TeMA

Journal of
Land Use, Mobility and Environment

There are a number of different future-city visions being developed around the world at the moment: one of them is Smart Cities: ICT and big data availability may contribute to better understand and plan the city, improving efficiency, equity and quality of life. But these visions of utopia need an urgent reality check: this is one of the future challenges that Smart Cities have to face.

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 CHALLENGES

SMART ENVIRONMENT FOR SUSTAINABLE RESOURCE MANAGEMENT

Vol.7 n.1 April 2014

print ISSN 1970-9889 e-ISSN 1970-9870
University of Naples Federico II

TeMA Journal of
Land Use, Mobility and Environment

SMART CITIES CHALLENGES:

SMART ENVIRONMENT

FOR SUSTAINABLE RESOURCE MANAGEMENT

1 (2014)

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.

TeMA Journal of Land Use, Mobility and Environment

SMART CITIES CHALLENGES: SMART ENVIRONMENT FOR SUSTAINABLE RESOURCE MANAGEMENT 1 (2014)

Contents

TeMA Journal of Land Use, Mobility and Environment

LAND USE, MOBILITY AND ENVIRONMENT

TeMA Journal of
Land Use, Mobility and Environment

TeMA 1 (2014) 3-4
print ISSN 1970-9889, e-ISSN 1970-9870
doj: 10.6092/1970-9870/2443

www.tema.unina.it

EDITORIAL PREFACE:

SMART CITIES CHALLENGES: SMART ENVIRONMENT FOR SUSTAINABLE RESOURCE MANAGEMENT

ROCCO PAPA
DICEA - Dipartimento di Ingegneria Civile, Edile ed Ambientale
University of Naples Federico II
e-mail: rpapa@unina.it
URL: www.roccopapa.it

There are a number of different future-city visions being developed around the world at the moment: one of them is smart cities. Gary Graham, coordinator of the Future Transport and Smart Cities Network in University of Leeds, in one of his recent articles published on “The conservation”, affirms that these visions of utopia need an urgent reality check and that smart cities ideas are in some cases too far away for people real needs and tries to give an answer to the provocative question: is anyone asking people what they want from the smart cities of the future?

This is one of the main challenges of smart or not smart cities should face in the near future, and this is one of the themes of this volume 7 of TeMA Journal of Land Use, Mobility and Environment. Volume 7 is in fact dedicated to the challenges of the Smart City and will focus during the three issues of the volume on three different challenges aspects. In this first issue the main theme is smart environment for sustainable resource management. The second issue will focus on the process of planning for smart cities, dealing with new urban challenges, while the third issue will be focusing on the smart communities between e-governance and social participation.

The first article of this issue is named “Considering Resilience: Steps Towards an Assessment Framework” by James Kallaos, Gaell Mainguy and Annemie Wyckmans, an international research group from France and Norway, identifies resilience characteristics in order to inform the eventual development of a resilience framework with which to assess architecture and infrastructure resilience. The aim of the work is to determine the conditions under which architecture and infrastructure resilience can be defined and measured, in order to guide the consideration of attributes and determine suitable criteria to select and elaborate indicators to help guide future actions and investments.

The second article titled “New Technologies for Sustainable Energy in the Smart City: the WET Theory” by Rosa Anna La Rocca and Romano Fistola develops a new approach to the sustainable planning for the smart

city based on the assumption that the relationship between new technologies and urban system could be developed in a new way considering the WET theory.

The third article by Adriana Galderisi is titled “Climate Change Adaptation. Challenges and Opportunities for a Smart Urban Growth” and explores strengths and weaknesses of current adaptation strategies in European cities. First the main suggestions of the European Community to improve urban adaptation to climate change are examined; then, some recent Adaptation Plans are analyzed, in order to highlight challenges and opportunities arising from the adaptation processes at urban level and to explore the potential of Adaptation Plans to promote a smart growth in the European cities.

The forth article titled “Limits to Ecological-based Planning in Zimbabwe. The Case of Harare” by Archimedes Muzenda and Innocent Chirisa, explores the feasibility of adopting ecological based planning in low-income residential development. In particular the case study of Hatcliffe residential area in Harare proposed in the article shows that there are many challenges to overcome uncoordinated planning approaches, ineffective policies and legislative frameworks, weak institutional settings, financial constraints, outdated planning standards and regulations, poverty, lack of environmental stewardship and lack of political will among others. The study findings call for robust environmental conservation strategies, strong environmental stewardship, responsive institutional and funding mechanism backed by realistic legislative frameworks and robust policy rectification.

The section Land-use, Mobility and Environment collects four general article of the theme of integration between mobility, urban planning and environment. The article “Urbanisation Pattern of Incipient Mega Region in India” by T. V. Ramachandra, Bharath H. Aithal, Barik Beas, focuses on the analysis of the spatial patterns of urbanization and sprawl in Pune city, India, using temporal remote sensing data. The analysis suggests that urbanization has caused fragmentation with adjacencies in buffer zones. Spatial metrics substantiate rampant sprawl at the peri-urban regions and infilling at city center. However, this value has reduced in 2013 indicating of reaching the threshold of urbanization. This research provides the details of land use and its development for guiding scientific-based decision support and policy making.

The article by Laura Russo, titled “The Effectiveness of Planning Regulation to Curb Urban Sprawl. The Case of Striano (NA)”, aims to assess the ability of Campania’s Planning regulations and tools in checking urban sprawl. The analysis was conducted in the town of Striano, within the complex urban conurbation of the Metropolitan Area of Naples. The case study results show a disconnection between the current legislation and the new planning tools which are pending approval, therefore, the paper suggests the need to update Campania’s Planning legislation to the new guidelines, which are much more effective in terms of land protection.

In the same section, the article by Silvia Alam titled “Prediction of Mymensingh Town Future Expansion Using Space Syntax”, aims to identify the influence spatial configuration exerts on the location of different types of commercial activity in terms of land use. The results of this study help to interpret and predict the future commercial land use related to its road network. In this paper the process was conducted through a field survey to collect data regarding locations of commercial activity, some land-use maps analysis and the application of Space syntax theory to simulate the data to analyze the relationship.

Finally the Review Pages define the general framework of the theme of Smart City Environmental Challenges with an updated focus of websites, publications, laws, urban practices and news and events on this subject.