

# **An Indicator-based Approach to Measuring Regeneration of Historic Cities.**

## **An experimental evaluation in Toscana and Sardegna.**

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### *ABSTRACT*

*Historic towns and cities are a distinctive element of Italian settlements. Despite their strategic role in structuring the Italian territorial framework, over the last few years they have been troubled by widespread abandonment and decay. While a major transition from preservation to regeneration policies has taken place, it has become evident that a crucial aspect is the evaluation of achieved goals and final success.*

*Against this background, the main purpose of this study is to highlight the need to provide a crosscutting and fully accessible set of indicators for measuring regeneration strategies for historic towns, and to develop a methodological proposal helping local authorities in*

*assessing the effectiveness of their development strategies and supporting the possible rescheduling of interventions while raising the interest about the use of indicators. An operational tool – the Set of Indicators for historic cities – is proposed based on the analysis and the selection of indicators adopted internationally.*

*The conceptual structuring of indicators is explored with a discussion of the selection process and the definition of a scoring framework. The case-study analysis is also reported – indicators being applied to Toscana and Sardegna to test the extent and the validity of the proposed indicators.*

*Conclusions are drawn concerning potential benefits and the applicability of the set of Indicators for historic towns.*

## **INTRODUCTION**

Since the early '60s, Italian academic debate about architectural and heritage conservation of historic towns and cities has been extremely lively and it has produced a number of in-depth researches. Indeed, historic towns and cities are the larger part of Italian settlements and they are proper to this Country: they are part of the historic character of Italy; they tell the story of its unique development and give a sense of place, continuity and cultural identity; they support a diversified local economy based on the high quality of their natural, cultural, agricultural and manufacturing resources. However, over the last few years, rapid economic, demographic and social changes have caused a widespread abandonment and decay of historic towns: they have lost their primary functions, their territorial viability has faded away, cultural and social connections have been shattered.

Extensive academic research has unanimously pointed out the need to oppose these phenomena of decay (Savarese and Valentino, 1994; Bonamico and Tamburini, 1996; Ricci, 2007; Rolli and Andreassi, 2008), but the Italian approach to planning practice has undergone some important changes over the past fifty years: from the early '60s to the end of the '90s, the *architectural conservation* of historic settlements through carefully planned interventions prevailed. Then, after a prolonged conflictual relation between conservation and development, a major transition from *preservation* to

*regeneration* finally took place.

Regeneration strategies explicitly intend to integrate social, economic, physical, ecological, demographic and financial issues.

Indeed, one of the most important challenges dealing with regeneration is to foster increasing productivity making the city or town more competitive (relatively to the surrounding region or the closer metropolitan area), at the same time paying attention to environmental issues, fighting social exclusion and promoting social cohesion, attracting new employment opportunities, renewing the deteriorating housing stock, facing crime and safety concerns (Andersen et al., 2003).

Since regeneration strategies aim at expressing a «*shared policy responsibility*» (Andersen et al., 2003, p. 80) and at encouraging a wide mobilization of individual energies and social resources as well as economic resources, they are generally based on partnerships among private stakeholders, associations, public authorities and local institutions.

At the same time, regeneration strategies arise from an area-based approach: the concerted actions they consist of, aim at counteracting local conditions of blight and decay. Due to the comprehensiveness of the urban problems they face, and because of the varied local conditions and the changeable social forces operating as part of the regeneration process, no pre-established solutions, repeatable models or recurring methods are possible – if not compromising the success of the regeneration itself. Indeed, when dealing with regeneration strategies, it is important to respond quickly and appropriately to changeable goals, resources and opportunities, eventually re-programming the interventions and re-defining the partnership. Therefore, a crucial step is the assessment of the effectiveness of the initiatives undertaken, that is the proper evaluation of the goals achieved, of the unexpected factors, of the final success or the inevitable failure of the strategy (Hemphill et al., 2004). «*When evaluations are used effectively, they support programme improvements, knowledge generation and accountability*» (UNDP, 2009, p. 127). Indeed, a well-balanced evaluation process can lead to more effective actions by simplifying and clarifying the planning process and making aggregated information available to policy makers, at the same time incorporating physical and social knowledge into decision-making, providing

an early warning to prevent economic, social and environmental setbacks, and encouraging the communication of ideas, thoughts and values (UNDESA, 2007).

Although extensive academic research has explored contents and practice of architectural conservation of Italian historic cities and towns (Di Stefano, 1979; Ferrari et al., 1980; Sanfilippo, 1983; Gabrielli, 1993; Aristone and Palazzo, 2000; Ricci, 2007), and despite the great number of studies about urban regeneration (Andersen et al., 2003; Audit Commission, 1989, 2007; UK Parliament, 2003), much less and more recent research has paid attention to the assessment of both the previous questions. Indeed, a review of the literature and of the existing sets of indicators reveals that scant research has focused on the evaluation of regeneration for historic cities.

Moreover, even though the evaluation approach has been growing more and more important in the last decade, and although many indicators have been drawn up, some theoretical inconsistencies persist, making it more difficult to assess programmes, initiatives and actions unanimously and unambiguously. As a matter of fact, the general quality of the evaluation design and the reliability of the final assessment can be negatively affected by differences in definitions, as well as diversified indicators for the same issue; lack of sufficient rigor and clearness in the methodology applied; scant or not-homogeneous data; not-unanimously approved interpretations of the outcomes. Against this background, the main purpose of this study is to highlight the need to provide a crosscutting and fully accessible set of indicators and to develop a methodological proposal for the evaluation of regeneration strategies for small historic towns and minor historic cities, while reconsidering the conceptual categories which define their territorial role. More specifically, the contribution of this work is to identify a flexible evaluation process and consequently to build an operational tool – the *Set of Indicators for historic cities* – based on the analysis and the selection of indicators adopted internationally.

The proposed Set is intended as a tool to investigate how actions, programs and projects are implemented and to assess the effects they produce. As part of the process aiming at achieving improved performance, it aims at supporting local authorities in assessing the effectiveness of their development strategies while encouraging more effective actions and better

decisions; at the same time, it aims at encouraging a prompt corrective action and the possible rescheduling of interventions in order to prevent setbacks or unfavourable outcomes; finally, it aims at contributing to the decision-making process while raising the interest of those involved in spatial planning and urban regeneration about the use of indicators.

The investigation process has been supported by both an historic and descriptive approach (analysis of the literature, legislation and the most significant experiences, not only with respect to regeneration strategies for historic towns, but also with respect to evaluation methodologies) reported in the first part of this article. Given that this paper is primarily focused on the selection of local indicators and the appropriate scoring framework, a significant investigation of evaluation principles and methodology has been carried out. Therefore, a possible listing of indicators has been identified based on five performance categories which, in their totality, are considered to contribute to urban regeneration.

The second part of this work is intended to describe the case-study analysis (the *Set of Indicators for historic cities* being applied to Toscana and Sardegna).

Conclusions are drawn on the validity of the indicators, the versatility of the scoring framework and the potential to identify best practices.

#### **FROM ARCHITECTURAL CONSERVATION TO REGENERATION OF HISTORIC CITIES IN ITALY**

Historic towns and cities are one of the major features of the Italian territorial framework due to their large number, to their numerous resident population and to the important heritage they house.

*Historic cities or towns* are distinctive settlement showing a lively urban culture, whose historic character is determined by the large number of adjustments in uses and activities and in the *forma urbis* – while the original traditions, rules and processes that led to their formation have been preserved. They are unique for formal, typological and planning features since they are unmistakable testimony of the historic, anthropological, cultural and artistic process determining their own existence (Di Stefano, 1979; Ferrari et al., 1980; Sanfilippo, 1983; Gabrielli, 1993; Aristone and Palazzo, 2000; Rolli and Andreassi, 2008). Undoubtedly, the concept of

*historic city* does not refer exclusively to a specific urban context, but to the area where it is located, that is the system of signs which the community recognizes (Savarese and Valentino, 1994; Ricci, 2007).

The expression *minor historic settlement* is a crucial specification. Initially, the adjective *minor* was adopted because of a distorted interpretation of the relationship between “predominant” and “subordinate” patterns of settlement and in order to implicitly justify why major cities were wiping out local cultures and marginal settlements (Terranova, 1982). As a matter of fact, such a terminology has to be traced back to purely quantitative considerations: *minor* does not express a reductive antinomy with celebrated and remarkable cities, but it rather refers to a place where urban culture found its congenial expression in small size and slow processes<sup>1</sup> (Bianchi, 1994; Musacchio, 1994; Bonamico and Tamburini, 1996; Maietti, 2008).

The planning concern with historic cities dates back to the '50s, when rapid changes in Italy and Europe made clear the need to protect the original settlements and to give them a new conceptual identity (Choay, 1995).

Although in Italy many laws had already been passed to encourage the protection of monumental assets, a proper turning point in the planning approach was the *Carta di Gubbio*, a declaration for the preservation of historic and artistic assets (ANCSA, 1960). This document initiated a lively academic debate and an enthusiastic operational research, but it determined controversial and not fully positive experiences. Actually, while advocating a general preservation of historic cities as a whole (even impeding new buildings), the *Carta di Gubbio* was focused on a strict conservation and on a rigorous protection of the city's monumental assets and historic features (Janin Rivolin, 1994).

Due to the simultaneous diffusion of a zoning-approach, which in Italy led to the adoption of DM 1444/1968<sup>2</sup>, the historic city was then reduced to a

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- 1 As for the Italian settlement, minor historic towns include “minimum” settlements (up to 2.000 population inhabitants), which usually are too small to take part in a truly effective development, and “minor” settlements (from 2.000 to 10.000 inhabitants).
  - 2 D.M. April 2, 1968 n. 1444, *Limiti inderogabili di densità edilizia, di altezza, di distanza fra i fabbricati e rapporti massimi tra spazi destinati agli insediamenti residenziali e produttivi e spazi pubblici o riservati alle attività collettive, al verde pubblico, al verde o a parcheggi da osservare ai fini della formazione dei nuovi strumenti urbanistici o della revisione di quelli esistenti, ai sensi dell'art. 17 della legge 6 agosto 1967, n. 765*, Gazzetta Ufficiale 16 aprile 1968, n.97.

rigid perimeter (the *Zona Territoriale Omogenea A*) subject to restricted regulation. The most obvious consequence was the segregation of this part of the city: often coinciding with the urban fabric inside the old city-walls, the A Zone was basically set apart from the ordinary planning process (a detailed plan was required in order to allow any intervention) and placed in a rather ambiguous prescriptive status.

Indeed, the long and sometimes farraginous planning procedure hindered local authorities from drawing up the required detail plans, so impeding any transformation for lack of the proper regulatory status in the A Zone – basically no interventions were carried out within the historic settlement. At the same time this hampering regulatory condition encouraged a frantic (and sometimes illegal) planning and building activity in areas other than the A Zone, where no restrictions or constraints were in force – the whole settlement being spoiled by widespread and uncontrolled interventions.

This paradoxical situation accelerated the urban decay within the A Zone, the latter being affected by a general abandonment and a quite widespread lack of maintenance, while major demographic and social changes determined an increasing depopulation of the historic settlement and the interventions in the surrounding areas changed significantly the historic town's primary functions. The disappointing experiences carried out over the years showed that simply architectural conservation and purely physical transformation of historic fabrics were not sufficient to stop these rapid changes and that a more comprehensive goal of revitalization was due.

The need for a radical innovation in planning policies for historic cities then emerged.

The second *Carta di Gubbio* (1990) marked another important turning point – it definitively shifted the general concern towards a comprehensive goal of development for a whole “historic region” and its specific cultural identity (ANCSA, 1990; Di Biase, 1991) – while a new awareness of the relationship between local and global dynamics and a new consideration of social issues emerged (Dematteis and Governa, 2005; Governa, 1997; Magnaghi, 1990, 2000, 2007; Vinci, 2005). At the same time, the major transition from a regulatory to a negotiated approach taking place in the '90s (Salone, 1999; Bobbio, 2000) reinforced the idea that effective solutions for historic cities have to be based on a solid integration of actions, procedures and

interventions and on a well-balanced partnership of actors and stakeholders<sup>3</sup>.

The aforementioned evolution of approaches for historic cities – from preservation of monumental assets to a broader concept of revitalization; from the initial interest on physical aspects to a wider interest on social issues and economic development – led to more comprehensive and concerted regeneration strategies.

Refusing the idea of a sole economic growth, urban regeneration deals with a more competitive development of local resources and intangible assets. The main challenge is to allow historic cities to compete with stronger areas by strengthening the economic performances while improving the quality of life and facing crime and safety concerns; by attracting new functions and new employment opportunities while delivering better public services; by renewing the deteriorating housing stock while paying attention to environmental issues; by managing any territorial change or development while strengthening the social connections and the private-sector investment opportunities (Andersen et al., 2003; ODPM, 2003; Audit Commission, 2007).

*«Regeneration policies need to be all-encompassing, looking beyond the purely physical and economic agendas of the 1980s, with equal importance being placed upon the economic, environmental and social objectives»* (Hemphill et al., 2004a, p.731). They should be based on concerted actions (strengthening of social capital; building restoration and environmental conservation; enhancement of public spaces; improvement of mobility; support to tourist, commercial, recreational, cultural activities), on a solid partnership of varied stakeholders (public authorities, but also private developers and actors), on diversified funds (regeneration typically involves a series of discretionary funding programmes, operating in parallel to public funds).

Due to the many aspects involved, the expected development results can be partially missed or their appropriateness can be negatively influenced by impedimental local conditions; by the lack of a clear planning or the

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3 Such a transition in the planning approach determined a real change in planning tools for historic towns and cities: from detailed plans and rehabilitation plans to the more recent negotiated tools and integrated programmes (Programma di Riqualificazione dei centri storici minori, Region of Marche; Programmi Integrati per i centri storici, Region of Sardegna; Quadro Strategico di Valorizzazione, Region of Umbria).



adoption of pre-determined conventional processes not taking into account the many local demands; by the often small scale of funding or the unsuitable partnership supporting the whole strategy. Indeed, some authors have questioned the effectiveness of regeneration strategies and it has even been argued if they do always provide a positive return (Tyler et al., 2013; Basle', 2006).

Against this background, there is increasing interest in evaluation.

Indeed, effective feedbacks about the ongoing activities and appropriate evaluation of the achieved results contribute *«to improving development policies, programmes and practices by providing policymakers with the relevant evaluation information for making informed decisions»* (OECD, 2001a, p. 3).

Evaluation plays a major role in enhancing the effectiveness of any planned strategy since it establishes a *«clear links between past, present and future interventions and results»* thus extracting *«relevant information that can subsequently be used as the basis for programmatic fine-tuning, reorientation and planning»* (UNDP, 2002, p. 5) – in this sense, contributing to greater accountability and better learning (OECD, 2001a; UNDP, 2009). At the same time, evaluation makes it possible to judge if the planned strategy went in the right direction, possibly assessing its replicability in other settings; whether success could be claimed; how future efforts might be improved eventually considering alternatives (UNDP, 2002, 2009).

#### **EVALUATING THE ACHIEVEMENTS OF URBAN REGENERATION FOR HISTORIC CITIES**

As briefly mentioned, evaluation plays a critical role in assessing the performance of programmes and projects – it reviews the achievements of a project against planned expectations, and it uses experience to improve the design of future projects and programmes, the decision-making process, the financing model, the public-private partnership (OECD, 1993, 2001b; UNDESA, 2007; European Commission, 2011). The increasing development of indicators has been helping decision makers in shaping effective programmes, therefore it seems a worthy effort to extend evaluation to strategies tackling urban decay in historic towns and cities – thus setting new standards for regeneration.

A thorough analysis of the literature about evaluation shows some peculiarities. Evaluation is internationally considered critical to support programme improvements and to plan strategically while contributing to make evidenced-based and informed decisions, and there is widespread consensus on the importance of early, persistent and rigorous evaluation (Alexander, 2006; Baer, 1997; Coombes et al., 1992; Hemphill et al., 2004; Linchfield et al., 1975; OECD, 1993, 2001a; Patton, 1990; Robson et al., 1994; The World Bank, 2010; Tyler et al., 2013; UNDESA, 2001, 2007; UNDP, 2002, 2009; UNEG, 2007; Wholey et al., 2010).

The European Commission is also quite engaged in promoting «*a culture of results-orientation, learning, inquiry and evidence-based decision making*» (UNDP, 2009, p. 127) – therefore it has produced or encouraged numerous studies (Basle', 2006; DETR, 2000; European Commission, 1999, 2005, 2011; Eurostat, 2009; Oatley, 1998; UK Parliament, 2003; Wong, 2000).

Conversely, evaluation has entered the Italian academic debate more recently and local authorities are still unaware of its potential. Indeed, in Italy evaluation is not yet considered a necessary step in the planning-monitoring-evaluating process, which is elsewhere unanimously recognized as «*a broad management strategy aimed at achieving improved performance and demonstrable results*» (UNEG, 2007, p. 2).

As a matter of fact, at the end of the '90s, when the Italian debate about evaluation took its first steps, most studies were basically related to social services, and to the assessment of efficiency and accountability in health and education sector. The many innovations taking place in the '90s determined the emergence of a new “planning perspective”, with many academics asking for broadening evaluation beyond the ordinary use in order to extend it to planning procedures, local development and territorial policies (Patassini, 1998).

New forms of representing diversified interests and the involvement of a plurality of actors within urban and territorial initiatives; deep changes in the role of local authorities and the wide involvement of private stakeholders in public policies; the innovative approach to negotiation, and the varied forms of public/private partnerships and inter-institutional cooperation within the planning process; the increasing attention to high standard of performance and high competitiveness of any territorial strategy; the need to seize diversified funds; all these aspects fostered the still lively Italian debate on

evaluation within the planning process (Bezzi, 2001, 2010; Bezzi et al., 2006; Bezzi et al., 2010; Ferrero, 2004; Florio, 2006; Leone et al., 2002; Moro, 2011; Palumbo, 2000, 2001; Palumbo et al., 2009; Stame, 1998, 2001, 2007; Urbani, 2010; Vergani, 2013; Vertecchi, 2003).

Many authors have investigated the extent of evaluation of local development and regeneration strategies (Curti, 2001; Laino, 2001; Micelli, 1995; Ministero delle Infrastrutture e dei Trasporti, 2002; Patassini, 1999, 2006; Sumiraschi, 2010) and there is a certain consensus on the idea that evaluation cannot be reduced to the mere measuring of impacts, effects, direct or indirect outcomes, but it should contribute to make possible coordination of diversified projects and programmes, with a wider goal of “territorial consistency” of the initiatives undertaken within a specific context (Palermo, 1998, 2002).

Despite the ongoing debate, some important questions remain as for the practice in evaluation. Indeed, some problems still affect the way evaluation is carried out in Italy: deep differences in concepts and general terms; not comparable set of indicators; multiple methodology applied; difficulty in finding data (statistical data sets available are mostly concerned with demographic and economic issues, lacking quality of life indicators). Moreover, methods and techniques are not always consistent and the adopted approach is not always dynamic – thus it is often difficult to assess initiatives taking place in complex and diversified contexts, as well as to comprise the strategic dimension of the initiatives while measuring their efficiency and effectiveness (Carmona, 2003; Governa, 2004). At the same time, since regeneration policies are concerned with social and territorial objectives as well as economic ones, measuring the outcomes can be uncertain – issues such as quality of life or territorial balance are less susceptible to quantification than economic growth. Finally, most of the existing sets of indicators are developed at the regional level, therefore they are affected by a certain fragmentation of information or by deep differences from region to region.

Against this background, the need to create a unanimous, crosscutting and accessible set of indicators to evaluate regeneration strategies seems to be worth discussing. The following paragraphs describe how existing indicators have been analyzed and consequently structured within a univocal *Set of*

*Indicators for historic cities.*

**The selection of indicators**

As mentioned before, evaluation consists in the systematic and objective measuring of a project, a program or a policy – to assess if the initiatives undertaken to achieve a general interest have produced the expected effects according to the stated objectives; to evaluate their relevance, efficiency, effectiveness; and to describe the unexpected outcomes thus contributing to the eventual rescheduling of interventions (OECD, 1993, 2001b; Stame, 1998; European Commission, 2011).

Most frameworks for evaluation follow an indicator-based approach by including contextual measures to identify the baseline assessment of the area, the conditions within which the strategy is operating and the effects of policy actions (European Commission, 1999; Wong, 1995, 2000; Audit Commission, 2002, 2005). Indicators are measurable units – nor necessarily numbers, but operational information or parameters – used to define (beyond what is directly associated with the indicator itself) not otherwise investigable phenomena in order to contribute to the improvement of policies and actions (OECD, 1993; Bossel, 1999).

The selection of appropriate indicators for regeneration strategies has proved difficult, given to many reasons. First, local social structures and economy often extend far beyond the area where regeneration takes place, making indicators quite sensitive to locational factors (Coombes et al., 1992). Secondly, the appropriateness of indicators depends on the difficult balance between high level of comprehensiveness and their necessary synthesis (European Commission, 1999; DETR, 1998b) – due to the great number of thematic and specific sets of indicators adopted internationally (dealing with environment and sustainability, quality of life, infrastructures, demographic issues, crime and safety concerns, etc.), it has been laborious to avoid double, inconsistent, or ambiguous parameters while selecting descriptive enough indicators. Finally, the assessment of regeneration strategies requires socio-economic indicators: although they have been used to inform policy decisions since the mid-‘60s, their application has been long delayed because of conceptual and methodological difficulties (Carley, 1981) – they might highlight strengths and weaknesses of regeneration practice but in

most cases they are not able to explain possible negative performances or indirect outcomes. Furthermore, even though it is possible to set parameters for mostly quantitative regeneration outputs, it is difficult to extend the same rationale to more specific criteria (quality of life, sustainability, other qualitative phenomena).

The indicators proposed in the present work have been selected based on the four-step procedure designed by Coombes and Wong (1994).

As a preliminary step, the conceptual consolidation and the investigation of issues related to regeneration of minor historic cities have been necessary, as well as the effort of clarifying the basic concepts of evaluation and the analysis of comparable information, previous research and existing indicator-based methods. Even if not directly related to historic towns and cities, diversified set of indicators have been considered to refine the selection of appropriate and previously tested parameters: economic and sustainable development and quality of life indicators (Audit Commission, 1989, 2005; DETR, 2000; UNDESA 2001, 2007; Eurostat, 2009; UNDP, 2009; The World Bank, 2010), local deprivation indicators (DETR 1998a), environmental indicators (OECD, 1993; Eurostat, 2008), social cohesion and human development indicators (OECD 2001c; Australian Bureau of Statistics, 2004).

Secondly, the analytical structure where the indicators can be organized has been provided. As argued before, regeneration of historic cities includes diversified contents, as well as numerous quantitative and qualitative aspects, therefore setting out the precise list of issues to be covered and providing the rationale for the selection of indicators have been crucial.

When dealing with historic cities and minor historic settlements it is necessary to consider not only local resources and economic features, but also spatial competitiveness, intangible assets and identity – the latter being a multifaceted concept including the territorial rootedness, creativity and local culture, the political background, expectations of the community, human and social connections. Camagni (2009) has resumed such a diversified content into the expression “territorial capital”: it includes “hard” and “soft” elements, goods and services, knowledge and skills, but also geographical location, nature and environmental resources, traditions, informal rules, social connections, everyday life and human activities

(OECD, 2001b; European Commission, 2005). Although partially questionable (intangible assets are not properly assessable and they do not represent economic forces), the economic concept of capital is used to identify the set of resources in which local stakeholders invest to promote development and which require maintenance charges, operating expense and hidden costs. Each asset may be considered an accrued and marketable stock with the potential to produce profit and to undergo wiping out processes, enhancement, depreciation (Bourdieu, 1983; Camagni, 2009).

Aiming at describing all the driving forces part of the aforementioned “territorial capital”, at the same time being due to provide an accessible analytical structure for the proposed set of indicators, a “five capitals model”<sup>4</sup> has been considered: from a bottom–up perspective, five key factors have been identified representing the issues required in a well-balanced regeneration policy – human, social, infrastructural, physical and manufacturing capitals.

Consequently, 55 indicators, deriving from a thorough selection of existing set of indicators and previously tested parameters (all of them adopted at present by international, European and Italian agencies) has been organized within the aforementioned “five capital” structure.

In the following paragraphs, a short description of the main contents of each “capital” is provided (see the Annex for the detailed list of the indicators).

- *HUMAN CAPITAL*

Studies on *human capital* point out the strategic relation between school and work experience of the population and social and economic development (Becker, 1962, 1975; Schultz, 1959, 1962; Sen, 1997, 1999; Arrow et al., 2010). Indeed, human capital is the set of knowledge, skills, competencies and attributes embodied in individuals that facilitated the creation of personal, social and economic well-being (Coleman et al., 1994; OECD, 2001c) allowing the achievement of a high territorial competitiveness.

In order to provide a complete sets of indicators of human capital, not only parameters related to education, competences and skills of the population, basic demands, working conditions and job opportunities

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4 Initially proposed by the organization *Forum for the Future* in order to describe stocks and flows related to a sustainable development, the *Five Capitals Model* includes natural, social, human, manufactured and financial capital.

have been considered, but also demographic indicators, parameters related to number and quality of facilities and related social services, programmes and initiatives addressing human capital, etc.

• *SOCIAL CAPITAL*

*Social capital* is a system of actual and potential resources and social elements – trust, social connections, institutions, customs – affecting the quality and quantity of social interactions (Bourdieu 1980, 1983; Coleman et al., 1994; Putnam 1993, 2000). It enables individuals to act collectively in the most effective way to pursue shared goals while reducing delays and illegality (Cersosimo, 2001; Bagnasco et al., 2001). In order to provide a complete set of indicators, social cohesion and social inclusion have been considered, as well as forms of participation and association, density of organizations, density of facilities supporting social development.

• *INFRASTRUCTURAL CAPITAL*

*Infrastructural capital* consists of assets that, while not directly used in the production process, provide services and improve the quality of life (basic facilities, resources and goods, public services, but also communication and distribution of energy, procedures and policies, financing systems). It generates positive externalities affecting the spatial competitiveness and it plays a significant role in the development process determining the accessibility of a certain area, therefore the potential to establish connections, to encourage innovation and to determine growth opportunities.

• *PHYSICAL CAPITAL*

*Physical capital* is a set of durable goods, assets and stocks that increase individual and collective productivity and make possible the provision of services. It includes natural and environmental systems and urban assets, as well as the relationship forged with the physical resources and land-use planning component of urban regeneration (Carbonaro and D'Arcy, 1993; DETR, 1998c).

In order to provide a complete set of indicators, environmental elements, as well as historic and cultural assets and main features of the located housing stock have been considered.

- **MANUFACTURING CAPITAL**

*Manufacturing capital* expresses the economic characteristics and the productive features strictly related to the development processes. It consists of stocks, activities, services, and private and public investment essential to the economic dynamics of a community.

## **TWO CASE STUDIES: TOSCANA AND SARDEGNA**

Two case-studies have been selected to test the validity of the *Set of Indicators for historic cities* – the Province of Grosseto (Toscana) and the Province of Nuoro (Sardegna). They are representative of the strategies that Italian municipalities put in place to achieve a well-balanced regeneration and they share the same basic characteristics as for size and scale of the related territorial framework, occurrence of regeneration efforts addressing historic towns, indicator coverage – although at the same time they give the opportunity to investigate different approaches to regeneration: while Tuscany has long supported its development by "indirect" and deeply embedded measures, more recently Sardegna has been promoting a direct policy of regeneration of its historical settlements.

- *The Province of Grosseto*

12 municipalities in the Province of Grosseto have been considered (Arcidosso, Castel del Piano, Castell'Azzara, Cinigiano, Manciano, Pitigliano, Roccalbegna, Santa Fiora, Scansano, Seggiano, Semproniano and Sorano – 1.631 sqKm, about 40.000 inhabitants). Most of them are very small towns with a low population density, and four of the selected can be considered "minimum" towns – less than 2,000 inhabitants; Manciano is the only municipality with more than 7,500 inhabitants.

Two different but complementary systems of towns might be identified within the case-study area. On one side, Manciano plays a leading role for the surrounding towns (Pitigliano, Sorano, Castell'Azzara) thanks to its central position in the infrastructural system, but also because of the spatial attraction it exerts. On the other side, the inward area is led by two strongly-connected municipalities (Arcidosso and Castel del Piano), whose central role is based on the provision of public services and facilities for the surrounding towns. Because of a significant infrastructural seclusion, this area is troubled



by serious problems of abandonment and depopulation, but at the same time it preserves high and unique environmental values.

All the case study area has been concerned with varied and numerous development initiatives, with significant public and private investments, and a solid and effective partnership of diversified stakeholders. A supporting role in the regeneration process has been played by the regional planning (*Piano di indirizzo territoriale regionale* and *Piano Territoriale di Coordinamento of the Province*) and by some European Programmes (especially Interreg IIC); by the financial support to the manufacturing resources (Regional Law n. 28/2005, *Codice del Commercio*; Regional Law n. 53/2008, *Norme in materia di artigianato*); by a well-balanced marketing campaign.

• *The Province of Nuoro*

20 municipalities in the Province of Nuoro have been considered (Aritzo, Atzara, Austis, Belvì, Desulo, Fonni, Gadoni, Gavoi, Mamoiada, Meana Sardo, Ollolai, Olzai, Ortueri, Ottana, Ovodda, Sarule, Sorgono, Teti, Tiana and Tonara – 1.018,2 sqKm, about 34.000 inhabitants). All of them are very small towns, with an extremely low population density (most municipalities have less than 2,000 inhabitants, six of them have less than 1,000 inhabitants).

Also in this case, two different systems of towns might be identified. On one side, Fonni and Mamoiada play the leading role for the surrounding towns (Gavoi, Ollolai, Olzai, Ottana, Ovodda, Sarule) thanks to the strategic provision of public services and facilities, but also because of the spatial attraction they exert on tourist, environmental and manufacturing resources. As for the other municipalities, they are part of a solid and balanced network of minor towns, where no leading role is played: even if Tonara and Aritzo exert some attraction by providing facilities, all these towns are part of a homogeneous settlement, sharing infrastructural seclusion, dramatic problems of abandonment, but at the same time high and unique environmental values.

The selected municipalities have been concerned with numerous initiatives, with significant public investment, and effective partnerships of diversified stakeholders. The recent regeneration effort

in the Province of Nuoro has been mainly focused on the strengthening of physical and social resources, with a strong public support for the restoration and the enhancement of building stock and public spaces (Regional Law n. 29/98 - *Tutela e valorizzazione dei centri storici della Sardegna*; *Bando CIVIS - Rafforzamento centri minori - POR Sardegna 2000-2006*; *Bando DOMOS - Proposte di programmi di valorizzazione dell'edificato storico della Sardegna, 2006*; *Bando BIDDAS: Proposte di rete con programmi integrati e interventi di riqualificazione urbana dell'edificato storico dei Comuni della Sardegna, 2008*; *Bando SALTUS - Interventi di recupero, riqualificazione e valorizzazione dell'architettura degli insediamenti rurali storici extraurbani, 2009*).

In facilitating the comparison of the selected case-study areas and in order to allow the proper assessment of the regeneration efforts, a series of points need to be allocated to each indicator in accordance with its performance, as highlighted by Coombes and Wong (1994) about the need to determine a scoring system as part of the evaluation process.

For the specific purpose of this work, a scale of 0–5 has been adopted, where 0 represents no contribution or unsatisfactory contribution to regeneration and 5 represents the maximum level of contribution for each indicator. The use of such a numerical scoring system is intended to enable the comparison of quantitative data with a regional benchmarking, identifying how the performance of each municipality differs from the regional performance and whether it can be considered the spur for improvement or an example of how to achieve good practice (Audit Commission, 2000; Hemphill et al., 2004b).

On these premises, data and information have been collected and analyzed for each municipality with reference to the indicators listed in the annex, then the assessment for each indicator has been formulated based on the comparison with the regional benchmark. The first result of this step is represented by 55 scores, one for each of the proposed indicators. The allocation of these indicator-based scores has been influenced by the importance of the phenomenon/action described by the indicator and the strategic contribution of the undertaken initiatives to the final regeneration;

by the consistency of the intervention with potentials and weaknesses of the area; by the possible integration of actions or phenomena and on the virtuous or repressive impulse of individual or collective participation; by the unexpected impact of planned or spontaneous actions.

Consequently, a resuming score has been drawn for the five indicator groups by working out the average of the points allocated to the 55 indicator. This intermediate scores, based on the comprehensive range of indicators employed and the extensive nature of data collected, are expected to allow each “capital” to be individually weighted in terms of its contribution to the achievement of the expected regeneration, possibly pointing out specific weaknesses in the strategy.

Finally, an overall numerical score – worked out as the average of the five intermediate results – has been used to enable the comparison of different municipalities in the same area (as shown in figure 1 and 3) and therefore to make possible a thorough discussion of the individual performance achieved. At the same time, the overall score permits the analysis of each case study against the theoretical maximum score and it enables to consider the standard to be attained in the pursuit of effective regeneration while considering the possible curbing contribution of the municipalities.

The overall and thematic results of evaluation have been summarized in results maps (as shown in the following figures), which contribute to identify each major problem or outcome of evaluation by stating each score as clearly and concretely as possible.

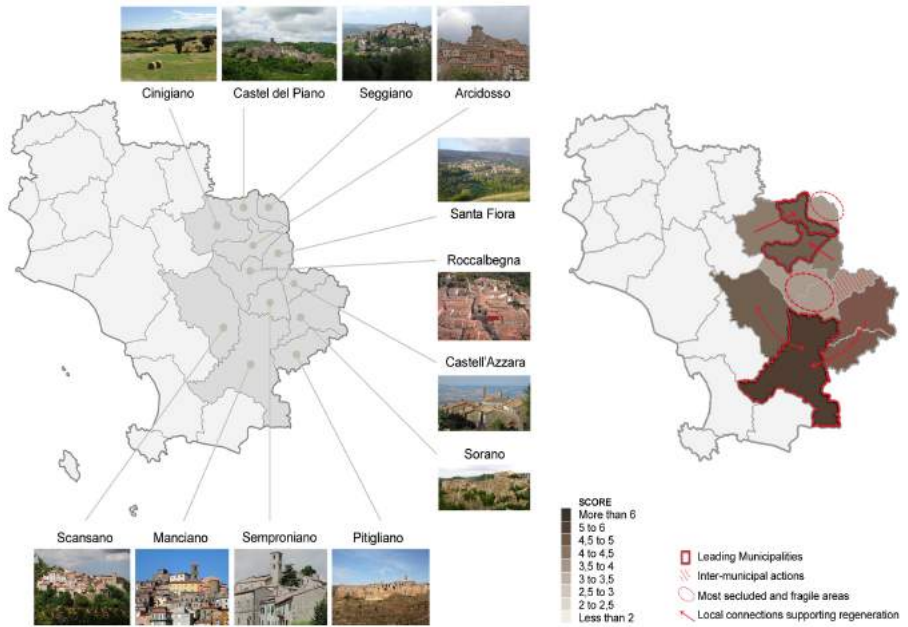


Figure 1 – The Province of Grosseto: case-study area and evaluation results

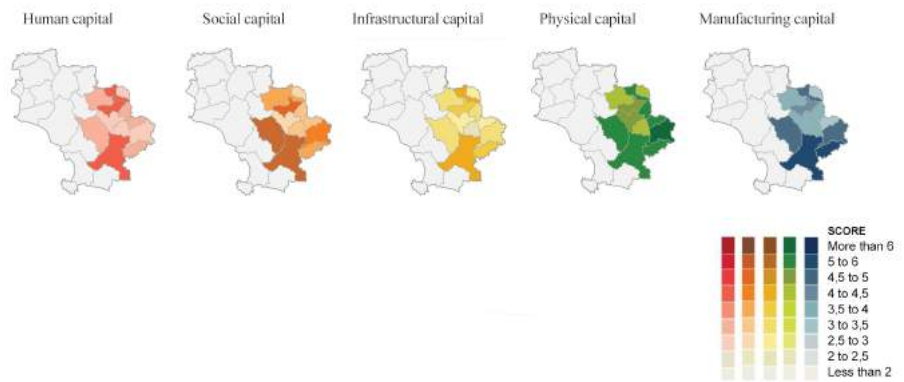


Figure 2 – The Province of Grosseto: intermediate evaluation results

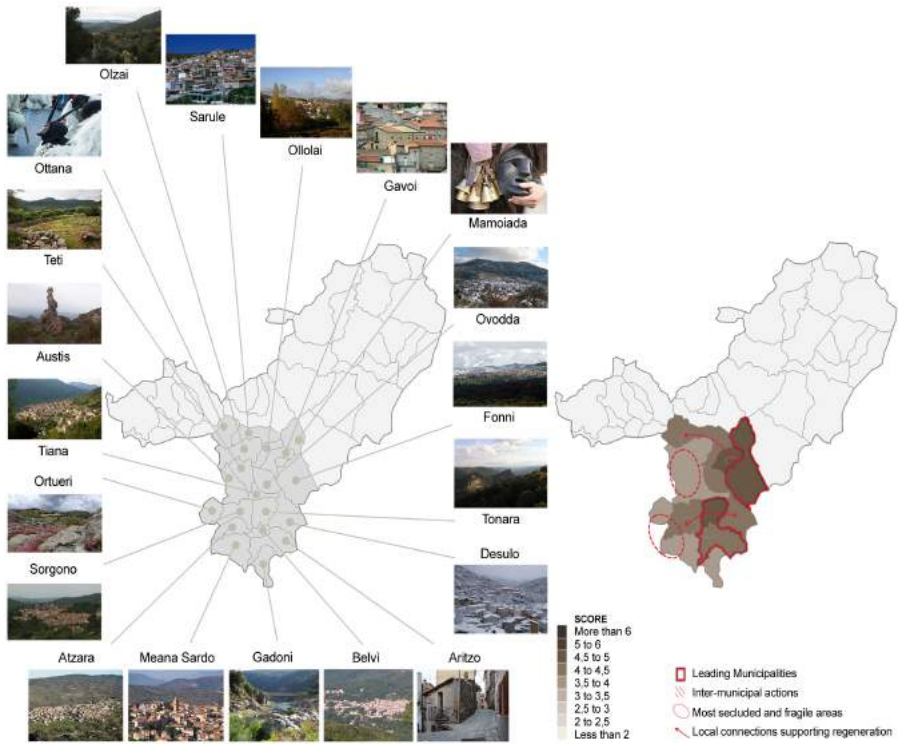


Figure 3 – The Province of Nuoro: case-study area and evaluation results

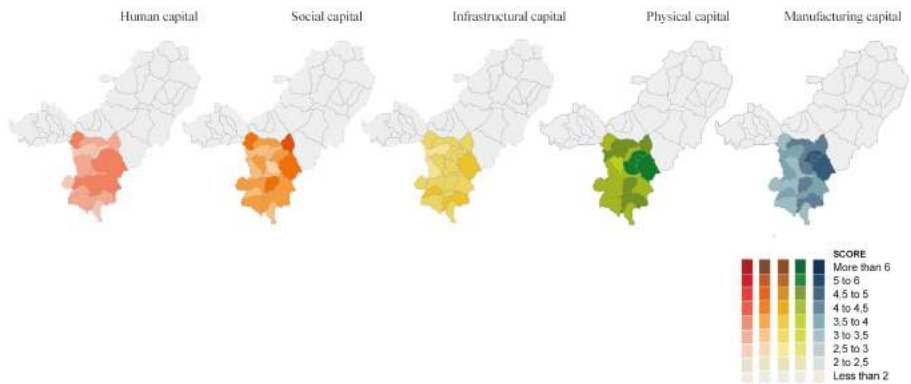


Figure 4 – The Province of Nuoro: intermediate evaluation results

## CONCLUSIONS

The planning concern with historic cities has undergone important changes: from the early '60s to the end of the '90s a major transition from *preservation to regeneration* took place.

As briefly highlighted in this work, the use of evaluations and related performance indicators within the planning process has become increasingly significant. Indeed, a well-balanced evaluation process can support programme improvements while contributing to measuring outcomes and results, it enables to illustrate what performance should be attained, it can lead to more effective actions while increasing accountability and prevent possible setbacks.

Although extensive academic research has explored conservation of Italian historic cities and towns as well as contents and practice of urban regeneration, and although there is international consensus on the importance of early, persistent and rigorous evaluation within the planning process, much less of the Italian research has paid attention to the assessment of regeneration strategies addressing historic towns and cities.

The main purpose of this study was to highlight the need to provide a crosscutting and fully accessible set of indicators and to develop a methodological proposal for the evaluation of regeneration strategies for small historic towns and minor historic cities. By identifying a flexible evaluation process and the consequent operational tool – the *Set of Indicators for historic cities*, based on the analysis and the selection of indicators adopted internationally – this work was intended to describe to which extent evaluation can be part of the Italian planning process. At the same time, it was intended to test the utility of a comprehensive evaluation tool, against the thematic fragmentation and sectorialism of existing set of indicators (dealing with environment and sustainability, quality of life, infrastructures, demographic issues, crime and safety concerns, etc.) and despite the lack of homogeneous data and deep differences from region to region.

On these premises, the application of the proposed *Set of Indicators for historic cities* to two case studies has been necessary not only to test its versatility – that is the possibility to extend its use to areas different in scale, territorial framework, planning background – and to try the comprehensiveness and the required synthesis of such an evaluation tool, but it has been indispensable

in order to test the availability of homogeneous and clear data, as well as the availability of the required benchmark scores (of regional or national level).

The attempt of evaluating the regeneration strategies put in place in the proposed case studies by applying the *Set of Indicators for historic cities* allows some considerations – apart from specific remarks about the case studies themselves. Some weaknesses have emerged, partially related to the problematic aspects of evaluation.

The selection of indicators has been deliberately conducted using well established techniques and making reference to set of indicators adopted internationally, thus dealing with widely agreed concepts and using statistical data sources that are frequently and readily available. Nonetheless, using the *Set of Indicators* for the selected case studies has been partially hindered by the scantiness of available information for some of the indicators or some of the selected municipalities. Indeed, being the Italian academic debate about evaluation quite recent and being many local authorities still untrained about the evaluation practice, in Italy data fragmentation is quite widespread. In addition, even though the lack of qualitative data for evaluation has been filled in some regional and subregional attempts, often there is no coordination from region to region (indicators of “physical capital” have proved to be more sensitive to unhomogeneous data). Evidently, data fragmentation makes the assessments less reliable, and duplicity or mismatching in the choice of indicators or deep differences in terminology and definitions interfere with the required relevance of evaluation.

As for the general convenience of the selected indicators, they have proved to be technically robust, easily measurable and capable of being regularly updated – most of them have been long in use in other Countries and they have been tested with varied approaches. Nonetheless, some of the selected indicators have proved to be not so sensitive to change in the initial planning or to specific local conditions, while others cannot easily highlight virtuous or curbing conditions to the planned regeneration strategies. In this sense, indicators within the “human capital” category are the most ambiguous, since it is often quite difficult to establish a clear connection between regeneration initiatives and demographic changes – the latter being

influenced by many conditions with no bearing on regeneration. Conversely, they have proved to be the most reliable as for data availability. At the same time, spontaneous contributions to the regeneration of historic towns are basically impossible to be measured or clearly defined based on the proposed set of indicators. Indeed, methods and tools used in the practice of evaluation are not always able to assess the specific contribution of integration within the regeneration strategy – integration of policies, general quality of partnerships between diversified stakeholders, concerted actions – or to properly interpret the delicate balance between development initiatives and actions to oppose urban decay.

Against this background, further research on evaluating regeneration of historic cities seems to be useful, while a wider acceptance of assessment at institutional level and a suitable training effort are required.



**ANNEX – THE SUGGESTED SET OF INDICATORS**

**HUMAN CAPITAL**

**Demographic dynamics**

UM 1a	Population over time and tendential growth rate;
UM 1b	Territorial density, spatial distribution of the population;
UM 1c	Index of mobility/permanence of resident population; Temporary settlement or return rate;
UM 1d	Age composition and age dynamics;
UM 1e	Ethnic composition; Immigration rate;

**Competences and skills**

UM 2a	Education and training, general attainment and qualification;
UM 2b	School desertion;

**Work conditions**

UM 3a	Occupation: employment and unemployment rate;
UM 3b	Job sectors and general qualification; Job density, local competitiveness and distribution of job opportunities;

**Facilities provided or initiatives undertaken**

	Facilities for low levels of education – number and quality;
UM 4a/b	Childcare facilities – number and quality; Employment and job facilities – number and quality;
UM 4b	Level of diversification and integration of existing and planned facilities;
UM 4d	Promotion and strengthening of human capital – number and status of related programmes, partners involved, initiatives undertake;

**SOCIAL CAPITAL**

**Associations**

SC 1a	Density and typology of associations;
SC 1b	Density and typology of non-profit organizations, voluntary and cooperative activities;
SC 1c	Social commitment;

**Social cohesion**

SC 2a	Promotion and strengthening of multicultural and multiethnic components – number and status of related programmes, partners involved, initiatives undertake;
SC 2b	Promotion and strengthening of weak social components – number and status of related programmes, partners involved, initiatives undertake;

**Facilities and services provided**

	Density, typology and distribution of social facilities;
SC 3a/b/c	Density, typology and distribution of cultural and recreational activities/facilities; Density, typology and distribution of primary social services;

## INFRASTRUCTURAL CAPITAL

### Transport

INF 1a/b	Density and typology of infrastructure of different levels;
INF 1c	Density and typology of public transport;
INF 1d	Commuting rate;
INF 1e	Promotion and strengthening of transport infrastructure – number and status of initiatives undertake and related programmes;

### Communication and information

INF 2a/b	Density and typology of computerized facilities, virtual infrastructure and related services; Access to telecommunication;
INF 2c	Promotion and strengthening of communication competences and facilities – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

### Social infrastructure

INF 3a/b/c	Density and typology of social services;
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## PHYSICAL CAPITAL

### Nature and environment

FS 1a	Density, typology and quality of environmental elements, nature reserve, areas of outstanding natural beauty, urban green areas, etc.
FS 1b	Density of causes of environmental deterioration
FS 1c	Promotion and strengthening of environmental resources – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

### Historic and cultural elements

FS 2a	Density, typology and quality of historic, monumental and cultural assets
FS 2b	Density of causes of decay and abandonment
FS 2c	Promotion and strengthening of historic and cultural resources – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

### Housing Stock

FS 3a	Density and typology of the housing stock; Index of housing quality; Housing tenure and housing cost and affordability;
FS 3b/c	Rate of erosion for urban sprawl and urban housing intensification; Density of causes of decay and abandonment; Density of illegal behaviour and rate of illegal buildings;
FS 3d	Promotion and strengthening of the existing housing stock – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

## **MANUFACTURING CAPITAL**

### **Industrial activities and handicraft**

<b>PR 1a/b</b>	Industrial rate and number of businesses;
<b>PR 1c</b>	Promotion and strengthening of local businesses – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

### **Agriculture**

<b>PR 2a/b</b>	Density, typology and quality of agricultural production, including typical production
<b>PR 2c</b>	Promotion and strengthening of the agricultural and typical production – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

### **Trade and businesses**

<b>PR 3a/b</b>	Density, typology and quality of local businesses; Density, typology and quality of commerce-related initiatives and events;
<b>PR 3c</b>	Promotion and strengthening of businesses and small retail – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

### **Tourism**

<b>PR 4a</b>	Density, typology and quality of tourist resources;
<b>PR 4b</b>	Density, typology and quality of tourist facilities;
<b>PR 4c</b>	Density, typology and quality of events and marketing initiatives;
<b>PR 4d</b>	Promotion and strengthening of tourism – number and status of initiatives undertake and related programmes; size of funds; density and typology of related services.

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