

## Accepted Manuscript

Title: Evaluation of cities' smartness by means of indicators for small and medium cities and communities: a methodology for Northern Italy

Authors: Giuliano Dall'O', Elisa Bruni, Angela Panza, Luca Sarto, Fazel Kayathian



PII: S2210-6707(17)30125-7  
DOI: <http://dx.doi.org/doi:10.1016/j.scs.2017.06.021>  
Reference: SCS 691

To appear in:

Received date: 10-2-2017  
Revised date: 27-6-2017  
Accepted date: 28-6-2017

Please cite this article as: Dall'O', Giuliano., Bruni, Elisa., Panza, Angela., Sarto, Luca., & Kayathian, Fazel., Evaluation of cities' smartness by means of indicators for small and medium cities and communities: a methodology for Northern Italy. *Sustainable Cities and Society* <http://dx.doi.org/10.1016/j.scs.2017.06.021>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

**Title**

Evaluation of cities' smartness by means of indicators for small and medium cities and communities: a methodology for Northern Italy.

**Authors**

Giuliano Dall'O<sup>1</sup>, Elisa Bruni<sup>2</sup>, Angela Panza<sup>1</sup>, Luca Sarto<sup>1</sup>, Fazel Kayathian<sup>1</sup>

1. Department of Architecture, Built Environment and Construction Engineering, Polytechnic of Milan, Milan, Italy
2. SACERT, Milan, Italy

**Abstract**

The need to develop policies that improve energy and environmental sustainability as well as technological innovation is the basis for the increase of the smartness of cities around the world. In the European Union, protocols were developed to measure the smartness of cities through indicators. These indicators however are tailored for large cities and do not fit the case of small cities in a satisfactory way. The paper develops a methodology for assessing smartness through indicators that is applicable to small and medium-size cities. The choice of the indicators is consistent with the ISO 37120 standard and it is inspired by the environmental indicators used in the Sustainable Energy Action Plan of the EU. The proposed methodology could be seen as an expansion of Governance strategies already partially adopted by many cities. The methodology is applied to 3 municipalities of northern Italy and the results obtained are discussed in the paper.

**Keywords**

Smart City; Assessment tools; Rating systems for sustainability; Indicators of smartness; Smartness Audit; Information Communication Technologies.

**Highlights**

The paper proposes a methodology for assessing the smartness of small and medium-size cities.

The proposed methodology defines a synergy with the European Project Covenant of Mayors

The main feature of the proposed methodology is its flexibility

The energy and environmental sustainability of cities is measured by a Smart City protocol

**1 Introduction**

This paper focuses on the topic of "urban smartness", namely the set of features and processes that make a city a "Smart City". Due to the complexity of this topic, it is necessary to analyze definitions and concepts before going in depth into the issue of what makes a city a Smart City. Many definitions of Smart City were developed in literature. Most of them are characterized by common elements, such as the idea that a Smart City is a city built around the human being. The smartness of a city refers to its ability to promote a lifestyle in which the needs of the individual citizen match those of the community. This idea encompasses a view of the citizen who do not play only a passive role (i.e. citizens are passive users of the services that are offered them), but also an active one. In such view, citizens are players in the planning process that improves the smartness of the city. Shared definitions of the factors that influence the evolution of cities into Smart Cities and of the process that leads to the increase of their smartness were not developed yet. This is partially due to continuous upgrading of the concept of quality of life as well as of technologies and related needs and opportunities (see for example the

Download English Version:

<https://daneshyari.com/en/article/4928183>

Download Persian Version:

<https://daneshyari.com/article/4928183>

[Daneshyari.com](https://daneshyari.com)