Verso la transizione eco-sociale: i *Community Regeneration Indicators* rispondono alla policrisi

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Abstract. Il contributo, svolto nell'ambito del *Community-led Local Development*, discute le relazioni tra capacità adattiva delle città e ultimi approcci di *governance* partecipata per individuare nuovi strumenti di transizione eco-sociale. La policrisi è un'opportunità per riflettere sulle strategie di mitigazione delle condizioni di scarto ambientale, sociale ed economico. L'adozione di una metodologia sistemica, circolare e reiterativa, considera gli *stakeholders* come promotori e *driver* di processi di sviluppo *human-centred*. Dal confronto empirico intercontinentale di casi studio, la sperimentazione propone i *Community Regeneration Indicators* per monitorare e valutare i processi di recupero e adattamento del patrimonio costruito, generando un *eco-social co-design transition model* replicabile.

Parole chiave: *Community-led Local Development*; *Community Regeneration Indicators*; *Co-design eco-social transition model*; *Human-centred approach*.

Introduzione

L'ambiente costruito è sottoposto a crisi eterogenee legate alle sfide di emergenza climatica, di disuguaglianza sociale e di vulnerabilità economica, evidenziando la necessità di elaborare nuovi strumenti di *transition policy*. La lunga predominanza di interessi individuali su quelli collettivi fino a tempi recenti, ha determinato una crisi nel rapporto co-evolutivo tra luoghi e persone, che si è tradotta nell'aumento di condizioni di scarto a diversi livelli.

Tuttavia, piuttosto che rappresentare un limite, tali condizioni di scarto possono essere un'opportunità per attivare processi di rigenerazione basati sulla riconnessione e sulla rifondazione delle relazioni compromesse. Adottando un approccio sistemico (Vittoria, 1995) le vulnerabilità sono interpretate come potenziali moltiplicatori di nuovi valori e riattivatori di quelli pregressi. Le condizioni di degrado evidenziate dalla policrisi influenzano le comunità, determinando società frammentate non più in grado di relazionarsi con l'ambiente costruito (Ciribini, 1986; Girardet, 2014). Alla luce di quanto detto, la promozione di approcci inclusivi rappresenta una precondizione fondamentale per affrontare la policrisi: il valore del *cum* nei processi di rigenerazione, pone l'accento sull'importanza degli *stakeholder* come abilitatori di strategie e di azioni eco-sociali.

La ricerca coniuga la visione sistemica della Tecnologia dell'Architettura agli approcci *human-centred* (European Commission, 2020) e partecipativi, sviluppati e sperimentati nel contesto internazionale, per orientare le strategie di recupero dell'ambiente costruito verso una dimensione circolare. Quest'ultima converte le vulnerabilità in potenzialità attraverso uno *human-centred approach,* che coniuga ed eleva le comunità da destinatari ad abilitatori di processi e *city maker* di innovazione (Ansell and Gash, 2008) e la combinazione di complementarietà sistemiche a soluzioni di compromesso soddisfacenti. Tale crasi rappresenta l'elemento fondamentale per mitigare la policrisi.

Il contributo riconosce le esigenze espresse dagli attori locali come *driver* per l'implementazione di un modello rigenerativo, orientato ad una transizione eco-sociale *culture-led* (Trischler *et al*., 2017). La rispondenza tra i requisiti, considerati come bisogni delle comunità, e prestazioni, come richieste dello spazio trasformato, avviene attraverso la co-creazione e co-rigenerazione di valori in molteplici dimensioni (Beauregard and Lieto, 2016), rafforzando e recuperando l'identità locale, e stimolando la capacità di adattamento e di reattività comunitaria rispetto alle sfide poste dalla policrisi.

La sperimentazione si focalizza su un doppio livello di innovazione, di processo e di prodotto. L'innovazione di processo è stata condotta analizzando le linee guida degli ultimi indirizzi

Towards eco-social transition: Community Regeneration Indicators respond to the polycrisis

Abstract. This paper, prepared in the context of Community-led Local Development, discusses the relationships between the adaptive capacity of cities and the latest participatory governance approaches to identify new tools for eco-social transition. The polycrisis is an opportunity to reflect upon strategies to mitigate environmental, social and economic waste. The adoption of a systemic, circular and reiterative methodology considers stakeholders as promoters and drivers of human-centred development processes. From the intercontinental empirical comparison of case studies, the experimentation proposes Community Regeneration Indicators to monitor and evaluate the processes of recovery and adaptation of the built heritage, generating a replicable eco-social co-design transition model.

Keywords: Community-led Local Development; Community Regeneration Indicators; Co-design transition model; Human-centred approach.

Introduction

The built environment is subjected to heterogeneous crises linked to the challenges of the climate emergency, social inequality and economic vulnerability, highlighting the need to develop new transition policy tools.

The long predominance of individual interests over collective ones has until recently led to a crisis in the co-evolutionary relationship between places and people, which has resulted in increased conditions of discard at different levels.

However, rather than representing a limit, these conditions of waste can be an opportunity to activate regeneration processes based on the reconnection and refoundation of compromised relationships. Indeed, adopting a systemic approach (Vittoria, 1995) in which vulnerabilities are interpreted as potential multipliers of new values and reactivators of previous ones. The conditions of degradation highlighted by the polycrisis affected communities by determining fragmented societies no longer able to relate to the built environment (Ciribini, 1986; Girardet, 2014). In light of the above, the promotion of inclusive approaches is a fundamental precondition for tackling the polycrisis: the value of regeneration processes emphasises the importance of stakeholders as enablers of eco-social strategies and actions.

The research combines the systemic vision of Architectural Technology with the human-centred (European Commission, 2020) and participatory approaches, developed and tested in an international context, to orient strategies for the recovery of the built

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transnazionali di *Multi-Stakeholder Engagement Process* attraverso il confronto di approcci di pianificazione *bottom-up* attivati nei siti di Ercolano (IT) e del Bronx (NY). L'innovazione di prodotto consiste nel considerare e nell'utilizzare gli strumenti di valutazione come esito operativo di tali processi, quindi un prodotto, che supporta le decisioni e orienta le strategie verso una transizione eco-sociale delle città. La proposta metodologica si sostanzia in un processo iterativo in cui il coinvolgimento degli attori è costante e ripetuto nel tempo ed è trasversale in ogni fase dell'intero processo. La trasversalità del *Multi-Stakeholder Engagement Process* in tutto l'*iter* rigenerativo, si traduce operativamente nell'elaborazione condivisa e partecipata di una matrice di indicatori capaci di restituire il livello di soddisfacimento delle esigenze espresse dagli attori (requisiti) rispetto agli obiettivi di sviluppo attesi ed alle risposte offerte dall'ambiente costruito (prestazioni). Il modello elaborato si sviluppa secondo una continuità evolutiva (Tagliagambe, 1998) in cui, all'avanzare del processo, va ridefinendosi la relazione esistente tra bisogni (requisiti), prestazioni e obiettivi.
L'esito della sperimentazione non rappresenta un risultato concluso in sé, ma intende proporre un approccio metodologico adattivo e replicabile in altri contesti, interpretando le specificità dei casi in cui viene applicato e generando soluzioni diversificate e sostenibili in quanto frutto di una concertazione tra i diversi attori coinvolti nel processo rigenerativo.

Scenario di riferimento L'adozione dello *human-centred approach* orienta la ricerca verso una *shift-perspective,* dalla dimensione umana individuale a quella comunitaria, in cui l'innovazione sociale gioca un ruolo fondamentale nei processi di recupero finalizzati a rigenerare il legame tra luoghi e *stakeholders*, esaltando il potenziale trasformativo e migliorativo delle loro specifiche azioni progettuali.
Il *Multi-Stakeholder Engagement Process* (UNDP, 2006) connota l'intero processo rigenerativo dalla fase di pianificazione a quella più propriamente operativa, stimolando la coesione sociale a partire dalla condivisione di valori identitari comuni e ponendosi come fattore di ricucitura tra i sistemi insediativi vulnerabili e le comunità (Pinto and Viola, 2016). Per tale motivo, il contributo declina il processo di recupero come integrazione complementare tra *design-as-practice* e *design-as-meaning* in cui le prestazioni degli strumenti empirici di coinvolgimento partecipativo degli *stakeholders* sono orientate dalle esigenze dei valori condivisi da questi ultimi. In quest'ottica le azioni di recupero sono interpretate come frutto dell'interconnessione tra trasformazione fisica dell'ambiente costruito e sistema valoriale della comunità di appartenenza. I valori che le comunità attribuiscono ai luoghi in cui vivono orientano le azioni trasformative e, allo stesso tempo, la rigenerazione di tali luoghi stimola anche il rinnovamento dei valori di cui essi sono portatori (Fusco Girard, 2021). Se, dunque, recuperare il patrimonio costruito vuol dire rigenerare le radici identitarie delle comunità è necessario che il *driver* di tale processo rigenerativo circolare sia la cultura eco-sociale, sostenibile e inclusiva.
La molteplicità e l'eterogeneità dei valori che entrano in gioco nei processi di rigenerazione, nonché la multidimensionalità degli impatti che ne derivano, evidenzia la necessità di ricorrere a strumenti di valutazione multilivello. Essi interpretano

environment towards a circular dimension. The latter converts vulnerabilities into potentials through a human-centred approach, which combines and elevates communities from recipients to enablers of processes and city makers of innovation (Ansell and Gash, 2008) and it converts the combination of systemic supplements into satisfactory compromise solutions. This crisis is the key to mitigating polycrisis.
This contribution recognises the requirements expressed by local actors as drivers for the implementation of a regenerative model geared towards a culture-led eco-social transition (Trischler *et al.*, 2017). The correspondence between requirements, considered as needs of the communities, and performances, considered as demands of the transformed space, takes place through the co-creation and co-regeneration of values in multiple dimensions (Beauregard and Lieto, 2016), thus strengthening and recovering the local identity and stimulating the capacity for community adaptation and responsiveness to the challenges posed by the polycrisis.
The experimentation focuses on a double level of innovation, process and product. The process innovation was conducted by analysing the guidelines of the latest transnational Multi-Stakeholder Engagement Process through the comparison of bottom-up planning approaches activated in the sites of Herculaneum (IT) and the Bronx (NY). The product innovation is about considering and using the evaluation tools as an operational outcome of these processes, i.e., a product that supports decisions and orients strategies towards an eco-social transition of cities. The methodological proposal is substantiated in an iterative process in which the engagement of stakeholders is constant and repeated over time and and is cross-cutting at every stage of the entire process. The changing nature of the Multi-Stakeholder Engagement Process in the whole regeneration process is translated operationally into the shared and participated elaboration of a matrix of indicators able to give back the required level of satisfaction for the needs expressed by the actors (requirements) compared with the expected development objectives and the answers offered by the built environment (performance). The elaborated model develops according to an evolutionary continuity (Tagliagambe, 1998) in which, as the process progresses, the relationship between needs (requirements), performances and objectives is redefined.
The outcome of the experimentation is not a conclusive result in and of itself, but intends to propose an adaptive methodological approach. It can be replicated in other contexts, interpreting the specificities of the cases in which it is applied and generating diversified and sustainable solutions as the result of a concerted effort between the different actors involved in the regenerative process.

Background
The adoption of the human-centred approach orients the research towards a shift perspective, from the individual human dimension to the community dimension, in which the social innovation plays a fundamental role in recovery processes aimed at regenerating the link between places and stakeholders, enhancing the transformative and improvement

l'ambiente costruito da una prospettiva olistica, elaborando strategie di intervento durevoli nel tempo e attente alla natura intersistemica e interscalare dei sistemi insediativi.
Alla luce di questa esigenza, la sperimentazione parte dalla comparazione di indirizzi strategici di due realtà culturalmente diverse tra loro, come quella americana e quella europea, ma accomunate dalla stessa attenzione rispetto al tema dell'inclusione della pianificazione partecipata nei processi di trasformazione dell'ambiente costruito (Caterina *et al.*, 2015; Bosone and Ciampa, 2021). Questa sensibilità, unitamente alla coesistenza di condizioni di scarto a più livelli e in molteplici dimensioni, sono fattori che accomunano i due casi studio e consentono di elaborare ipotesi analoghe per l'individuazione di un modello rigenerativo, guidato da un *complexity-based governance framework* e reso efficace dall'uso di strumenti di monitoraggio e valutazione multidimensionali.
Desumendo dall'approccio americano gli strumenti partecipativi di coinvolgimento degli *stakeholder* (putativi, potenziali o futuri) nel *decision-making process* e da quello europeo le strategie di mediazione tra azioni di cambiamento e conservazione socialmente eque e sostenibili, il contributo enfatizza il ruolo di una *transition management* guidata dalla cultura e fondata sull'*empowerment* degli *stakeholder*. Ciò è volto ad elaborare una strategia progettuale per il mantenimento e la valorizzazione della reattività ecologico-ambientale, dell'adattabilità organizzativo-procedurale e della trasformabilità tecnologico-spaziale dell'intero sistema insediativo.

L'ambiente costruito in policrisi: una proposta metodologica per i distretti vulnerabili dell'Area Vesuviana Italiana e dell'Area Newyorkese

La metodologia utilizzata sperimenta due livelli di innovazione: uno legato alle modalità di partecipazione degli attori (*methodological engagement modality*) nelle fasi della sperimentazione, l'altro relativo agli strumenti utilizzati (*methodological co-design and evaluation tool*) per monitorare e valutare gli esiti dell'adozione di un approccio *multi-stakeholders* e per orientare l'elaborazione di strategie di sviluppo futuro.
La sperimentazione statunitense è frutto di un accordo di mobilità per la ricerca internazionale presso la *Graduate School of Architecture, Planning and Preservation* della Columbia University (Ciampa, 2018). Tale sperimentazione è poi valsa il successivo titolo di *Placement Research Abroad* presso la medesima università per l'approfondimento di strategie e strumenti di *stakeholders engagement* nel distretto di Manhattan durante il percorso di Dottorato di Ricerca. La sperimentazione italiana è stata sviluppata nell'ambito di una Tesi di Dottorato interdisciplinare svolta presso il Dipartimento di Architettura dell'Università degli Studi di Napoli "Federico II". Tale aspetto è stato riconosciuto come rilevante fattore di innovazione e sperimentazione, nell'ambito di progetti PRIN e Horizon 2020. Entrambe le sperimentazioni hanno testato empiricamente un *co-design and co-evauation tool* basato sia sull'istituzione di tavoli di concertazione inter-istituzionali periodici fra Amministrazioni centrali, enti territoriali, enti di formazione e comunicazione, enti del Terzo Settore, stakeholder, che sull'interazione diretta con la comunità (Bosone *et al.*, 2021).

potential of their specific design actions.
The Multi-Stakeholder Engagement Process (UNDP, 2006) connotes the whole regenerative process from the planning phase to the more proper operational one, stimulating social cohesion starting from the sharing of common identity values and acting as a mending factor between vulnerable settlement systems and communities (Pinto and Viola, 2016). For this reason, the contribution declines the process of recovery as a complementary integration between design-as-practice and design-as-meaning in which the performance of empirical tools of participatory stakeholder engagement is oriented by the needs of the shared values of the latter. From this point of view, recovery actions are interpreted as the result of the interconnection between the physical transformation of the built environment and the value system of the community to which it belongs. The values that communities attribute to the places where they live guide the transformative actions and, at the same time, the regeneration of these places also stimulates the renewal of the values of which they are bearers (Fusco Girard, 2021). If, therefore, recovering the built heritage means regenerating the identity roots of communities, it is necessary that the driver of this circular regenerative process is an eco-social, sustainable and inclusive culture.
The multiplicity and heterogeneity of values that come into play in regeneration processes, as well as the multidimensionality of the resulting impacts, highlights the need to use multi-level assessment tools. They consider the built environment, developing intervention strategies that are durable over time and attentive to the inter-systemic and inter-scalar nature of settlement systems.
In light of this need, the experimentation starts from the comparison of strategic directions of two culturally different realities, such as those in America and European, but sharing the same level of attention to the inclusion of participatory planning in the transformation processes of the built environment (Caterina *et al.*, 2015; Bosone and Ciampa, 2021). This sensitivity, together with the coexistence of gap conditions at multiple levels and in multiple dimensions, is a factor that unites the two case studies and allows the elaboration of similar hypotheses for the identification of a regenerative model, guided by a complexity-based governance framework and made effective by the use of multidimensional monitoring and evaluation tools.
Drawing from the American approach the participatory tools for involving stakeholders (putative, potential or future) in the decision-making process and from the European approach the strategies of mediation between socially equitable and sustainable change and conservation, the contribution emphases the role of a transition management guided by culture and based on stakeholder empowerment. This is aimed at elaborating a design strategy for maintaining and enhancing the ecological-environmental responsiveness, organisational-procedural adaptability and technological-spatial transformability of the whole settlement system.

The built environment in a polycrisis: a methodological proposal for vulnerable districts in the Italian Vesuvian area and the New York area

The methodology used experiments

01 | The Bronx, rilievo fotografico aereo, foto di F. Ciampa
The Bronx, aerial photographic survey, photo by F. Ciampa

02 | Bronx Building Block, rilievo fotografico aereo, foto di F. Ciampa
Bronx Building Block, photographic aerial survey, photos by F. Ciampa

03 | Ercolano, rilievo fotografico, foto di M. Bosone
Herculaneum, photographic survey, photo by M. Bosone

I casi studio sono stati scelti sia per il comune stato di degrado e potenzialità delle risorse ambientali, architettoniche, sociali e culturali (Figg. 1, 2), che per la medesima inclinazione ad adottare l'approccio partecipativo *human-centred* per il recupero del patrimonio costruito (Figg. 3, 4).
La similitudine degli approcci e delle vulnerabilità offrono la possibilità di adottare un approccio deduttivo in base a cui è possibile astrarre, da un contesto specifico, strumenti ed esiti generali allo scopo di testarne la validità, l'adattabilità e la replicabilità anche in altri contesti.
Il grande potenziale trasformativo presente nei siti di sperimentazione viene valorizzato grazie all'*empowerment* degli attori nei processi di recupero dell'ambiente costruito.
In entrambi i casi la metodologia si articola nelle seguenti fasi (Fig. 5):
– Analisi dell'ambito di intervento attraverso la discretizzazione del sistema urbano complesso nei sub-sistemi am-

01 |

02 |

| 03

with two levels of innovation: one related to the methodological engagement modality in the phases of the experimentation, the other related to the tools used (methodological co-design and evaluation tool) to monitor and evaluate the outcomes of the adoption of a multi-stakeholder approach and to guide the elaboration of future development strategies.
The US experimentation was the result of an international research mobility agreement at Columbia University's Graduate School of Architecture, Planning and Preservation (Ciampa, 2018). This experimentation was then worth the subsequent title of Placement Research Abroad at the same university for the in-depth study of strategies and tools for stakeholder engagement in the borough of Manhattan during the PhD thesis. The Italian experimentation was developed as part of an interdisciplinary PhD thesis at the Department of Architecture of the University of Naples Federico II. This aspect has been recognised as a relevant factor of innovation and experimentation within the framework of PRIN and Horizon 2020 projects. Both experiments empirically tested a co-design and co-evidence tool based on the establishment of periodical inter-institutional consultation tables. They were between central administrations, territorial bodies, training and communication bodies, third sector bodies and stakeholders and involved direct interaction with the community (Bosone *et al.*, 2021).
The case studies were chosen both for the common state of degradation and potential of environmental, architectural, social and cultural resources (Figs. 1, 2) and for the same tendency to adopt the participatory human-

04 | Via Pugliano Ercolano, rilievo fotografico, foto di M.Bosone
Via Pugliano Ercolano, photographic survey, photo by M.Bosone

bientale, tecnologico e sociale, individuando per ciascuno di essi le condizioni di vulnerabilità, potenzialità, risorse e *stakeholders* da coinvolgere nell'intero processo, dal livello strategico-programmatico a quello operativo-progettuale ed esecutivo.

– Adozione di un approccio esigenziale-prestazionale per l'individuazione di requisiti, prestazioni e obiettivi. In particolare, essi sono deducibili direttamente come dati *hard* dall'analisi dei sub-sistemi ambientale e tecnologico e indirettamente come dati *soft* dall'analisi del sub-sistema sociale. Per quest'ultimo step, la definizione del quadro esigenziale passa attraverso l'adozione di una *methodological engagement modality* costituita dall'attivazione di *Policy Labs* (Olejniczak *et al.*, 2020). Questi ultimi sono degli spazi di collaborazione finalizzati a facilitare l'interazione tra *stakeholders* di diversa natura orientando nuove forme di co-progettazione locale per l'identificazione di soluzioni innovative e replicabili. Tale interazione consente di operare all'interno di una visione olistica in cui i diversi specialismi possono cooperare per la mitigazione delle pressioni perturbative agenti sull'ambiente costruito. Attraverso questa modalità è possibile far emergere le esigenze latenti e potenziali su cui basare le azioni di mitigazione delle condizioni di vulnerabilità. L'identificazione dei bisogni inespressi nella prima fase di processo consente la raccolta di dati *soft*, di tipo qualitativo, capaci di orientare gli indirizzi strategici e le scelte progettuali. Al contempo, questi stessi dati possono rappresentare anche uno strumento di *feedback* per valutare di volta in volta le soluzioni proposte, reiterando il processo valutativo fino a giungere ad una strategia soddisfacente per tutti gli attori. Le Tabelle 1 e 2 mostrano in dettaglio i risultati della sperimentazione empirica derivanti dal confronto tra i due casi di studio. Il questionario sottoposto agli *stakeholders* è stato organizzato attraverso domande in formato aperto e domande in formato chiuso, al fine di dedurre informazioni sulle caratteristiche dell'intervistato e sulle sue percezioni, bisogni e aspettative a livello culturale, sociale, economico e ambientale. In particolare, tra le diverse categorie di domande in formato chiuso, sono state scelte domande Likert, domande dicotomiche e domande a scelta multipla. In en-

centred approach for the recovery of the built heritage (Figs. 3, 4). The synergistic similarity of approaches and vulnerabilities offer the possibility of adopting a deductive approach according to which it is possible to abstract, from a specific context, general tools and outcomes in order to test their validity, adaptability and replicability in other contexts.

The great transformative potential present in the experimental sites is valued thanks to the empowerment of the actors in the processes of recovery of the built environment.

In both cases, the methodology is divided into the following phases (Fig. 5):

– Analysis of the scope of intervention through the discretisation of the complex urban system into environmental, technological and social subsystems, identifying for each of them the conditions of vulnerability, potential, resources and stakeholders to be involved in the whole process, from the strategic-programmatic level to the operational-design and implementation level;
– Adoption of a demand-performance approach for the identification of requirements, performances and objectives. In particular, they can be deduced directly as hard data from the analysis of the environmental and technological subsystems and indirectly as soft data from the analysis of the social subsystem. For this last step, the definition of the demand framework passes through the adoption of a methodological engagement modality consisting of the activation of Policy Labs (Olejniczak *et al.*, 2020). They are spaces of collaboration aimed at facilitating the interaction between stakeholders of different nature, directing new forms of local co-design for the identification of innovative and replicable solutions. This interaction allows operation within a holistic vision in which the different specialisations can cooperate for the mitigation of disturbing pressures acting on the built environment. Through this modality, it is possible to bring out the latent and potential needs on which to base mitigation actions of vulnerability conditions. The identification of unexpressed needs in the first phase of the process allows the collection of soft, qualitative data capable of orienting strategic directions and design choices. At the same time, this same data can also represent a feedback tool to evaluate the proposed solutions each time, repeating the evaluation process until a satisfactory strategy for all actors is achieved. Tables 1 and 2 show in detail the results of the empirical experimentation deriving from the comparison between the two case studies. The questionnaire submitted to the stakeholders was organised through a mix of open-format and closed-format questions in order to garner information about the characteristics of the respondent and their perceptions, needs and expectations at cultural, social, economic and environmental levels. Specifically, among the different categories of closed-format questions, Likert scale questions, dichotomous questions and multiple-choice questions were chosen. In both cases, the sample of respondents consisted of 398 citizens;
– Definition of indicators. Taking as requirements the needs expressed by

Tab. 01 | Development and outcomes of Policy Labs. Comparative bottom-up visions, F. Ciampa e M. Bosone
Development and outcomes of Policy Labs. Comparative bottom-up visions, F. Ciampa and M. Bosone

| Tab. 01

Development and outcomes of the policy lab			
Engagement Approach	Comparative bottom-up visions		Subsystem
	Ercolano (IT)	The Bronx (NY)	
Survey	Stakeholders_bottom-up	Stakeholders_bottom-up	
Q1. Are you satisfied with the quality of your surrounding green spaces?	64% of the entire sample are 'not at all' satisfied with the quality of the green space environment	73% of the entire sample are 'not at all' satisfied with the quality of the green space environment	Environmental
Q2. Do you think that the area where you live has a quality dissatisfaction?	69% of the whole sample stated that the area needed improvements, especially in public transport (48%), accessibility for disabled people (43%) and pedestrian routes (32%)	73% of the whole sample stated that the area needed improvements, especially in public transport (65%), accessibility for disabled people (37%) and pedestrian routes (41%)	
Q3. Do you think that your work negatively influences environmental conditions?	The respondents stated that their work has 'quite a lot' (17%) or 'much' (6%) negative influence on environmental conditions (produces pollution, creates waste disposal problems, increases the level of urban traffic, etc.)	The respondents stated that their work has 'quite a lot' (56%) or 'much' (9%) negative influence on environmental conditions (produces pollution, creates waste disposal problems, increases the level of urban traffic, etc.)	
Q4. Do you think that your work has a positive influence on environmental conditions?	The respondents stated that their work has 'not at all' (29%) or 'a little' (21%) positive influence on environmental conditions (reduces waste production, walking, cycling, public transport)	The respondents stated that their work has 'not at all' (28%) or 'a little' (39%) positive influence on environmental conditions (reduces waste production, walking, cycling, public transport)	
Q5. Do you think is there an exclusion of green areas in regeneration strategies?	79% of the whole sample highlights the need to integrate green spaces improvement in regeneration strategies	93% of the whole sample highlights the need to integrate green spaces improvement in regeneration strategies	
Q6. In your opinion, are there any factors, which could determine the prevention of site's values destruction?	67% of respondents identified the widespread degradation at social, cultural, economic causing (51%) a negative expectations about the future	64% of respondents identified the widespread degradation at social, cultural, economic causing (41%) a negative expectations about the future	Cultural
Q7. Is your work did you import of external knowhow and loss of local skills?	51% have skills not based on local knowledge and work in other districts/neighborhoods	81% have skills not based on local knowledge and work in other districts/neighborhoods	
Q8. Do you notice a disconnection between the community and local cultural heritage?	40% have 'a little' confidence in the built environment projects to enhance the Ercolano cultural heritage	71% have 'a little' confidence in the built environment projects to enhance the Bronx cultural heritage	
Q9. Do you perceive the landscape as a physical reality dominated by economic aspects?	59% of the whole sample thought that economic activities in Ercolano had no cultural value	72% of the whole sample thought that economic activities in the Bronx had no cultural value	
Q10. Do you have lack of trust in the Cooperative relationship between your community and institutions?	31% of the entire sample had little trust in the collaborative relationship between citizens and institutions (at local level). 63% of respondents say that the institutions don't pay attention to the problems of the area	34% of the entire sample had little trust in the collaborative relationship between citizens and institutions (at local level). 58% of respondents say that the institutions don't pay attention to the problems of the area	Economic
Q11. Do you have scarce availability to collaboration into the process?	39% of respondents declare that they participate in the social life of the district/neighborhood. Among them, 31 % is a member of an association for local development	38% of respondents declare that they participate in the social life of the district/neighborhood. Among them, 29% is a member of an association for local development	
Q12. Do you think that the built environment development is driven by a capitalist Economy?	The respondents declare themselves 'quite a lot' (48%), 'much' (41%) or 'very much' (10%) willing to contribute to improving the quality of life, only 25% are willing to invest money while the others prefer to invest only time (35%) and skills (40%) because there is no economic return	Among those who declare themselves 'quite a lot' (51%), 'much' (47%) or 'very much' (2%) willing to contribute to improving the quality of life, only 10% are willing to invest money while the others prefer to invest only time (40%) and skills (50%) because there is no economic return	
Q13. Do you have Subsistence economy?	The respondents declare themselves 'quite a lot' (48%), 'much' (41%) or 'very much' (10%) willing to contribute to improving the quality of life, only 25% are willing to invest money while the others prefer to invest only time (35%) and skills (40%) because there is no economic return	Among those who declare themselves 'quite a lot' (51%), 'much' (47%) or 'very much' (2%) willing to contribute to improving the quality of life, only 10% are willing to invest money while the others prefer to invest only time (40%) and skills (50%) because there is no economic return	
Q14. Do you have "Business as usual" dynamics?	48% of the whole sample have been working as merchants for more than 10 years with no innovative elements into their business model in the last 10 years of activity	51% of the whole sample have been working as factory workers for more than 10 years with no innovative elements into their business model in the last 10 years of activity	
Q15. Are you and your community needs excluded in decision making process?	65% of interviewed have never contributed to decision-making processes and, among them, 28% emphasize the need to increase association spaces to favor the enhancement of a shared vision about future development strategies	48% of interviewed have never contributed to decision-making processes and, among them, 74% emphasize the need to increase association spaces to favor the enhancement of a shared vision about future development strategies	Social
Q16. Are you perceived a lack of defined responsibilities in decision making process?	34% of respondents are engaged in activities aimed to promote inclusiveness (21% of them) and to enhance local culture (24%)	71% of respondents are engaged in activities aimed to promote inclusiveness (49% of them) and to enhance local culture (26%)	
Q17. Do you perceive a marginalization of different cultures and loss of local cultural identity?	48% of respondents felt that the presence of foreigners negatively affects the community and, among them, 27% highlights that it is "much" and 12% "very much"	29% of respondents felt that the presence of foreigners negatively affects the community and, among them, 15% highlights that it is "much" and 12% "very much"	
Q18. Are you and your community needs are excluded in decision making process?	29% of respondents feel unsafe in the area where they live and 55% had no job stability	81% of respondents feel unsafe in the area where they live and 82% had no job stability	
Q19. Are you unsafety and unemployment rate?	71% of respondents stated that the most widespread decay in the area relates to a high rate of poverty and unemployment	84% of respondents stated that the most widespread decay in the area relates to a high rate of poverty and unemployment	

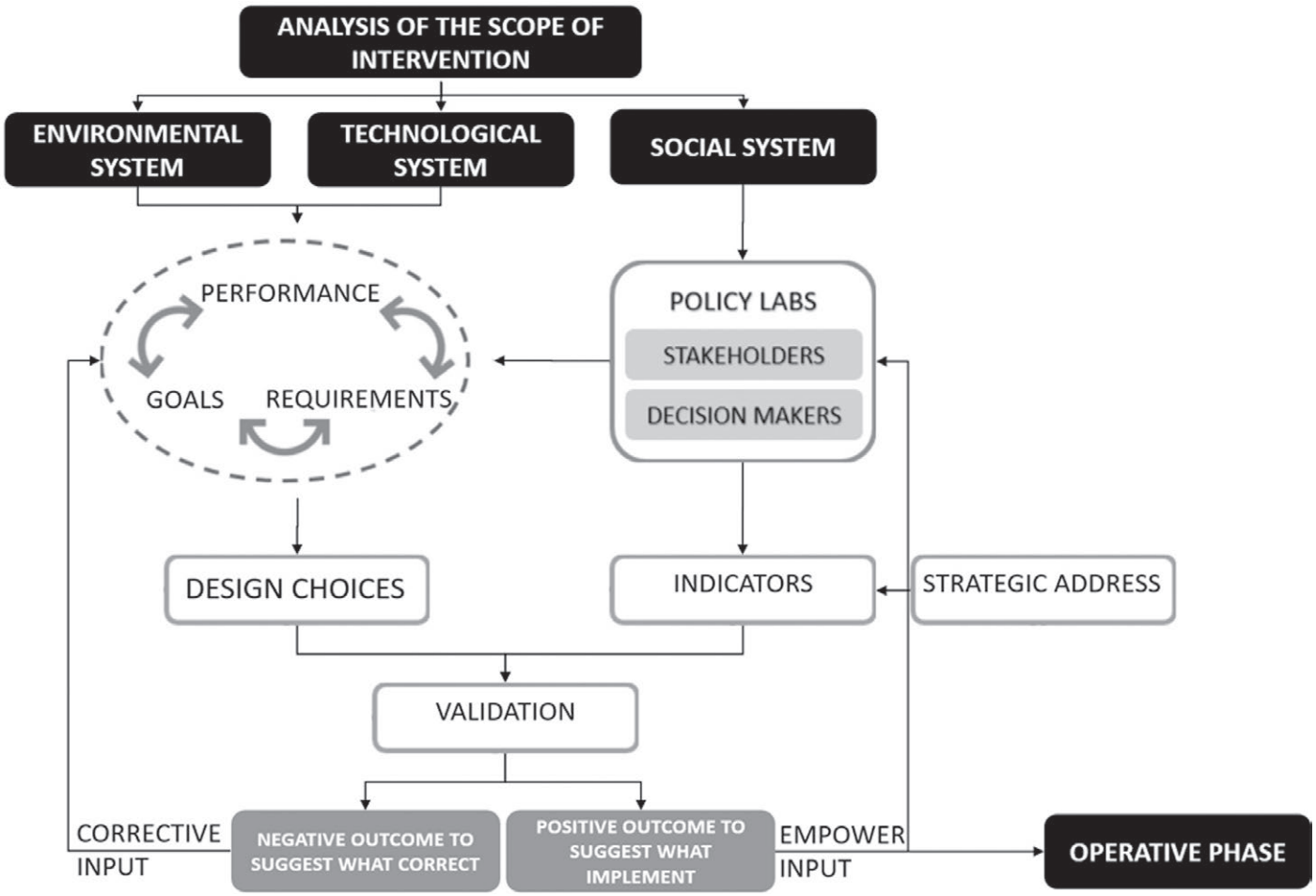
Tab. 02 | Development and outcomes of Policy Labs. Comparative top-down visions, F. Ciampa e M. Bosone
Development and outcomes of Policy Labs. Comparative top-down visions, F. Ciampa and M. Bosone

trambi i casi, il campione di intervistati è composto da 398 cittadini.

– Definizione di indicatori. Assumendo come requisiti i bisogni espressi dai vari attori durante i *Policy Labs* e adottando un *co-design and co-evaluation tool*, è possibile giungere all'elaborazione partecipata, mediata dalla conoscenza del sapere esperto, di una matrice delle priorità. Tale matrice consente di individuare delle *topic area*, dettagliate in *subtopic*. Per ciascuno di essi sono definiti uno o più indicatori che consentono di valutare le *performance* attese dall'implementazione delle scelte progettuali proposte nella fase precedente. Gli indicatori che popolano la matrice rappresentano il risultato dell'integrazione tra approccio *top-down* e *bottom-up* (Tab. 3). Una parte di essi è dedotta direttamente da documenti ufficiali di pianificazione strategica elaborati dalle autorità locali, mentre un'altra parte rappresenta il risultato della rielaborazione delle istanze emerse nella precedente fase di concertazione, confronto e *co-design*. Il processo di definizione di un indicatore è finalizzato a stabilire dei parametri di misurazione, quantitativi o qualitativi, rispetto ai quali valutare il grado di soddisfacimento delle le esigenze espresse dagli attori coinvolti nel processo di recupero per una transizione eco-sociale. La peculiarità degli indicatori elaborati è la capacità di diventare strumento di autovalutazione da parte delle comunità, elevando la loro capacità di gestire e monitorare i processi.
– Validazione del *co-design and co-evaluation tool* e processo di *feedback*. Il *set* di indicatori rappresenta sia uno strumento di valutazione e monitoraggio *in itinere* della qualità del progetto (Angelucci *et al*., 2015), sia uno strumento di supporto alle decisioni per orientare strategie di rigenerazione e di mitigazione della policrisi. Il processo di valutazione attiva un meccanismo di *feedback* in base al cui esito è possibile procedere alla successiva fase operativa o tornare alla fase precedente di definizione di requisiti e obiettivi (Fig. 5).
– Le fasi appena descritte configurano un processo metodo-

Tab. 02 |

Development and outcomes of the policy lab			
Engagement Approach	Comparative top-down visions		Subsystem
	Ercolano (IT)	The Bronx (NY)	
Survey	Stakeholders_top-down	Stakeholders_top-down	
Q1. Do you believe in a whole sustainable development perspective or do you think they have been defined to favor the specific interests of determined sectors?	71% of respondents felt that sustainable development strategies were fragmented and formulated to favor the consumerism policy and capitalistic sectors without considering overall long-term planning	93% of respondents felt that sustainable development strategies were fragmented and formulated to favor the consumerism policy and capitalistic sectors without considering overall long-term planning	Environmental
Q2. Do you think that some sectors should receive more attention in sustainable development strategies than other ones?	94% of the whole sample thought that development strategies should be strengthened, especially those on a local scale. In particular, among them, emerges the necessity to increase citizens' awareness raising (51%), to favor the development of an entrepreneurial culture (48%), to valorize and improve existing commercial activities (31%) and tourism services (24%)	81% of the whole sample thought that development strategies should be strengthened, especially those on a local scale. In particular, among them, emerges the necessity to increase citizens' awareness raising (74%), to favor the development of an entrepreneurial culture (33%), to valorize and improve existing commercial activities (41%) and tourism services (36%)	
Q3. Do you have a Modern Anthropocentrism vision?	68% of respondents felt that development strategies were fragmented and formulated to favor the short-term interests of specific sectors without considering overall long-term planning	76% of respondents felt that development strategies were fragmented and formulated to favor the short term interests of specific sectors without considering overall long-term planning	Cultural
Q4. Do you adopt different strategies for different sectors and different scales?	61% of the whole sample thought that strategies concerning the protection and enhancement of cultural heritage should be strengthened, and especially those on a local scale, concerning archaeological (Virtual Archeological Museaum)	59% of the whole sample thought that strategies concerning the protection and enhancement of cultural heritage should be strengthened, and especially those on a local scale, concerning historical heritage (Morris House or 1st Bronx road)	
Q5. Do you perceive a lack of cooperative Relationship between State, market and civil society?	78% of respondents collaborate with other local authorities but only 28% collaborate with authorities from different sectors	51% of respondents collaborate with other local authorities but only 28% collaborate with authorities from different sectors	Economic
Q.6 Do you think the subsistence economy exists in your reality and way of life?	%84 of respondents highlighted the need to integrate local economy with tourism activities and services (40%), to improve and increase commercial activities (323%) and to orient economic development towards culture-led strategies (28%)	54% of respondents highlight the need to integrate local economy with tourism activities and services (38%) to improve and increase commercial activities (31%) and to orient economic development towards culture-led strategies (59%).	
Q7. Do you feel that the institutions pay attention to the problems of the area where you live?	92% of respondents said they felt there was a lack of institutional attention to the main critical issues for local development	98% of respondents said they felt there was a lack of institutional attention to the main critical issues for local development	Social
Q8. Do you perceive a lack of trust in the Cooperative relationship between citizens and institutions?	56% of respondents have organized activities as members of local civil society organizations to stimulate the engagement of citizens but, among them, 94% affirms that the public administration is totally absent	87% of respondents have organized activities as members of local civil society organizations to stimulate the engagement of citizens but, among them, 78% affirms that the public administration is totally absent	



the various actors during the Policy Labs and adopting a co-design and co-evaluation tool, it is possible to arrive at the participatory elaboration of a matrix of priorities mediated by expert knowledge. This matrix allows the identification of topic areas, detailed in subtopics. For each of these, one or more indicators are defined to assess the performance expected from the implementation of the project choices proposed in the previous phase. The indicators populating the matrix represent the result of the integration between top-down and bottom-up approaches (Tab. 3). Part of them is directly deduced from official strategic planning documents elaborated by the local authorities, while another part represents the result of the re-elaboration of the instances emerged in the previous phase of consultation, comparison and co-design. The process of defining an indicator is therefore aimed at establishing quantitative or qualitative measurement parameters against which the degree of satisfaction of the needs expressed by the actors involved in the process of recovery for an eco-social transition can be assessed. The peculiarity of the indicators developed as a result of co-design processes is their ability to become a tool for self-assessment by communities, enhancing their ability to manage and monitor processes;

– Validation of the co-design and co-evaluation tool and feedback process. The set of indicators represents both an *in itinere* evaluation and monitoring tool of the project quality (Angelucci *et al*., 2015) and a decision support tool to orient regeneration and polycrisis mitigation strategies. The evaluation process activates a feedback mechanism based on the outcome from which it is possible to proceed to the next operational phase or return to the previous phase of defining requirements and objectives (Fig. 5);

– The phases just described configure an iterative methodological process in which indicators are used at each stage as a tool for control and progressive validation of design choices. In this way, it is possible for the actors involved to constantly monitor the process, thus helping to overcome many of the limits found in practices of exclusive top-down or bottom-up derivation and contributing to reinforcing the triad "conception-design-realisation" (Mussinelli, 2014) in an inclusive, adaptive, dynamic and systemic perspective. In fact, while it is true that in recent times top-down strategic planning processes have taken a considerable step forward in including issues related to participatory design and evaluation, it is also true that the tools proposed have often proved far from being effectively usable at the local scale due to the difficulty in obtaining data and the implicit demand for hyper-technicality in their understanding and use. This

Tab. 03 |

Community Regeneration Indicators (CRI)						
Subsystem	Topic area	Subtopic	Indicator	Vision		Reference
				Top-down	Bottom-up	
Environmental	State of conservation of the built environment	Built heritage	Potential for residential use	X	-	NPCC19, 2019; ISTAT, 2011
			Incidence of buildings in bad condition	X	-	
		Housing stock	Housing under-use index	X	-	
	Archaeological and/or historical/ settlement heritage	Recovery and Regeneration	Consolidation and redevelopment	X	-	HUD, 2014; MIBACT, 2018
			Maintenance	X	-	
	Well-being and quality of life	Quality of the built environment	Satisfaction with the quality of the environment	-	X	Interviews and questionnaires (Bosone, 2019; Ciampa, 2017-19)
			Need for equipment and green areas	X	X	
Cultural	Tourism	Tourist flow	Entrance to the archaeological site/ urbanized historic center	X	-	Biden RESILIENCE 21, 2021; Elaboration on data derived from MIBACT, 2020
			Net revenue	X	-	
		Accessibility and Usability	Visitor management	X	-	Bronx River Alliance, 2019; MIBACT, 2018
		Trust in cultural projects	Trust in cultural built environment heritage projects	-	X	Interviews and questionnaires (Bosone, 2019; Ciampa, 2017-19)
	Governance	Engagement activities	Consultation tables	-	X	Adapted from MIBACT, 2018 and from Nocca and Fusco Girard, 2018; Bosone and Ciampa, 2021
	Capacity Building	ICT project	Realisation	-	X	UNRISD, 2021; MIBACT, 2018
		Education	Project implementation	-	X	
		Training information	adult graduates incidence	-	X	NYCG, 2018; ISTAT, 2011
			adult mastered incidence	-	X	
Economic	Quality of life	Economic well-being	Incidence of households with potential economic hardship	X	-	ORR & NPCC,2017; ISTAT, 2011
			Low or inconstant income	X	-	Interviews and questionnaires (Bosone, 2019; Ciampa 2017-2019)
		Willingness to invest	Willingness to invest money in the process to improve quality of life	-	X	Interviews and questionnaires (Bosone, 2019; Ciampa, 2017-19)
Social	Vulnerability	Social and material vulnerability	Social and material vulnerability index	X	-	NYC Recovery and Resiliency Design, 2020 ISTAT, 2011
		Education by age group	Incidence of adults with degree or master	X	-	
		Structure of young families	Incidence of households with more than 6 members	X	-	
		Structure of elderly families	Incidence of households with care difficulties	X	-	
		Housing conditions	Incidence of households with severe crowding	X	-	
		Population activities	Incidence of young unemployed	X	-	
		Potential material and social difficulties	Participation in the labour market	X	-	
	Population	Demographic dynamics	Annual intercensual variation	X	-	NYC Recovery and Resiliency Design, 2020; ISTAT, 2011
		Population structure	Old-age index	X	-	
	Labour market	Unemployment	Unmployment rate	X	-	
		Specialisation	Incidence of low specialisation	-	X	
	Well-being and quality of life	Implementation prospects	Trust in the future	-	X	
	Contextual relations	Social vitality	Need for social relations	-	X	Interviews and questionnaires (Bosone, 2019; Ciampa 2017-2019)
		Trust in institutions	Trust in collaborative relationships between citizens and institutions (at local level)	-	X	
		Willingness to cooperate to improve quality of life	Availability of time	-	X	
			Availability of expertise	-	X	
			Availability of money	-	X	

logico iterativo in cui gli indicatori sono utilizzati in ogni fase come strumento di controllo e di progressiva validazione delle scelte progettuali. In questo modo è possibile il monitoraggio costante del processo da parte degli attori coinvolti, favorendo il superamento di molti dei limiti riscontrabili nelle pratiche di esclusiva derivazione *top-down* o *bottom-up* e contribuendo a rinsaldare la triade "ideazione-progettazione-realizzazione" (Mussinelli, 2014) in un'ottica inclusiva, adattiva, dinamica e sistemica. Infatti, se è vero che in tempi recenti nei processi di pianificazione strategica *top-down* è stato fatto un notevole passo in avanti nell'includere i temi legati alla progettazione partecipata e alla valutazione. Al contempo, è anche vero che spesso gli strumenti proposti si sono rivelati lontani da una loro effettiva utilizzabilità alla scala locale, a causa della difficoltà nel reperimento dati e nell'implicita richiesta di un iper-tecnicismo per la loro comprensione e utilizzo. Questo aspetto apre la riflessione sull'importanza di rendere questi strumenti *user-friendly* e sulla necessità di inglobare il parere e i punti di vista di altri attori coinvolti nei processi di rigenerazione al fine di allargare l'utilizzabilità ad utenti con diverso grado e tipo di competenze.

Risultati e possibili sviluppi futuri

L'integrazione tra approccio *top-down* e *bottom-up* è finalizzata a coprire allo stesso tempo obiettivi di breve e lungo termine, su larga e piccola scala. L'obiettivo dei processi partecipati di monitoraggio e valutazione è quello di realizzare uno strumento che, seppur inizialmente gestito dal sapere esperto, possa poi essere facilmente trasmesso e compreso dagli attori locali e utilizzato dagli stessi per l'autovalutazione. Proprio in questo aspetto si stressa l'importanza di adottare un approccio *human-centred*, in cui è centrale il perseguimento di obiettivi di interesse generale e il loro raggiungimento sia inteso come un processo collaborativo e cooperativo tra tutti gli attori potenziali che possono intervenire nel processo di rigenerazione. In quest'ottica tale processo diventa un'occasione di scambio culturale reciproco, di *community capability* e *capacity-building* collettiva in base a un approccio di tipo cooperativo.
L'innovazione risiede nell'utilizzare l'espressione dei bisogni della collettività come strumento di valorizzazione dei processi di cooperazione e collaborazione delle comunità per la riappropriazione e la riscoperta del valore identitario del patrimonio culturale di cui si fanno custodi, attraverso azioni di trasformazione e conservazione. Il *Community-led Local Development* agisce in maniera ambivalente per riscoprire e tramandare il patrimonio culturale comune alle future generazioni. Da un lato, le azioni di conservazione provengono dagli esiti laboratoriali di *co-design*, che consentono la riscoperta del *genius loci* e inducono nella comunità la necessità di sostenere l'estensione del ciclo vitale del proprio ambiente costruito. Dall'altro, le azioni di trasformazione sono guidate dall'aumento della consapevolezza e dalla riscoperta delle potenzialità del patrimonio culturale, incrementate dalla sedimentazione identitaria della comunità contemporanea. Ciò consente non solo di custodire ma anche di garantire l'efficienza prestazionale, adeguando le funzioni alle esigenze del tempo. Il modello di transizione eco-sociale descritto individua la necessità di stabilire dinamiche attuative di conservazione e trasformazione del patrimonio culturale. Gli esiti, sotto forma di indicatori, mirano ad analizzare i processi di recupero e adat-

aspect opens up the reflection on the importance of making these tools user-friendly and on the necessity to incorporate the opinion and the points of view of other actors involved in the regeneration processes in order to widen the usability to users with different degrees and types of competences.

Results and possible future developments

The integration of top-down and bottom-up approaches is aimed at simultaneously covering short- and long-term objectives on a large and small scale. The objective of participatory monitoring and evaluation processes is to create a tool that, although initially managed by expert knowledge, can then be easily transmitted and understood by local actors and used by them for self-evaluation. It is precisely in this aspect that the importance of adopting a human-centric approach is stressed, in which the pursuit of general interest objectives is central and their achievement is understood as a collaborative and cooperative process between all potential actors that can intervene in the regeneration process. In this perspective, this process becomes an opportunity for mutual cultural exchange, community capability and collective capacity-building based on a co-operative approach.
The innovation lies in using the expression of the needs of the community as a tool for enhancing the processes of cooperation and collaboration of communities for the reappropriation and rediscovery of the identity value of the cultural heritage of which they are the custodians, through actions of transformation and conservation. The Community-led Local Development acts in an ambivalent way to rediscover and hand down the common cultural heritage to future generations. On the one hand, conservation actions come from the results of co-design workshops, which allow the rediscovery of the genius loci and induce in the community the need to support the extension of the life cycle of its built environment. On the other hand, the transformation actions are guided by the increased awareness and rediscovery of the potential of the cultural heritage, increased by the identity sedimentation of the contemporary community. This makes it possible not only to preserve but also to ensure performance efficiency, adapting functions to the needs of the times. The eco-social transition model described identifies the need to establish implementation dynamics for the conservation and transformation of cultural heritage. The outcomes, in the form of indicators, aim to analyse the processes of recovery and adaptation of built heritage from a multidimensional point of view, considering social, economic, environmental, cultural and value impacts. The model integrates top-down and bottom-up approaches through the constant and integrated v of different categories of stakeholders and decision-makers through both co-design and co-assessment processes. The identification of Community Regeneration Indicators, elaborated in a shared way, together with the actors of the process, favours a Community-led Local Development able to combine the needs expressed by the local actors with the instances of recovery of the built environment. The indicators' obtained from the co-design process, as well as representing a tool for the service of expert knowl-

tamento del patrimonio costruito da un punto di vista multidimensionale, considerando impatti sociali, economici, ambientali, culturali e valoriali. Il modello integra l'approccio *top-down* e *bottom-up* mediante il coinvolgimento costante e integrato di diverse categorie di *stakeholder* e *decision maker* attraverso processi sia di *co-design* che di co-valutazione. L'individuazione di *Community Regeneration Indicators*, elaborati in modo condiviso insieme agli attori del processo, favorisce un *Community-led Local Development* capace di coniugare le esigenze espresse dagli attori locali con le istanze di recupero dell'ambiente costruito. Gli indicatori ottenuti dal processo di *co-design*, oltre a rappresentare uno strumento al servizio del sapere esperto per il monitoraggio e la valutazione dei processi attivati, si configurano come strumento abilitatore e potenziatore della capacità autovalutativa e auto-organizzativa della comunità rispetto ad azioni di custodia e recupero del patrimonio culturale identitario. Nella partecipazione multi-attoriale lo scambio tra sapere esperto e sapere comune si rivela, da un lato, uno strumento necessario alla riappropriazione e alla responsabilizzazione delle comunità nei confronti della propria identità e del proprio ambiente costruito; dall'altro, un supporto al monitoraggio e all'estensione del ciclo di vita dell'ambiente costruito come testimonianza per le generazioni future. Ciò genera un consolidamento della cultura materiale di un luogo, utile a valorizzare il riallineamento prestazionale e le qualità dell'esistente. I *Community Regeneration Indicators* sono dispositivi di indirizzo e verifica volti al progresso e alla crescita delle qualità dell'ambiente costruito, restituito e riconnesso alle comunità.

edge in monitoring and evaluating the activated processes, are configured as an enabling and empowering tool for the community's self-assessment and self-organisation capacity with respect to actions of custody and rehabilitation of the identity cultural heritage. In the multi-actor participation, the exchange between expert and common knowledge proves to be, on the one hand, a necessary tool for the re-appropriation and empowerment of communities towards their own identity and built environment, and on the other hand, a support to the monitoring and extension of the life cycle of the built environment as a testimony for future generations. This generates a consolidation of the material culture of a place, useful to enhance the performance realignment and the qualities of what currently exists. The Community Regeneration Indicators are guidance and verification devices aimed at the progress and growth of the quality of the built environment, returned to and reconnected with the communities.

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