

TeMA

Journal of
Land Use, Mobility and Environment

This special issue collects a selection of peer-review papers presented at the 8th International Conference INPUT 2014 titled "Smart City: planning for energy, transportation and sustainability of urban systems", held on 4-6 June in Naples, Italy. The issue includes recent developments on the theme of relationship between innovation and city management and planning.

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).

INPUT 2014

papers selected

Smart City

planning for energy, transportation
and sustainability of the urban system

SMART CITY

PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM

Special Issue, June 2014

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TeMA

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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.

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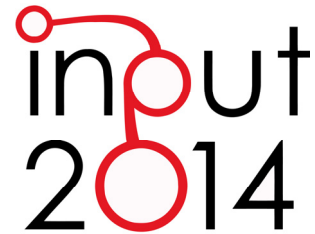
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This special issue of TeMA collects the papers presented at the 8th International Conference INPUT 2014 which will take place in Naples from 4th to 6th June. The Conference focuses on one of the central topics within the urban studies debate and combines, in a new perspective, researches concerning the relationship between innovation and management of city changing.



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EIGHTH INTERNATIONAL CONFERENCE INPUT 2014

SMART CITY. PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM

This special issue of TeMA collects the papers presented at the Eighth International Conference INPUT, 2014, titled "Smart City. Planning for energy, transportation and sustainability of the urban system" that takes place in Naples from 4 to 6 of June 2014.

INPUT (Innovation in Urban Planning and Territorial) consists of an informal group/network of academic researchers Italians and foreigners working in several areas related to urban and territorial planning. Starting from the first conference, held in Venice in 1999, INPUT has represented an opportunity to reflect on the use of Information and Communication Technologies (ICTs) as key planning support tools. The theme of the eighth conference focuses on one of the most topical debate of urban studies that combines , in a new perspective, researches concerning the relationship between innovation (technological, methodological, of process etc..) and the management of the changes of the city. The Smart City is also currently the most investigated subject by TeMA that with this number is intended to provide a broad overview of the research activities currently in place in Italy and a number of European countries. Naples, with its tradition of studies in this particular research field, represents the best place to review progress on what is being done and try to identify some structural elements of a planning approach.

Furthermore the conference has represented the ideal space of mind comparison and ideas exchanging about a number of topics like: planning support systems, models to geo-design, qualitative cognitive models and formal ontologies, smart mobility and urban transport, Visualization and spatial perception in urban planning innovative processes for urban regeneration, smart city and smart citizen, the Smart Energy Master project, urban entropy and evaluation in urban planning, etc..

The conference INPUT Naples 2014 were sent 84 papers, through a computerized procedure using the website www.input2014.it . The papers were subjected to a series of monitoring and control operations. The first fundamental phase saw the submission of the papers to reviewers. To enable a blind procedure the papers have been checked in advance, in order to eliminate any reference to the authors. The review was carried out on a form set up by the local scientific committee. The review forms received were sent to the authors who have adapted the papers, in a more or less extensive way, on the base of the received comments. At this point (third stage), the new version of the paper was subjected to control for to standardize the content to the layout required for the publication within TeMA. In parallel, the Local Scientific Committee, along with the Editorial Board of the magazine, has provided to the technical operation on the site TeMA (insertion of data for the indexing and insertion of pdf version of the papers). In the light of the time's shortness and of the high number of contributions the Local Scientific Committee decided to publish the papers by applying some simplifies compared with the normal procedures used by TeMA. Specifically:

- Each paper was equipped with cover, TeMA Editorial Advisory Board, INPUT Scientific Committee, introductory page of INPUT 2014 and summary;
- Summary and sorting of the papers are in alphabetical order, based on the surname of the first author;
- Each paper is indexed with own DOI codex which can be found in the electronic version on TeMA website (www.tema.unina.it). The codex is not present on the pdf version of the papers.

SMART CITY PLANNING FOR ENERGY, TRANSPORTATION AND SUSTAINABILITY OF THE URBAN SYSTEM Special Issue, June 2014

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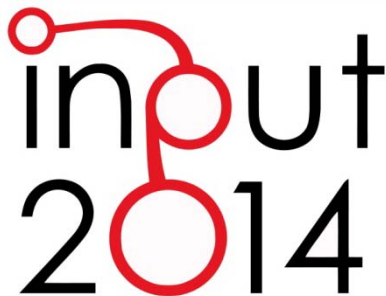
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SPECIAL ISSUE

Eighth International Conference INPUT
Smart City - Planning for Energy, Transportation and Sustainability
of the Urban System

Naples, 4-6 June 2014

The logo for the INPUT 2014 conference. It features the word "input" in a lowercase, sans-serif font, with the "i" and "n" connected by a red line that loops around the "o". Below "input" is the year "2014", where the "0" is a large red circle. The "1" and "4" are in a standard black font.

STRATEGIC PLANNING OF MUNICIPAL HISTORIC CENTERS

A CASE STUDY CONCERNING SARDINIA, ITALY

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ABSTRACT

The conceptual horizon of this essay is related, on the one hand, to the adjustment process of the implementation plans of the historic centers of the municipalities of the Sardinian region to the Regional Landscape Plan (RLP), and, on the other hand, to strategic planning as an important tool to guide land transformations in order to implement effective local development processes.

We address these issues through a critical analysis of a set of implementation plans of the historic centers (IPHCs) of Sardinian municipalities adjusted to comply with the rules of the RLP, in the frame work of strategic plans (SPs), in order to assess if, and to what extent, IPHCs are consistent with the strategic planning approach.

KEYWORDS

Implementation plans of historic centers, Strategic plans, Landscape plans

1 STRATEGIC PLANS AND IMPLEMENTATION PLANS OF HISTORIC CENTERS: A PROBLEMATIC DUALISM

In the framework of regional and urban planning processes of Sardinia, in the context of the RLP, established by the Decision of the Sardinian Regional Government (DSRG) no. 36/7 of 5 September 2006¹, the IPHCs are planning tools that implement the Planning implementation code (PIC) of the RLP into the “Areas characterized by historic settlements”. For these areas, the PIC defines a set of prescriptive rules and planning criteria (articles nn. 51-53 of the part of the PIC related to “Cultural and historic spatial framework”, which is defined by articles nn. 47-59). More precisely, article no. 52 identifies the IPHC as a plan which has to be necessarily approved through the cooperation of the Sardinian regional administration and a municipality as a necessary precondition for a municipality to exert its ruling power over the local transformation processes related to the municipal spatial jurisdiction, which implies a considerable pressure on the local administrators in order to implement valuable and effective planning processes concerning the municipal historic centers.

Following the RLP's approval, the Sardinian regional administration provided municipalities and practitioners with a wide range of technical guidelines and documentation that are significantly influencing the implementation of the planning processes of IPHCs².

As a consequence, in the planning processes of the IPHCs, heavily influenced by the control of the technical staff of the regional offices, a strong consistency and implied uniformity do show up as: i. a strong attention to historical, typological and morphological characteristics in terms of the territorial analysis of historic urban settlement systems, which are identified by the RLP as “Centers of antique and primary development”; ii. A strong prescriptive ruling framework characterized by a markedly-conservative attitude.

Sardinian SPs are studied and defined either by the municipal councils, or, less frequently, by groups of municipalities or province administrations, by means of financial programs stated by: i. paragraph 1.1 of the Decision of CIPE (The Interministerial Committee for Economic Programming of the Italian government) no. 2004/20, titled “Additional resources, premiality, extraordinary destinations and reserves”, and by criteria and procedures established by the Interinstitutional Table for the “Reserve for urban areas” of FAS (the governmental Fund for Underdeveloped Areas) in November 2004, which states that a part of the financial resources of each Italian Region will be utilized to define and study municipal, metropolitan areas' or groups of municipalities' SPs with a resident population of at least 50,000 inhabitants (paragraph B.11, titled “Interventions concerning innovative planning/projecting activity and immaterial investment in urban areas”); ii. Annex 2 of Note no. 125/GAB of 17 March 2005, titled “Modalities to activate resources”, where funds for SPs are increased.

¹ An updated and revised version of the RLP was preliminarily approved by the Regional Government of Sardinia by the DSRG n. 45/2 of 25 October 2013, titled: “Regional Law n. 4 of 23 October 2004, article 11. Regional Landscape Plan of Sardinia, first coastal territorial homogeneous region, approved by the DSRG n. 36/7 of 5 September 2006. Updating and Revision. Preliminary approval”. According to this DSRG, only a subset of the “Centers of antique and primary development” of the Sardinian municipalities are classified as “landscape goods”, as it occurs in the case of the RLP, while the majority are classified as “Identitarian systems: areas characterized by historic settlements” (art. 52 of the Planning implementation code of the updated and revised RLP; all the documentation concerning is available online at <http://www.sardegna territorio.it/j/v/1293?s=242464&v=2&c=11437&t=1> (accessed April 2014). If and when the new version of the RLP is established, this will imply some (minor) changes in the IPHCs' planning processes, whose rules will not be related to landscape goods, which will make the approval processes of projects faster, since no landscape authorization will be required anymore.

² Guidelines and documentation are available online in the institutional Internet site of the Sardinian regional administration “Sardegna Territorio” [Sardinia Territory] at <http://www.sardegna territorio.it/j/v/1123?s=6&v=9&c=9560&na=1&n=10> (accessed April 2014).

Following these measures, about forty SPs were defined, the most part at the municipal level, which delineate the strategic framework of the ongoing projects of the local contexts in the medium and long run.

How these plans integrate and confront with municipal Masterplans and implementation plans of Masterplans is still an issue of debate and discussion, in theoretical and technical terms.

In the vast majority of cases, the SPs identify and prepare the implementation of strategies that consider the historic centers of municipalities fundamental for the definition of the urban development policies, which aim at generating, especially in the medium and long run, an effective improvement of urban life quality. For instance, the SP of Sassari implements a holistic approach and defines a “Direction D9: urban transformation/regeneration “ where the interventions related to the historic center are integrated into a system of operations, which addresses several important and interdependent issues, such as: hydraulic reclaim of the subsoil, urban refuse collection, urban retail sale organization, e.g. through natural commercial centers, energy saving and efficient use –oriented through appropriate plants (Comune di Sassari 2007, 153).

The SP of Villacidro is rather different from the Sassari’s, since it considers urban renewal of the historic center almost exclusively dependent on buildings’ reuse and requalification instead of an issue that should involve city planning in general and systemic terms. Some punctual interventions are planned as “catalyzing operations” implemented through hierarchically-ordered projects named “flag projects”, “carrying projects” and “supporting projects”. The catalyzing action mainly related to interventions concerning the historic center is named “socially-oriented building sites”, which implies the implementation of projects based on the functional rehabilitation of historic buildings located either inside or outside the historic center. In this case, the rehabilitation of the historic center has not a strategic character, but an ancillary role with respect to higher-order strategic goals (Comune di Villacidro 2008). Between the two extremes represented by the SPs of Sassari and Villacidro lay a range of intermediate situations, among which the SP of Settimo San Pietro, Sorso and Stintino.

A comparison between SPs and IPHCs shows, rather surprisingly, a general lack of coordination and integration among the processes of definition of these municipal planning instruments, and a sort of a communicative short circuit since, on the one hand, SPs tend to neglect the importance and the intrinsic value of historic and cultural resources of the *centers of antique and primary development*, and, consequently, to undervalue the systemic and general potential of interventions in the historic centers that are often limited to punctual and fragmented restoration of buildings; and, on the other hand, IPHCs propose analyses of municipal historic settlement systems characterized by excessive philological and self-referential attitudes, which do not take into account planning frameworks that may possibly found, in the medium and long run, realistic plan implementation processes, in terms of the logical framework of the objectives and financial feasibility.

This essay proposes a discussion on the definition and implementation of IPHCs with the general goal of orienting their conservative character, mainly based on the urban settlement system’s requalification and restoration, in order to generate conditions favorable to local economic and social development, following the strategic planning conceptual framework.

In the next section, we tentatively define a system of foundational elements for a “Strategic plan of a historic center” (SPHC), by considering as reference points some recent experiences. In the following section, we critically analyze some approved or adopted municipal IPHCs, with reference to these foundational elements. In the concluding section, we discuss some possible theoretical and technical-practical paths to go beyond the dualism of the SPs’ and IPHCs’ planning approaches.

2 FOUNDATIONAL ELEMENTS OF A STRATEGIC PLAN OF A HISTORIC CENTER

A critical analysis of the IPHCs of Sardinian municipalities, which reflect properly and precisely the planning guidelines of the regional administration, shows a lack of an explicit strategic vision, which should characterize the planning processes, which instead are mostly concerned with the analysis of the historic urban settlement system and of building typologies, which eventually found projects that mainly consist of limited and conservative interventions. So, there is no evidence of theoretical and practical connections between IPHCs and SPs, even though several SPs, which were established just one year or so before the IPHCs, put in evidence a potential strong link between planning processes related to historic centers and local economic and social development.

Under this perspective, in this section, we propose two parallel analytical grids. The first grid aims at identifying the strategic potential of the IPHCs, on the basis of a detailed analysis that could eventually increase substantially the strategic effectiveness of these plans that is, implementing their transformation into SPHC. The second grid indicates the strategic priorities related to the historic centers of the SPs of four Sardinian municipalities (Assemini, Cagliari, Elmas and Villacidro) in order to detect if, and to what extent, these priorities are recognized in their IPHCs.

As a reference point, we assume the GOPP (Goal-oriented project planning; Bussi, 2004) strategic planning approach, which has recently been used in several planning and programming processes, implemented under the direction of the Sardinian regional administration. The GOPP methodology is based on a logical framework and was adopted in the first place for the definition of the so-called *Integrated development projects* in 2006, which were one of the main technical and financial instruments the Sardinian regional administration used in order to implement the investment policies of the 2000-2006 Regional operational program of the European structural funds. The GOPP approach makes it possible to address, in systemic and structured terms, economic, social and spatial planning and programming issues, and represents a theoretical and technical framework to implement processes of social learning, aimed at developing local development policies, which imply active participation of the local communities³. The logical framework consists of a hierarchically-structured objective tree, which should be defined through an incremental and participatory process by the local communities. This process starts with a SWOT⁴ analysis, which recognizes and classifies positive and negative current conditions that characterize the spatial, economic and social situation of the local context (e.g., the municipality) where a public policy is going to be projected and implemented. From the SWOT analysis we derive a hierarchically-ordered problem tree, where the lowest-level problems are identified as the causes of the highest-level problems, in a bottom-up causation chain. The problem tree generates the hierarchically-ordered objective tree that is a mirror copy of the problem tree, where objectives are future positive situations, which are represented by the overcoming of the (current) problems. The systemic and structured representation of the analysis of the local context through the SWOT analysis makes it clear and straightforward the definition of the problem and objective trees, which is the logical framework of the public policy at stake. The objective tree and the planning operations, associated to each operational (lowest-level) objectives, is named "matrix of the project" (Bussi, 2004). Through the "Document, which integrates the guidelines concerning strategic planning" (Regione Autonoma della Sardegna, 2005, pp. 6-7) the GOPP was assumed as the methodological reference point for SPs by the

³ See, for example, the materials available online in the institutional Internet site of the Sardinian regional administration at <http://www.regionesardegna.it/argomenti/programmazione/progettazioneintegrata/comepartecipare/presentazioneprogetti.html> (accessed April 2014).

⁴ SWOT is the acronym of strengths, weaknesses, opportunities and threats.

Office of Local public bodies, Financial affairs and Regional and urban planning of the Sardinian regional administration.

Effective strategic approaches to historic centers' strategic planning can be recognized in some recent experiences implemented by the municipalities of Reggio Emilia (Strategic plan for the qualitative enhancement of the historic center; Comune di Reggio Emilia 2005 2011) and of Vicenza (Masterplan of the historic center of Vicenza; Fantin 2013). In both cases, a strategic approach is explicitly mentioned and implemented into the plans in order to study the future scenarios of the historic centers, on the basis of a system of objectives, which comes from the overcoming of a system of problems (negative current situations: a problem solving-based goal-oriented approach). A very similar logical framework can also be identified in the debate proposed in a monographic issue of *Urbanistica Dossier* related to LUDA (Large urban distressed areas)⁵. In particular, Mueller *et al.* (2005) propose a GOPP methodology, the so-called CoSGOP (Collaborative strategic goal-oriented programming), to define strategies and programs to address urban requalification programs towards cooperation between public and private stakeholders, based on the analysis of case studies related to the urban contexts of Bratislava, Dresda, Edinburgh, Florence, Lisbon and Valenciennes.

Starting from these methodological and conceptual premises, and in order to clarify the analytical framework of our discussion, it is fundamental to understand how the SPs of the four municipalities we consider in order to analyze their IPHCs deal with the issue of their historic centers' strategic planning. All these municipalities used the GOPP methodology to set up the logical framework of their SPs, and they founded their goal-oriented SPs on a context analysis ordered through a SWOT representation. The participatory issue is fundamental and gives the whole a bottom-up character which the identification of future urban scenarios is based upon. However, not all the analyzed SPs consider the municipal historic center as a primary question. For instance, the SPs of the municipalities of Elmas and Assemini identify the historic center as a marginal urban area, and treat it as such in defining the future municipal scenarios, by giving much more importance to other spatial contexts, such as the productive peripheral areas and the urban parks for open-space recreational activities. From this point of view, the projects related to the historic center are critical, since no strategic future vision concerning the urban historic settlement system can be recognized and integrated into the implementation process of local plans.

The analysis of the GOPP-based strategic approaches to the definition and implementation of plans for the historic centers provides the municipalities with sets of objectives that could be very useful to assess the strategic effectiveness of their IPHCs, and to identify suitable planning paths to improve the quality of life and to catalyze economic and social local development. These sets may eventually make more comprehensive and multifaceted the almost-monotonically conservative and philological character of the current IPHCs.

In our view, a tentative general set of objectives to define and implement SPHC could be the following, based on two general objectives, 1 and 2.

1. General objective: improving the quality of municipal life in the short run, which includes the following specific objectives:
 - 1.1. promoting the urban system of the historic center and its relationships with the rest of the municipal area;

⁵ The issue describes the experience of "LUDA Project – Improving the quality of life in large urban distressed areas", funded by the European Commission through the Fifth Framework Program – Energy, Environment and Sustainable Development, Key-action 4 – City of Tomorrow and Cultural Heritage (Bentivegna 2005).

- 1.2. improving the quality of the historic center’s built environment, which contributes substantially to the historic center’s perceived features, which implies a particular attention to urban maintenance and renewal;
- 1.3. increasing the quality and potential of the historic center’s public spaces in terms of aesthetic attractiveness, urban fabric and functionality;
- 1.4. organizing and increasing the quality of commercial and retail sale activities;
- 1.5. promoting the image of the historic center through marketing campaigns related to the local, regional, national and international tourist markets.
2. General objective: promoting local development in the medium and long run, which includes the following specific objectives:
 - 2.1. making housing in the historic center more interesting and attractive;
 - 2.2. implementing cooperative actions between the public and private sectors to generate a system of urban services qualitatively valuable and competitive in terms of capacity of responding to social demand, also by means of innovative tertiary activities;
 - 2.3. improving accessibility, mobility efficiency and the situation of thru-traffic flows in the historic center, by encouraging the use of public transport, pedestrian and cycling paths, and discouraging the use of private transport;
 - 2.4. implementing participatory practices to support planning processes.

With, reference to the second grid of objectives, our discussion is related to the SPs of four Sardinian municipalities, Assemini, Cagliari, Elmas and Villacidro, whose we consider only the strategic operations concerning their historic centers, which, theoretically, should be identified in their IPHCs as well. However, in the SPs of Elmas and Assemini there is no evidence of strategic operations specifically related to the historic centers, since they have a general spatial scope. In any case, these strategic operations can possibly have important impacts on the historic centers’ situation of the two municipalities. The municipalities of Cagliari and Villacidro identify site-specific policies related to their historic centers, which are considered peculiar parts of the municipal areas in the strategic visions of the plans. Table 1 shows the second grid.

MUNICIPALITY	STRATEGIC OPERATION ⁶
Assemini	Requalification urban projects: A1. reorganization and enhancement of existing collective services and areas; A2. promotion of functional intermix; A3. promotion of private and public collaboration. Requalification building projects: A4. requalification and restoration of existing fixed heritage in relation to environmentally friendly architecture principles.
Cagliari	Characterization and orientation of historic centers neighborhoods, in terms of requalification, in order to increase their attractiveness and use: C1. definition of infrastructural actions in order to revitalize the historic neighborhoods. Enhancement of all tourist components and rediscovery of commercial and artisan uses in relation to the municipal center and historic neighborhoods, which represent essential parts of a new supply system based on environment, culture, commerce, tourism and the local products, related to Sardinian tradition and cultural identity; C2. Development of natural shopping centers and small artistic centers, in particular in the historic neighborhoods.
Elmas	Requalification of the residential offering: E1. reorganization and enhancement of existing public areas;

6 The strategic operations are extracted by SPs of Municipalities of Assemini, Cagliari, Elmas and Villacidro, available at <http://www.sardegna territorio.it/cittacentrstorici/pianificazionestrategica.html> (accessed April 2014). Bibliographic references are available in the section 'reference'.

	<p>E2. requalification of existing fixed heritage;</p> <p>E3. definition of urban planning policies in order to address the current population (inhabitants and workers) needs and to promote the increase of the endowment of public capital.</p> <p>Reorganization of internal mobility:</p> <p>E4. usability improvement for disabled consumers;</p> <p>E5. construction of pedestrian and cycling paths.</p>
Villacidro	<p>Enhancement of the historic center as unique and recognizable system in order to improve usability with particular regard to both development of cultural tourism and increase of urban quality:</p> <p>V1. development of an integrated project concerning the overall relaunch of the historic center;</p> <p>V2. integration of new cultural and social functions within the presently underused fixed heritage;</p> <p>V3. development incentive of high-quality tourist accommodations;</p> <p>V4. development of a total or partial pedestrianization strategy in order to protect a public good and to enhance its peculiarities.</p>

Tab.1 Strategic operations of SPs

As it is possible to recognize in the above-mentioned analyses, in relation to the majority of examined SPs, the objectives and strategic operations implement the two general goals of the first grid that may possibly improve the living quality standard in the short run and promote local development in the medium and long run. As a result, the historic center acquires a strategic value, shared by local communities and administrators.

3 ANALYSIS OF POTENTIALITY AND CRITICAL ASPETCS OF IPHCS IN RELATION TO FOUNDATIONAL ELEMENTS OF A STRATEGIC PLAN OF A HISTORIC CENTER

The qualitative enhancement of historic centers represents a significant question in the national, regional and local planning contexts. In particular, the Sardinian regional administration, which identified in the historic centers' renewal, improvement and promotion, a very important opportunity to support local, economic and social development, established the Regional Law no. 98/29 titled "Protection and enhancement of the historic centers of Sardinia", and, in 2006, approved the RLP, which recognizes the strategic role of the "Centers of antique and primary development", which are defined through a cooperative planning activity by the regional administration and the municipalities, and are classified as landscape goods, and, as such, are subject to a special protection regime under the provisions of the National Law enacted by decree no. 2004/42 on cultural and landscape goods.

On one hand, this section of the paper aims at identifying potentialities and critical elements of the IPHCs of four Sardinian municipalities, such as Assemini, Cagliari, Elmas and Villacidro, in relation to the objectives, defined in the section two. On the other hand, the section proposes a critical analysis in order to understand if the strategic operations, defined in the SPs, have been accepted by IPHCs, lending a strategic value to these plans. From this conceptual viewpoint, it is important to underline an elucidation concerning the choice of these four municipalities and to provide some information on the IPHCs. First of all, we chose these four municipalities because they are the only Sardinian municipalities that developed both a SP and an IPHC in order to make the SPs/IPHCs comparative analysis possible. Secondly, only Elmas and Assemini concluded the approval procedure in relation to the art. 9 of the Regional Law no. 28/98, as stated, respectively, by Decisions of Municipal Government no. 4283 of 28 September 2012 and no. 2407 of 26 October 2010.

With reference to the first general objective "improving the quality of municipal life in the short run", which is taken into account much more than the second one, the four IPHCs address in particular specific objective

n. 1.2 “improving the quality of the historic center’s built environment, which contributes substantially to the historic centers’ perceived features, which implies a particular attention to urban maintenance and renewal”. The four IPHCs, starting from context analyses that put in evidence a significant historic centers’ decay, project interventions aimed at protecting the comprehensive characteristics of their centers of antique and primary development, with a particular attention to conservation of the historic identity of the built environment. On the other hand, these operations not only focus on urban decay, but also they aim at revitalizing the urban historic contexts characterized by insufficient endowment of public services. The municipalities also address this issue through projects that pursue specific objective 1.4 “organizing and increasing the quality of commercial and retail sale activities”. Moreover, even though all IPHCs give provisions concerning enhancement and strengthening of public spaces in terms of aesthetic attractiveness, urban fabric and functionality (specific objective n. 1.3), only the municipality of Cagliari emphasizes the strategic importance of this objective in terms of enhancing their attractiveness and functionality. Finally, it is certainly emblematic that specific objective n. 1.5 “promoting the image of the historic center through marketing campaigns related to the local, regional, national and international tourist markets” is almost totally neglected by the IPHCs. From this point of view, it has to be noticed that, in operational terms, the issue of the centers of antique and primary development is dealt as an almost-exclusively local question, and, as such, as a problematic that does not deserve but a limited consideration. Only the municipality of Assemini underlines the importance of an increased awareness of the local communities, even though no planning policy is explicitly defined. Specific objective n. 1.1 “promoting the urban system of the historic center and its relationships with the rest of the municipal area” is addressed, even though in general terms, only by the IPHC of Cagliari, which proposes an analysis of the synergic relationships between historic center and the rest of the city.

In regard of the second general objective “promoting local development in the medium and long run”, the analyzed IPHCs do not show interest in strategic visions that go beyond a short run horizon, with the exception of Cagliari, since they identify, as their only focal point, what indicated by specific objective 2.1, that is “making housing in the historic center more interesting and attractive”. On the other hand, the municipality of Cagliari promotes interventions and operations aimed at improving the quality of housing in the historic center by boosting not only the stability of the current resident population, but also the demand for houses of new inhabitants, such as students. The other three specific objectives, namely “implementing cooperative actions between the public and private sectors to generate a system of urban services qualitatively valuable and competitive in terms of capacity of responding to social demand, also by means of innovative tertiary activities”, “improving accessibility, mobility efficiency and the situation of thru-traffic flows in the historic center, by encouraging the use of public transport, pedestrian and cycling paths, and discouraging the use of private transport” and “implementing participatory practices to support planning processes”, are almost completely ignored, with the exception of Cagliari. The municipality of Cagliari plans to strengthen and redevelop the historic center endowment of public services, and pedestrian and cycling mobility. Finally, the IPHC of Cagliari is built on a participatory process, based upon a set of public debates, and shows a strategic vision related to the local economic and social development in the medium and long run, and, by doing so, this plan goes far beyond the provisions of the regional guidelines. In relation to the second grid, where strategic operations of the four IPHCs in relation to the SPs of the same municipalities are analyzed, synthetized in the table 3, the study emphasizes how, with exception of Cagliari and Assemini, the IPHCs do not transpose integrally the objectives and strategic operations, defined by SPs, within their IPHCs. Moreover, Assemini, Elmas and Villacidro do not mention the existence of a SP for their territory. On the other hand, the municipality of Cagliari takes strategic operations of its SP into consideration, by

analyzing the SP within a particular section of the IPHC's report. In addition, Cagliari defines actions that address the strategic operations, identified by SP, lending a strategic value to IPHC, consistent with the SP.

GOAL ⁷	ASSEMINI	CAGLIARI	ELMAS	VILLACIDRO
1.1	Missing	Emphasis on the reciprocal relation between local level, represented by the historic center, and the overall level, represented by the city.	Missing	Missing
1.2	Requalification and restoration of the municipal historic tissue, by protecting the historic identity	Protection, preservation and restoration of the building stock, promoting the reconstruction of altered urban tissues	Reinstatement of the historic center's urban quality through restoration and requalification operations, based on the study of the typology identity of the urban tissue	Restoration of the historic center's urban quality in order to reinstate uniformity across the urban tissue, by reducing non homogeneous conditions
1.3	Adequate detailed prescriptions concerning public spaces in terms of materials, urban fabric and decor by means of graphical examples	Enhancement and protection of attractiveness and functionality of public spaces, through public infrastructural operations	Detailed prescriptions related to public spaces in terms of materials, urban fabric and decor by means of graphical examples	Detailed prescriptions related to public spaces in terms of materials, urban fabric and decor by means of graphical examples
1.4	Individuation of possible uses within the historic tissue, such as artisan shops and tourist facilities in order to reinstate a significant supply of services	Requalification, with the aim of supporting the existing artisan shops, in order to promote high quality operations	Promotion of commercial, artisan and tourist uses, consistent with environmental quality's enhancement	Promotion of commercial, artisan and tourist uses, consistent with environmental quality's enhancement
1.5	Local communities become conscious of the importance of historic centers	Missing	Missing	Missing
2.1	Restoration and reuse of existing buildings in terms of residential and service uses	Restoration and reuse of existing buildings in terms of residential use, in order to promote the stability of the current resident population, but also the demand for houses of new inhabitants, such as students	Urban renewal related to the maintenance of houses, that represents a specific target of planning policies related to the historic center	Missing
2.2	Missing	Requalification and improvement of the historic center in terms of quality and usability of services	Missing	Missing

⁷ The objective codes are related to the numeration of the second section that is "Foundational elements of a Strategic plan of a historic center".

2.3	Missing	Improvement of the public transport system and pedestrian mobility at the local level	Missing	Missing
2.4	Missing	Use of participatory approaches, such as public debates involving the local communities	Missing	Missing

Tab.2 Comparison between the objective system, defined in the second section, and strategies identified in the IPHCs⁸

The IPHC of Villacidro represents an emblematic case because only one of the four strategic operations is accepted and adopted in the IPHC. The position of Assemini municipality is intermediate. Indeed, although the IPHC accepted the most part of the SP's strategic objectives, with exception of one, it does not define specific operations related to such objectives.

STRATEGIC OPERATIONS⁹ ASSEMINI

A1.	Definition of recommendations in relation to materials, urban fabric and décor
A2.	Individuation of different possible uses of buildings
A3.	Missing
A4.	Requalification and restoration implemented through conservation of the historic characteristics rather than through environmentally friendly architectural principles
CAGLIARI	
C1.	Restoration operations based on polyvalent uses; Construction of public infrastructure Restoration of the urban waterfront Promotion of urban mobility characterized by limited pedestrian transfers
C2.	Supporting the existing artisan shops Enhancement of uses concerning existing cultural and environmental resources
ELMAS	
E1.	Missing
E2.	Reinstatement of the historic center's urban quality through restoration operations
E3.	Promotion of new commercial, artisan and tourist activities
E4.	Missing
E5.	Missing
VILLACIDRO	
V1.	Missing
V2.	Promotion of cultural activities
V3.	Missing
V4.	Missing

Tab.3 Comparison between the strategic operations of both SPs and IPHCs

In conclusion, the two analyses have underlined two significant problems. The first concerns the difficulty of small municipalities in defining strategic operations in relation to their municipal land. The second regards the current gap between the strategic operations of SPs and the strategies and actions of IPHCs.

⁸ Bibliographic references are available in the section 'reference'.

⁹ The objective codes are related to the numeration of the second section that is 'Foundational elements of a Strategic plan of a historic center', in the table 1 'strategic operations of SPs'

5 CONCLUSION

This essay discusses the definition of planning processes concerning the historic centers in terms of sustainable development. There are two parallel analyses proposed in the essay. One identifies the potential strategic values that convert IPHCs into SPHCs. The other concerns the relations between SPs and IPHCs of four Sardinian municipalities.

From this methodological viewpoint, the above-mentioned analyses have emphasized five critical questions. The first issue regards the difficulty of small municipalities in defining strategic operations. Indeed, this situation is clearly traceable through a comparison between Cagliari, the Sardinian regional capital, and the other municipalities. In addition, the issue is particularly critical in relation to the second general objective that concerns the medium and long run time periods. Under this perspective, the increased availability of resources in terms of skills and money could favor the development of a systemic vision that lends strategic value to SPs in the case of small municipalities.

The second issue concerns the conceptual gap between the strategic operations, defined by the four SPs, and strategies and actions, identified by IPHCs. With the exception of Cagliari and, partially, of Assemini, not only do the IPHCs ignore the existence of a SP, but also they neglect the most part of strategic operations, which puts in evidence a missing dialogue among the public departments at different scales of planning. The third issue concerns the lack of strategy of the current IPHCs, which are just aimed at fulfilling some practical questions targeted by various departments of the regional public administration, identified by the repletion of such task as filling in specific forms related to the architectural analysis of buildings, and the detailed description of blocks and parcels. Therefore, technical guidelines and handbooks were issued by the Sardinian regional administration related to IPHCs. Following this conceptual vision, historic centers represent single entities within municipal conurbations, which give rise to the fourth question. Indeed, with exception of Cagliari, all IPHCs neglect the identification of functional relations among the historic center, the rest of the urban tissue and the peripheral and periurban areas of a municipality. This problem originates from the lack of a systemic vision and strategic values that convert IPHCs into SPHCs. In the light of our discussion, a theoretical and practical path that may possibly help overcoming the almost-absolute lack of strategy of the IPHCs, and, at the same time, be a promising future development of our research, could be the radical redefinition of the actual IPHCs through a thorough and analytical implementation of the GOPP methodology, and the identification of the logical frameworks of the IPHCs.

NOTES

Federica Leone and Corrado Zoppi have made substantial contributions to the paper's conception and design, background and concluding remarks. Corrado Zoppi defined the question of the problematic dualism of strategic plans and implementation plans of historic centers (IPHCs). Federica Leone and Corrado Zoppi designed the discussion on the issue of the founding elements of a strategic plan of a historic center. Federica Leone analyzed potentialities and critical points of the IPHCs with respect to these founding elements.

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