

TECHNE

Journal of Technology for Architecture and Environment

Special Series

EUROPEAN PATHWAYS FOR THE **SMART CITIES**

TO COME

on behalf of EERA Joint Programme
on Smart Cities



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Journal of Technology for Architecture and Environment

Special Series
Issue 01 | 2018

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Veronica Dal Buono

Executive Graphic Design
Giulia Pellegrini

Editorial Office
c/o SITdA onlus,
Via Toledo 402, 80134 Napoli
Email: redazionetechne@sitda.net

Publisher
FUP (Firenze University Press)
Phone (0039) 055 2743051
Email journals@fupress.com

Journal of SITdA (Società Italiana della Tecnologia dell'Architettura)

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Emilio Faroldi, Editor in Chief

Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano, Italy

emilio.faroldi@polimi.it

The charm of architecture lies also in its intrinsic quality of providing a concrete figurative and fruitive change of the spaces we live. It is difficult to discern when architecture reveals existing tendencies or when it represents a revolutionary element for the city - understood as a strategic improvement. The contemporary city appears to be fragmented into systems, fabrics and nodes, within which it is possible to individuate “partial cities”, which can interact or, in other cases, conflict with each other. The invariants of the transformation process can be found within the history of the city, considered as an entity in continuity or in opposition to the thought expressed by the previous epoch.

For the first time, the Journal undertakes such important partnership, as the one established with the *European Energy Research Alliance Joint Programme on Smart Cities*. A significant step in thinking the future and its evolutionary lines, represented by the launch of a dialogic and research debate with a high scientific and sociological value for the cities of today and tomorrow. Nowadays, the “Smart City” represents a concrete concept of development, able to provide answers to the needs expressed by the city users; a stage of growing interrelation, at all levels, between people, services, infrastructures and built environment. The city identifies a complex system, composed by an articulated network of connections: the constant demographic growth and urbanization dynamics feed a series of social, technical and organizational problems that deeply threaten the economic and environmental sustainability of territories.

In this logic, the concept of Smart City is increasingly becoming subject of study within the architectural debate; a new model of urban development, capable of realizing a credible and intelligent response to foster a sustainable socio-economic growth.

A reality can be defined “smart” when the investment of tangible and intangible resources in communication and information infrastructures, envisages a strategic economic development; an investment, oriented to the social capital and towards a high quality of life, through an active participation of users, productive realities, governance and institutional bodies.

There is no single meaning of the term “Smart City”, nor codified parameters that can represent a univocal model and reference. Also, with reference to its etymology, the term “smart” is widely used in current language referring to indicators of environmental protection, public safety, public services and infrastructures. The coexistence of ICT with the “city of stone” is producing urban assets, which are very different from those given to us from history. Cities become smart in terms of systematization of everyday practices, in order to support individuals, buildings, systems of flows; at the same time they aim to enable the monitoring, understanding and planning of the city, improving efficiency, equity and quality of life in real time. A shift of paradigm, which is influencing the design and planning forms on several spatial and

temporal levels. A perspective, which foresees a more intelligent built environment in the medium and long term, compared to continuous but unproductive short-term reflection.

Realities require slow and long sedimentation times: the positive transformation of forms and habits follow these rhythms, influencing each other. What aggregates all the categories are the strategies aimed at defining a city, which considers that within a decade more than sixty percent of the population will live in a metropolitan environment. The concept of Smart City evolved over time also through recent technological developments, which combine networks and systems of immaterial connection. Modern ICT technologies allow the creation and development of integrated, shared and interoperable knowledge bases; a centralized optimization of information and a platform to support knowledge sharing and capitalization.

This monographic issue of the journal intends to address these levels of complexity, trying to tackle, in a scientific way, themes that concern a global sphere. A window on the topic, both in terms of geography and distribution, at different scales: from policies and strategies, to built environment transformations within the broader concept of Smart Cities.

Most of the topics are attributable to the concepts of flexibility, adaptability, versatility and sustainability, as well as innovative housing models: new forms of networking and different supply chains, tools and methodologies to support new designs and processes.

The Special Issue, for its nature, aims at representing an international scientific community and foster new platforms of knowledge sharing and dissemination. This intention has been received, as demonstrated by the considerable number of contribution coming mainly from Europe, but also from United States and China.

An international objective, on common aims and investigation fields, which confirmed the success of this first fruitful cooperation between SITdA and EERA, proposing a virtual roundtable about the Smart Cities to come and their founding principles.



01 | Coverage of contributions from the European Scientific Community

STARTING SESSION AND DOSSIER

Authors



Mario Losasso
SITdA and TECHNE Director
2014-2017
Full Professor of Architectural
Technology, Head of DiARC -
Department of Architecture,
University Federico II of Naples,
Italy



Emilio Faroldi
Editor in Chief
Vice-Rector of Politecnico
di Milano, Full Professor at
Department of Architecture,
Built Environment and
Construction Engineering
of Politecnico di Milano, Italy



Paola Clerici Maestosi
Coordinator for Scientific and
Editorial Board of EERA JPSC,
Senior Researcher DTE-SEN,
ENEA Italian National Agency
for New Technologies, Energy
and Sustainable Economic
Development, Italy



Brigitte Bach
European Energy Research Alliance
Executive Committee vice-chair



Hans-Martin Neumann
Member for Scientific and Editorial
Board of EERA JPSC, Senior
Research Engineer, Sustainable
Buildings and Cities, Austrian
Institute of Technology, Austria



Annemie Wyckmans
Member for Scientific and
Editorial Board of EERA JPSC,
NTNU Norwegian University of
Science and Technology, Faculty of
Architecture and Design, Norway



Mauro Annunziato
Member for Scientific and
Editorial Board of EERA JPSC,
Head for Smart Energy Networks
Energy Technologies Department,
ENEA -Italian National Agency
for New Technologies, Energy
and Sustainable Economic
Development, Italy



Miimu Airaksinen
Member for Scientific and Editorial
Board of EERA JPSC, Managing
Director and CEO, Finnish
Association of Civil Engineers,
Finland



Ambrosio Liceaga

Member for Scientific and Editorial Board of EERA JPSC, Institute of Smart Cities, Universidad Pública de Navarra, Spain



Ernesto Antonini

Full Professor of Technology of Architecture at the Department of Architecture of the University of Bologna, Director of Second Cycle Degree of Engineering of Building Processes and Systems



Elena Mussinelli

Full Professor at Department of Architecture, Built Environment and Construction Engineering of Politecnico di Milano, Italy

CONTRIBUTIONS

Authors

Alessandra Barresi,

Department of Architecture and Territory, Mediterranean University of Reggio Calabria, Italy

Maurizio Sibilla,

School of the Built Environment, Oxford Brookes University, United Kingdom

Esra Kurul,

School of the Built Environment, Oxford Brookes University, United Kingdom

Roberta Pinna,

ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Intern at Energy Technologies Department - Smart Energy - Smart Cities and Communities, Bologna, Italy

Ezilda Costanzo,

ENEA - ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Energy Efficiency Department, Rome Italy

Sabrina Romano,

ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, Energy Technologies Department, Rome, Italy

Ornella Iuorio,

University of Leeds, School of civil engineering, Leeds, United Kingdom

Luca Lanini,

Department of Energy Engineering, Systems, Land and Buildings, University of Pisa, Italy

Eleona Barsanti,

Toscana Energia, Italy

Angelo Frascella,

Italian National Agency for New Technologies, Energy and Sustainable Economic Development, ENEA, Bologna, Italy

Arianna Brutti,

Italian National Agency for New Technologies, Energy and Sustainable Economic Development, ENEA, Bologna, Italy

Nicola Gessa,

Italian National Agency for New Technologies, Energy and Sustainable Economic Development, ENEA, Bologna, Italy

Piero De Sabbata,

Italian National Agency for New Technologies, Energy and Sustainable Economic Development, ENEA, Bologna, Italy

Cristiano Novelli,

Italian National Agency for New Technologies, Energy and Sustainable Economic Development, ENEA, Bologna, Italy

Martin Burns,

National Institute of Standards and Technology, Gaithersburg, United States

Vatsal Bhatt,

United States Green Building Council, Washington DC, United States

Raffaele Ianniello,

Department of Computer Science and Engineering, University of Bologna, Italy

Linghao He,

United States Green Building Council, Washington DC, United States

Ali Hainoun,

Center for Energy, Sustainable Buildings and Cities, AIT Austrian Institute of Technology GmbH, Seibersdorf, Austria

Ghazal Etminan,

Center for Energy, Sustainable Buildings and Cities, AIT Austrian Institute of Technology GmbH, Seibersdorf, Austria

Massimiliano Condotta,

University Iuav of Venice, Department of Design and Arts, Italy

Giovanni Borga,

University Iuav of Venice, Department of Design and Planning in Complex Environments, Italy

Silvia Soutullo,

Energy Efficiency of Buildings R&D Unit 7 Renewable Division, CIEMAT, Madrid, Spain

Jose Antonio Ferrer,

Energy Efficiency of Buildings R&D Unit 7 Renewable Division, CIEMAT, Madrid, Spain

Maria del Rosario Heras,

Energy Efficiency of Buildings R&D Unit 7 Renewable Division, CIEMAT, Madrid, Spain

Maria Beatrice Andreucci,

Department of Planning, Design, Technology of Architecture, Sapienza University of Rome, Italy

Fabrizio Tucci,

Department Planning, Design, Technology of Architecture, Sapienza Università di Roma, Italy

Daniele Santucci,

Chair of Building Technology and Climate Responsive Design, Technische Universität München, Germany

Elisabeth Endres,

IB Hausladen Engineering Firm, Kirchheim-München, Germany

Gerhard Hausladen,

Emeritus, Technische Universität München, Germany

Andrea Boeri,

Department of Architecture, University of Bologna, Italy

Jacopo Gaspari,

Department of Architecture, University of Bologna, Italy

Valentina Gianfrate,

Department of Architecture, University of Bologna, Italy

Daniilo Longo,

Department of Architecture, University of Bologna, Italy

Edi Valpreda,

ENEA, Italian national agency for new technologies energy and sustainable economic development, Italy

Lorenzo Moretti,

ENEA, Italian national agency for new technologies energy and sustainable economic development, Italy

Maria Anna Segreto,

ENEA, Italian national agency for new technologies energy and sustainable economic development, Italy

Francesca Cappellaro,

ENEA, Italian national agency for new technologies energy and sustainable economic development, Italy

ACKNOWLEDGMENTS OF VALUE

Stakeholders

William Brunelli,

Confindustria Emilia - Area Centro, Italy

Barend van Engelenburg,

TNO, Netherlands

Nienke Maas,

TNO, Netherlands

Laura Ricci,

Department of Planning, Design and Technology of Architecture,
Sapienza University, Rome, Italy

Carmen Mariano,

Department of Planning, Design and Technology of Architecture,
Sapienza University, Rome, Italy

Marco Padula,

National Research Council of Italy, Institute for Construction
Technologies

Francesca Picenni,

National Research Council of Italy, Institute for Construction
Technologies

Roberto Malvezzi,

CertiMaC

Luca Laghi,

CertiMaC

José Manuel Salmerón Lissén,

Universidad de Sevilla, Spain

Francisco José Sanchez de la Flor,

Universidad de Sevilla, Spain

Carolina Mateo-Cecilia,

Intituto Valenciano de la Edificaciòn, Spain

Laura Soto-Francés,

Intituto Valenciano de la Edificaciòn, Spain

Maragarita-Niki Assimakopoulos,

National and Kapodistrian University of Athens, Greece

Theoni Karlessi,

National and Kapodistrian University of Athens, Greece

Michela Toni,

Department of Architecture, University of Ferrara, Italy

Maddalena Coccagna,

Department of Architecture, University of Ferrara, Italy

Alessandro Claudi de Saint Mihiel,

Department of Architecture, University Federico II of Naples, Italy

Eliana Cangelli,

Department Planning Design Architecture Technology, Sapienza
University of Rome, Italy

Giovanna Franco,

Department of Architecture and Design, University of Genoa, Italy

Paola Gallo,

Department of Architecture, University of Florence, Italy

Rosa Romano,

Department of Architecture, University of Florence, Italy

DIALOGUES

Virtual Round Table Participants



Magdalena Andreea Strachinescu Olteanu

Head of Unit, New energy technologies, innovation and clean coal, Directorate General for Energy, European Commission



Eddy Hartog

Head of Unit Smart Mobility and Living, Directorate General Communications Networks, Content and Technology, European Commission



Paolo Civiero

Associated Participant and Assistant Editor EERA JP on Smart Cities, Sapienza University of Rome



Gunter Amesberger

Municipality of LINZ, Austria, and Director Urban planning, Technics and Environment



Pasquale Capezuto

Municipality of Bari, Italy, and Head of Energy and Plants Office in Urban Planning and Private Building Department, Former Coordinator of Bari Smart City Project



Xavier Normand

City of Grenoble, France, and Former program manager "Sustainable Urban Development", Founder and CEO of "XN conseil", consulting and expertise in the field of sustainable urban development projects



Rasmus Reeh

Municipality of Copenhagen, Denmark, and Senior Advisor of Copenhagen Solutions Lab and Project Leader of the project Innovatorium Nordhavn



Elena Guarnieri

Technical University of Denmark and Secretariat of the European Energy Research Alliance



Luciano Martini
 Director, Ricerca sul Sistema Energetico (RSE, Italy) and Coordinator European Energy Research Alliance Joint Programme Smart Grids



Daniela Velte
 Programme Director and Senior Researcher, Tecnalia, Spain, and Coordinator of European Energy Research Alliance Joint Programme Economic, Environmental and Social Impacts



Mathias Noe
 Karlsruhe Institute of Technology, Germany, and Coordinator of European Energy Research Alliance Joint Programme Energy Storage



Isabelle Johanna Südmeyer
 Karlsruhe Institute of Technology, Germany, and Manager of National Research Programme Storage and Cross-linked Infrastructures



Myriam E. Gil Bardají
 Karlsruhe Institute of Technology, Germany, and Manager of European Energy Research Alliance Joint Programme Energy Storage



Laurens de Vries
 Associate Professor at Delft University of Technology, Netherlands, and Coordinator of European Energy Research Alliance Joint Programme on Energy Systems Integration



Eugen Pănescu
 Architect, Architects Council of Europe



Daniele Russolillo
 Chief Business Development Officer Planet Idea Smart Engineering, Italy-Brazil



Graziella Roccella
Chief Operating Officer Planet Idea
Smart Engineering, Italy-Brazil



Luca Talluri
Engineer; President of Federcasa,
Italy



Margit Noll
Austrian Research Promotion
Agency JPIUE Management
Board Chair



Nikolaos Kontinakis
EUROCITIES, Senior projects
coordinator

EERA JOINT PROGRAMME ON SMART CITIES - Full Members and Associated Partners



Participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Participant



Participant



Participant



Associated participant



Associated participant



SP Coordinator;
Participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Participant



Associated participant



Associated participant



Participant



Participant



Associated participant



Participant



Associated participant



JP Coordinator,
Participant



Participant



Participant



Associated participant



Participant



Associated participant



Taskforce leader,
Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Associated participant



Participant



Participant



Associated participant



Associated participant



Participant



Participant



Participant