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**Preface** 1  
*Barbara Ferri*

## ***THEME “Historic urban landscape”***

Lo spazio urbano come teatro della nostalgia: fenomeni di  
ritradizionalizzazione in un contesto provinciale italiano 3  
*Lia Giancrisofaro*

## ***THEME “Building quality and energy resources”***

Building with wood in the Mediterranean area 25  
*Antonella Della Cioppa*

Energy redevelopment of historical centers in the pursuance of the  
cost-effectiveness principle 39  
*Maria Fiorella Granata*

Mediterranean think tank to share urban energy policies and  
measures: meethink\_energy project 57  
*Antonella Trombadore*

Communicative construction site:  
technological tools improving knowledge for users 73  
*Antonella Violano, Roberto Castelluccio, Lucia Melchiorre*

***THEME “Public space, urban and environmental redevelopment”***

Project for a new urban landscape 93  
*Lorenzo Capobianco, Rossella Franchino, Carlo Mele*

***THEME “Housing and social policies”***

Social Housing and the redevelopment of open spaces. 105  
A case study of Scampia (NA)  
*Claudia de Biase, Caterina Frettoloso, Valentina Perrone*

***THEME “Advances in quantitative methods for housing and urban development”***

Estimating the parameters of a flexible mortgage loan \* 119  
*Salvador Cruz Rambaud, Ana María Sánchez Pérez*

***\*Invited paper***

## **Mediterranean think tank to share urban energy policies and measures: *meethink\_energy project***

Antonella Trombadore<sup>1</sup>

**Abstract:** MEETHINK\_Energy is an european research project led by Tuscany Region under Horizon 2020 call for proposal, involving 30 municipalities of 6 different EU countries to develop a *Mediterranean think tank* to share urban energy policies and measures stimulating a multilevel governance model involving policy makers, technicians, stakeholders in a bottom-up integrated approach. Common protocol, criteria and energy performance indicators will be shared and tested in 3 pilot actions with s/m sized city partners.

**Keyword:** *Smart cities, smart governance, think tank network, renewable energy management, energy efficiency in buildings & districts.*

### **1. Mediterranean vision**

With 80% of European citizens living in urban areas, cities have a crucial role to play in the transition towards a low-carbon economy. Faced with the challenge of ensuring the quality of life of their citizens while becoming more energy efficient, cities must look at the system level and develop integrated urban development strategies that will make them both sustainable and better places to live.

Cities in the Mediterranean need to change and develop to overcome growing difficulties and adapt to the increasingly knowledge-intensive economies. Cities need to become ‘smart cities’. The “Smart Cities in the Mediterranean” Strategic Partnership aims to work for ‘smartering’ cities in the Mediterranean region by sharing resources, knowhow and experience.

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A.Trombadore, *Mediterranean think tank to share urban energy policies and measures: meethink\_energy project*

European and Mediterranean cities, although different from each other, they have similar needs that can be tackled best through a common approach. <https://eu-smartcities.eu>.



*Fig 1. Siviglia: passive cooling effect in the open space due to the shading devices*

## **2. Theoretical background**

*The PLEEC project – "Planning for Energy Efficient Cities"*

For various reasons, cities aim at improving their competitiveness and their position in comparison to other cities (Begg 1999). Since the European integration process has diminished, differences in economic, social and environmental standards (Pichler- Milanovic 2005), cities have converged in their basic conditions for competition, which is

increasingly scaled down from the national level to the level of cities and regions (Storper 1995).

However, socio-economic inequalities are still considerable on a regional level, although the efforts of Cohesion Policy have largely succeeded in reducing disparities between the richer and the developing countries. New member states face a growing economic gap between central urban areas and remote rural regions (Kramar 2006). This trend enhances the importance of specific local characteristics, which provide comparative advantages competing for increasingly footloose and mobile global enterprises, investors, tourists and capital (Parkinson et al. 2003, Giffinger et al. 2003).

In these comparative studies, cities are evaluated and ranked with regard to different economic, social and geographical characteristics in order to reveal the best (and the worst) places regarding either quality of life or conditions for economic activities. In this way, the comparison of cities can support stakeholders on the one hand, but it can also be an important guide for future city development on the other. Having realized these specific potentials of city rankings, policymakers increasingly make use of their results.

Thus, city rankings have become an important empirical base for disclosing comparative advantages and sharpening specific profiles and consequently for defining goals and strategies for future development. Secondly, positive results in a widely published and approved city ranking can also be used as a central part of a city's marketing strategy as a top rank in a highly reputed ranking definitely helps to improve the international image of a city. As part of this process, city rankings reinforce the competitive perspective steering urban development; their placing focuses the strategic efforts of urban politics mostly on strengths, neglecting weaknesses.

### **3. The Smart Cities' Approach**

Smart City projects are developed as a consequence of increasing city competition in Europe, which has been induced by economic globalization and political integration processes (Begg 1999) and which

A.Trombadore, *Mediterranean think tank to share urban energy policies and measures: meethink\_energy project*

very obviously enforced cities to steer urban development in a more strategic way. European cities are characterized by diverging historic backgrounds, different functions and conflicting interests, a specific positioning within the European urban system is a rather complex challenge, which demands well-reflected strategic planning and governance efforts based on local conditions. Hence, the specific strengths and weaknesses of a city are the central base for defining future development options.

The “European Smart Cities” approach, which was elaborated by Vienna University of Technology (Centre of Regional Science) in 2007 and revised for the specific requirements of the PLEEC project in 2013, concentrates on medium-sized cities and their perspectives for competitive and sustainable development. Even though the vast majority of the urban population lives in such cities, the main focus of urban research tends to be on ‘global’ metropolises. As a result, the challenges of medium-sized cities, which can be rather different, remain unexplored to a certain degree. Medium-sized cities, which have to compete with larger metropolises on corresponding issues, appear to be less equipped in terms of resources and organizing capacities. In order to enforce endogenous development and to achieve a good position, these cities have to identify their strengths and opportunities even more carefully and to ensure comparative advantages in key resources against other cities of the same level.





*Fig 2. Cairo: the typical effect of traffic*

These “Smart City”-profiles aim at supporting a forward-looking and evidence-based strategic planning considering two different components of urban development: First, the evaluation of cities has to consider issues as awareness, flexibility, transformability, synergy, individuality and self-decisive behavior. Especially awareness seems important for a “smart” city as certain potentials can only be mobilized if inhabitants, companies or administrations are well aware of the cities’ position. This kind of assessment must not be confined to the internal structure of the city but has to consider its surrounding regions and its position in the regional system of cities. Second, the profiles should not only focus on single aspects, but consider all fields of urban development, which requires a clear and transparent identification of characteristics for the evaluation (Giffinger et al. 2007). In this context the “Smart City”-profiles identify six key fields of urban development incorporating the main aspects of “Smartness”, as indicated in the following definition:

*“Smart City is a city well performing in [relevant key fields of urban development], built on the ‘smart’ combination of endowments and activities of self-decisive, independent and aware citizens.”* (Giffinger et al. 2007)

A.Trombadore, *Mediterranean think tank to share urban energy policies and measures: meethink\_energy project*



*Fig 3. Amman: view of urban density and architectural typology*

#### **4. The aim of Meethink\_Energy project**

Meethink\_Energy is a European research project led by the Tuscany Region under the Horizon 2020 call for proposals, involving 30 municipalities from 6 different European countries (Albania, Greece, Italy, Serbia, Slovenia, and Spain). The project aims to stimulate a multilevel governance model by joining regional with local authorities and involving policy makers, technicians, and stakeholders in a bottom-up integrated approach. The core of the project focuses on the definition of a common protocol and on the identification of common criteria and performance indicators of energy efficiency, as well as on a pilot phase during which the multilevel governance model will be tested in collaboration with small and medium-sized city partners. Several potential scenarios will be evaluated to compare performance. In this way, the multilevel governance model will allow to improve the quality and the effectiveness of energy policies and measures developed by the cities, as well as the connection among different key-actors and levels of government.

The core of the project focuses on the definition of a common

protocol and the identification of common criteria and energy efficiency performance indicators, as well as on a pilot phase during which the multilevel governance model will be tested in collaboration with city partners.

With a focus on three thematic priority areas (energy efficiency in buildings & districts, in particular public bodies buildings; renewable energy sources & distributed energy generation; energy in urban mobility), the aim of the project will be achieved by sharing activities through large-scale networking, peer-to-peer learning and best practices, by assessing the training gaps and needs of the participating municipalities in reference to energy efficiency planning and implementation; by developing a detailed capacity building strategy for public authorities at different levels of governments.

At the same time, a common ICT platform will be integrated with existing networks (e.g. PLEEC, Europeansmartcities 3.0). The platform, supported by a peer-to-peer methodology, will be structured with three different access levels (free access, policy makers, technicians) and it will be made up by a tool to share the data, (open data repositories), a decision support system and a communication website. The platform will support public authorities in monitoring and evaluating their current situation with the aim to identify strengths, weaknesses and opportunities as a baseline for evaluating the next energy efficiency policies and measures. The platform will allow to involve public/private stakeholders and promote a multidisciplinary Think Tank network across the EU.

Moreover, the project will support MS public authorities to implement article 7 of the EE Directive by setting up, revising and implementing robust Energy Efficiency Obligation schemes (EEOs) or alternative policy measures while providing appropriate information and tools and to strengthen the capacity of EU regions and municipalities in institutionalizing sustainable energy policies into their operations and committing and fulfilling their Covenant of Mayors obligations.

## **5. The added value of multilevel governance approach**

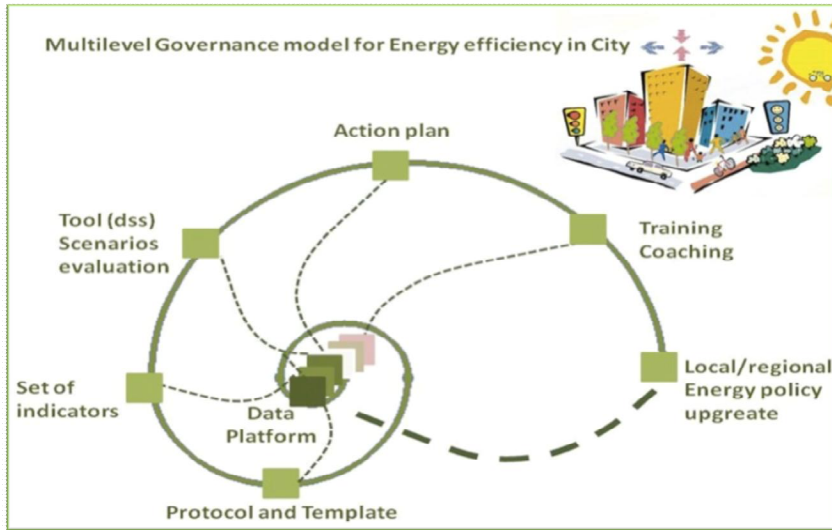
While many initiatives focus on the local level only, Meethink\_Energy project will also highlight the regional dimension of energy efficiency efforts. This aspect assumes a great relevance, for example, in the field of mobility, where a big share of transport energy use is related to commuting which is usually not confined to municipality boundaries but subject to a functional region. Also other important aspects, as renewable energy production, management or land use planning, will be characterized by a considerable regional dimension.

The regional dimension will foster the multilevel governance approach in specific three ways:

- The regional dimension will drive the indicators framework, the database structure and the monitoring tool;
- The regional structural and cohesion funds managing authorities will be involved in the selection of energy saving packages during the development and evaluation phase of Local Action Plans scenarios in order to reduce the governance gap among regional and local planning and to achieve synergies and effectiveness of integrated actions;
- Through the engagement of several municipalities of the same region in the project, Meethink\_Energy project will set-up regional groups to foster debates on regional issues, supplementing the local agenda.

Moreover, the regional groups will allow a fast exchange of ideas and approaches to implement energy efficiency measures in similar policy contexts, while the cross-national exchange between partner cities will promote new thinking and critical perspectives on local practices.

Meethink\_Energy project wants to make a real input to achieve the European targets by improving legislation through action of learning and dissemination of Best Practices on sustainable building and knowledge transfer. A special attention will be dedicated to the building sector (improving energy saving - energy efficiency in existing building).



*Fig. 4 Multilevel Governance model for Energy efficiency in City*

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Level approach	Objectives	Main results	Field	
<b>Policy</b>	Integrated approach multilevel regional scale Definition of the energy efficiency performance indicators in order to asses the potential scenarios and integrated solutions for a comprehensive city planning. Stimulating interactions between stakeholders/officers/ administrators and citizens/final users, to ensure the opinions and views of all interested parties.	New integrated management model	<b>Governance</b>	<b>THINK</b>
<b>Measure</b>	Definition of scenarios, integrated technological solutions and socio-economic measures. The development of a strategic plan and creation of scenarios, consolidating the foundations to support properly an Action plan. Valuation and analysis of SEAPs results, in order to keep track of the gap between achieved results and achieved goals, in reference to the EU 2020 targets. Benchmark with other position in respect to the EU targets and other SEAPs achievements.	Scenarios Action Plan SEAPs evaluation and monitoring	<b>Planning</b>	
<b>Tool</b>	One of the components of the MEETHINK-Suite multilevel governance model and tool, <i>as support decision system</i> , to close the distances between policy choices, planning at the regional/local scale, fostering the building capacity on Energy Efficiency Governance integrated approach, data management, monitoring and results analysis of SEAPs in respect with EU 2020 targets.	Data base, Protocol Decision support system software	<b>DATA Platform Suite</b>	<b>TANK</b>
<b>People</b>	Think tank network - Knowledge exchange New level of “advanced municipality” Skills and policy capacity building to define new Energy saving target and visions	Local Chapter Cross-departmental tasks unit	<b>Skills and Knowledge</b>	<b>NETWORK</b>

Tab. 1 Multilevel Integrated approach : 4 LEVEL Policy, Measure, Tool, People

The general objective of the Meethink\_Energy is to experiment an innovative approach in empowering public authorities to develop, finance and implement ambitious sustainable energy policies and plans on the basis of reliable data and analyses in sectors with high energy saving potential such as buildings, industry and urban mobility with a geographical coverage of clear European added-value and considering capacity building as an integral part of the project proposals-including EED implementing bodies, joining regional with local authorities and involving policy makers, stakeholders and technicians in a bottom-up integrated approach.

The model will be supported by an international network and tools (platform, database, software) to reach a vertical and horizontal cooperation, generating synergies and economies of scale on the defined priority areas.

## **6. The network of local Municipalities**

Meethink\_Energy targets Regional/Local Administrations of 30 European small and medium-sized cities: under 5,000 (small), 30.000/300.000 (medium) inhabitants. More than 1500 public agents/trainees/trainers should essentially benefit and take forward the project results in the short and long term, according to the stage of local planning activity.

The participating municipalities might very likely be involved in very different stages of their actions. Some might consider to subscribe the Covenant of Mayors, others might have already submitted an Action Plan and work on its implementation or are even close to the evaluation stage and might have to follow up on its results. It would make sense to support the municipalities in the specific stage. There are two main groups:

1. *Start-up Municipalities*: Help to map their stakeholders, identify energy problems (data), develop an Action plan, etc.
2. *In progress Municipalities*: Help to prioritize their existing Action Plan, probably critically review, monitor implementation and evaluate impacts.

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Again, as a unique selling point for *Meethink*, the project puts more attention to the second point with a focus on evaluation of the Covenant of Mayors efforts in the different municipalities. It would be really an added value of the project. All cities of Tuscany and Sardinia Regions and a couple in Greece and Slovenia are already in the CoM. It would show that we are working already on the next step in some municipalities (“Covenant of Mayors 2.0”).

Meethink\_Energy will involve local experts and technicians of public authorities (as trainees/trainers) with experience in/or building and city planning, Energy efficiency Action Plans and the capability as trainers to conduct activities at European level, to consolidate the “*Meethink peer to peer methodology network*”. A network where a group of agents/experts from different cities working on similar issues evaluates local policies, programmes and practices being implemented in a particular city and gives recommendations on possible action areas or improvements.

## **7. Action Plan and scenarios**

Impacts are expected on the accuracy and efficacy of the New Energy/City Action plans and the calibration of the existing ones, specifically in reference to three priority areas (energy efficiency in buildings and districts; renewable energy sources and distributed energy generation; and energy in urban mobility), a time/cost reduction during the planning development and recalibration processes, possibility to access to qualified and highly qualified personnel especially in the case of small and medium sized cities, smartness/experience exchange container, not only a database but a knowledge and experience open source library. Meethink\_Energy project wants to make a real input in the achievement of a better energy efficiency, promoting renewable energy and reducing GHG emissions, by creating an international platform and improving legislation through action of learning and dissemination of Best Practices on sustainable building and knowledge transfer.



The following chart defines the three thematic priority areas, energy efficiency in buildings and districts; renewable energy sources and distributed energy generation; and energy in urban mobility, of Action Plans where to intervene in order to achieve the best of energy efficiency. In each area will be considered three action levels (low, medium, high), that are conditioned by municipalities' vision, needs, priorities, stakeholder involvement and budget.

	low	medium	high	
district (building, industry and green infrastructure)				
renewable energy				
mobility				
Index:	Green building Green industry	Green public transport Electric bicycles	ICT Renewable energy	Photovoltaic installation for power and lighting Solar thermal installation for heating and hot water

*Tab. 2 The chart defines the actions and strategies that should be combined in the three thematic priority areas (energy efficiency in buildings and districts; renewable energy sources and distributed energy generation; and energy in urban mobility).*

## 7. The Meethink\_Energy Think Tank mission

In the long term, Meethink\_Energy Think Tank will support the achievement of EU 2030 and 2050 energy saving targets and GHG reduction goals outlined by the “Roadmap for moving to a competitive low-carbon economy in 2050” the EU “Energy Roadmap 2050”<sup>1</sup> and in the “EU policy framework for climate and energy in the period from 2020 to 2030”.

In the short term, it will have a direct impact on a number of EU Directives where real energy performance is crucial to effective implementation.

The expected impact will reflect the multilevel approach of the project:

- **Policy/Governance:** New multilevel integrated management model
- **Measure:** Criteria, set of indicators, scenarios, Action Plan SEAPs evaluation and monitoring
- **Tool:** Data base, Protocol, Decision support system software
- **People / Skill and Knowledge / Network:** implement technical skill as well as policy awareness in order to define new cross sectors strategies in energy planning. Structure as Local Chapters (at national level) as support and training expert group of Think Tank network; Cross-departmental tasks unit (at municipality level).

By focusing on real Municipalities energy data, collection, analysis and monitoring of SEAPs data, Meethink-energy addresses one of the main barriers *to enhance the capacity of public authorities to plan and implement sustainable energy policies and measures.*

The project will contribute to implement the awareness and capacity building in the field of energy efficiency multidisciplinary planning of more than 1500 public officers (policy makers, funding managers, technicians, city/energy planners, decision makers and administrators) of 30 municipalities of 6 different European countries (Albania, Greece, Italy, Serbia, Slovenia, and Spain). Thanks to the

common experimentation activities, they will become able to apply locally the set of *common criteria and multidisciplinary performance indicators in order to drive ambitious integrated regional and/or local Sustainable Energy Action Plans*. The Think Tank mission, in the short-medium period, is to train other officers into their respective countries/region/municipalities, to diffuse Meethink-Energy methodology and integrated solution capabilities on energy efficiency and city planning. At the same time will be the first members of the *peer-to-peer* exchanging information (energy consumptions/savings data, know-how, experiences, failures, best practices, etc...) network, sharing concepts and helping officers of other municipalities in building up robust and accurate energy/city plans.

### **Project partners**

**RT-** Regione Toscana – *Coordinator*, IT

**UCPH** Kobenhavns Universitet, DK

**Except**, NL

**Tecopy** SA, ES

**ANCI Toscana** Associazione Nazionale Comuni Italiani Toscana, IT

**CRES** Centre for Renewable Energy Sources and Saving Foundation, EL

**RAS** Regione Autonoma della Sardegna, IT

**ENERAGEN** Asociación Agencias Españolas de Gestión de la Energía, ES

**LEA Promurje** Lokalna Energetska Agencija za Pomurje, SI

**Vojvodina** Provincial Secretariat for Energy and Mineral Resources, RS

**AEA** Albania Energy Association, AL

### **Notes**

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