbeeb, Wael Awad
The Spatio-Temporal Modeling of Urban Growth. Case Study: Mahabad, Iran Ail Soltani, Davoud Karimzadeh	189	The Spatio-Temporal Modeling of Urban Growth. Case Study: Mahabad, Iran Ail Soltani, Davoud Karimzadeh

TeMA

Journal of
Land Use, Mobility and Environment

Tourism and City. Reflections About
Tourist Dimension of Smart City 201
Rosa Anna La Rocca

Tourism and City. Reflections About
Tourist Dimension of Smart City
Rosa Anna La Rocca

Informazioni dirette ed indirette
nell'organizzazione dello spazio urbano 215
Alessandro Bove, Carlo Ghirardelli

Direct and Indirect Information
in Urban Space Planning
Alessandro Bove, Carlo Ghirardelli

Modeling the Travel Behavior Impacts of
Micro-Scale Land Use and Socio-
Economic Factors 235
Houshmand E. Masoumi

Modeling the Travel Behavior Impacts of
Micro-Scale Land Use and Socio-
Economic Factors
Houshmand E. Masoumi

Resilience in the Transition Towns
Movement. Towards a New Urban
Governance 251
Grazia Brunetta, Valeria Baglione

Resilience in the Transition Towns
Movement. Towards a New Urban
Governance
Grazia Brunetta, Valeria Baglione

OSSERVATORI 265
Laura Russo, Floriana Zucaro, Valentina Pinto,
Gennaro Angiello, Gerardo Carpentieri

REVIEW PAGES
Laura Russo, Floriana Zucaro, Valentina Pinto,
Gennaro Angiello, Gerardo Carpentieri

TeMA

Journal of
Land Use, Mobility and Environment

TeMA 2 (2013) 143-144
print ISSN 1970-9889, e-ISSN 1970-9870
doi: 10.6092/1970-9870/1829

Licensed under the Creative Commons Attribution – Non Commercial License 3.0
www.tema.unina.it

EDITORIAL PREFACE:

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

ROCCO PAPA

Land Use, Mobility and Environment Laboratory – *TeMALab*

University of Naples Federico II

e-mail: rpapa@unina.it

URL: www.roccopapa.it

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.

References:

- Bourdic, L. & Salat, S. (2012) Building energy models and assessment systems at the district and city scales: a review, in: *Building Research & Information* 40(4), 518–526.
- Pacione M. (2009) *Urban geography – a global perspective*. Routledge, New York
- Harrison C., Eckman B., Hamilton R., Hartswick P., Kalagnanam J., Paraszczak J., Williams P., *IBM J. Res. Develop.* 54, 1 (2010)