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Towards the Implementation of the Science of the City





Via Toledo, 402 80134 Napoli tel. + 39 081 2538659 fax + 39 081 2538649 e-mail info.bdc@unina.it www.bdc.unina.it

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THE REGENERATION OF HISTORICAL SMALL TOWN CENTERS: A METHODOLOGY FOR PARTICIPATE ACTION

Alessandra Battisti, Silvia Cimini

Abstract

As European strategies on urban environment acknowledge the strengthening of community identity as a major opportunity to focus resources specifically for the energy retrofitting of historic centers and districts (Lewis *et al.*, 2013), the aim of this study is to investigate a refurbishment model for non-monumental historical districts, which fulfills the general criteria of cultural, environmental and economic valorization, through an integrated design that combines principles of innovation and conservation, minimum intervention and energy efficiency. The refurbishment of historical villages calls for a participate action in order to deeply value the cultural heritage standing behind the historic significance of the built environment, through the development of integrated bottom-up approaches for the formulation of multi-sectoral area-based local development strategies.

Keywords: multi-disciplinary approach, energy efficiency, community led local development

LA RIGENERAZIONE DEI CENTRI STORICI DELLE PICCOLE CITTÀ: UNA METODOLOGIA PER UN'AZIONE PARTECIPATA

Sommario

In linea con le strategie europee in materia di ambiente costruito, che riconoscono il rafforzamento dell'identità collettiva come importante opportunità di concentrare le risorse per la riqualificazione energetica dei distretti storici (Lewis *et al.*, 2013), l'obiettivo di questo studio è quello di indagare un modello di riqualificazione per i centri storici nonmonumentali che soddisfi i criteri generali di valorizzazione culturale, ambientale ed economica, attraverso una progettazione integrata, che combini i principi di innovazione e conservazione, minimo intervento ed efficienza energetica. Il retrofitting dei borghi storici richiede un'azione partecipata per valorizzare a fondo il patrimonio culturale sotteso alla valenza storica dell'ambiente costruito, attraverso lo sviluppo di approcci integrati bottom-up per la formulazione di strategie di sviluppo locale multi-settoriali specifiche.

Parole chiave: approccio multi-disciplinare, efficienza energetica, community led local development

1. Why promoting participate actions in the renovation of historical districts

Along with cultural heritage protection projects (European Union *et al.*, 2012), European Strategy on the Urban Environment (European Commission, 2012) fosters urban communities identity and enhanced urban quality of life, as a major opportunity to focus resources specifically for energy retrofitting of historic centers and districts (Lewis *et al.*, 2013). CRESME (2013) estimates that in Italy 1.650 municipalities will be at "risk of extinction" in 2016. In line with the prescriptions of the network HerO - Heritage as Opportunity (Ripp *et al.*, 2011), it is necessary to facilitate the right balance between the preservation of built cultural heritage and the sustainable, future-proof socio-economic development of historic towns, as a resource to be valued at ground zero consumption.

As pointed out by 3ENCULT European project (3ENCULT, 2011), historic building stock is extremely heterogeneous and requires specific interventions to protect and enhance its cultural value, assess and improve its energy efficiency. In fact, historic buildings have been gleaned through a long-time experience of trials and errors, which has encouraged the selection of effective passive constructive methods to provide a comfortable state both for living and general use, thus contributing to good energy performance for different climates (New4Old, 2009). To enable the process of eco-efficient renovation of existing buildings all operators in the market must be involved, starting from public authorities, to construction companies and designers. Something has to change not only in the perspectives of design and construction, but also in operational tools: adjustments will be necessary in areas such as financing structure, public procurement, education and marketing. It seems clear that the assumption underlying any action plan need to be aware of the typological and constructive characteristics and the energy consumption of 12.5 million buildings. In this perspective it is not enough to operate on individual buildings, but we must extend the upgrading operation to entire neighbourhoods and historical compounds as smaller towns and hamlets. Such a comprehensive approach calls for the involvement of all the stakeholders of the process, including and giving a prevalent role to the inhabitants of the historical districts.

With projects such as LEADER (*Liaison Entre Actions pour le Développement de l'Economie Rurale* – Links between the rural economy and development actions) or URBAN I/II (innovative strategies for sustainable economic and social regeneration in a limited number of urban areas throughout Europe), over the last 20 years European commission has been promoting initiatives to foster Community Led Local Development (CLLD), based on the design and management of development plans which mobilize and involve local communities and organizations to contribute to achieving the Europe 2020 Strategy goals of smart, sustainable and inclusive growth, fostering territorial cohesion.

Meant to encourage local communities to develop integrated bottom-up approaches, CLLD is community-led, by local action groups composed of representatives of local public and private socio-economic interests. Aiming at building community capacity and stimulating innovation, it is carried out through integrated and multi-sectoral area-based local development strategies, designed taking into consideration local needs and potential. Furthermore, it includes innovative features in the local context, networking and cooperation, for it promotes community ownership by increasing participation within communities and build the sense of involvement.

The European Commission expects that the CLLD will facilitate the implementation of integrated approaches between Structural Funds and European investment at the local level

in order to achieve the 11 thematic objectives of the Common Regulations laying down common provisions for 2014-2020. Among these objectives, the majority have great relevance to this study: development and innovation of supply chains and of local production systems (agri-food, crafts and manufacturing); development the renewable energy supply (production and energy saving); sustainable tourism; care and protection of the landscape, land use and biodiversity (plant and animal); enhancement of cultural and artistic heritage linked to the territory; access to essential public services; social inclusion of specific disadvantaged and/or marginalised groups; urban regeneration with the creation of services and inclusive spaces for the community.

2. Aim of the research

Following the CLLD approach, the research presented here is part of the aim fulfilling the objectives described above by highlighting the possibilities and problems of activating participate processes in the regeneration of historic centers in the Italian territory.

The refurbishment of historical villages calls for a participative action, in order to deeply value the cultural heritage standing behind the historic significance of the built environment. This paper tries to investigate a methodology to trigger the regeneration of small historical villages in Abruzzo, through channelling the management capabilities of local administrations with the technical know-how of professionals and the real needs and possibilities of citizens, in order to generate an integrated project for the safeguard of rural historical landscape, local development and architectural regeneration.

With a multi-scale and multi-disciplinary approach, the study sets a research analysis and evaluation methodology of the building system, meant to establish the feasibility of its transformation and development at every step of the process.

All in all, it proposes to generate scenarios that will strengthen and promote local tourism as well as enhance the potential of the territory, recover the architectural typology while enhancing energy performances and achieving microclimatic comfort, in compliance with regulated performance requirements and innovative models of traditional spaces in terms of accessibility, management and equipment. Specifically, the territory here presented is the Valle del Sangro (AQ), which includes the towns of Alfedena, Ateleta, Barrea, Castel di Sangro, Civitella Alfedena, Opi, Pescasseroli, Pescocostanzo, Rivisondoli, Rocca Pia, Roccaraso, Scontrone, Villetta Barrea.

The decision to delimit the analysis to this territory has depended largely on two factors: firstly, the area has the right size to allow an adequate level of in-depth analysis within the limits (of time and resources) linked to a participative project; furthermore, an excessive enlargement of the area to all the municipalities included in the Mountain Community of Alto Sangro could have entailed the risk to disperse energies and to fail in the attempt to actively involve local communities.

For the Valle del Sangro, the main theme of the research was the regeneration of rural villages, through the creation of an integrated network of activities related to local culture, implementing diverse qualifying functions (receptive, cultural, training and relaxing, enogastronomy and handcraft).

The theme of the recovery of rural villages has been considered important for at least three reasons. Firstly, in Abruzzo the rural villages represent a unique vehicle of historical memory in terms of traditions of farming, construction techniques, materials, architectural styles and cultural identity (as for example the relationship between men and the

environment, the ability to create solutions appropriate to the context, or the genuine social relations in the daily lives of rural villages).

Secondly, rural villages could be seen as a potential settlement which, when properly exploited, can act as an opportunity to develop models for tourism in balance with the environment. This means that the renovation should combine the maintenance of the buildings as well as the environmental and landscape features of the settlements with the increase of their accessibility (both physical and telematic communication) and the provision of adequate services (Battisti, 2014).

Finally, focusing on the recovery of rural villages could give new impetus to some economic activities closely related to the specificity of places: from construction companies able to use traditional techniques (stone, wood) to new craft activities, or activities linked to hospitality and local culture.

Methodology and tools are introduced through the refurbishment of the rural burg "Le Pagliara" (Opi, AQ), a case study within the Mountain Community of Alto Sangro. The renovation scenarios proposed together with the guidelines framework form a tool useful to direct local administration to direct the participatory process for the new definition of the area and to govern the operational stage of the retrofit process.

3. Overall methodology

In the above direction we have worked continuously with territorial revitalization activities with a dual function. At first, this operation allowed the collection of information necessary to read the territory and to identify critical issues, strengths and development prospects. Then, through a direct survey with local citizens and administrators, it was possible to identify the views of local stakeholders. A direct discussion has triggered new contacts between people, local government and investors, associations, professional organizations, education and citizenry. Thanks to this interaction, the process has highlighted the importance and the added value of cooperation and coordination.

More specifically, the process was systematized into three phases:

- 1. survey-listening, with the aim of identifying the opinions and viewpoints of local partners and enrich the cognitive framework of the territory;
- 2. the organization of a communication plan, to ensure the discussion among local partners about the themes touched by the project;
- 3. elaboration of shared strategies, to point-out solutions to address the shared identified problems.

During the first phase, we acted through the mapping of public and private stakeholders, listed with a cadastral survey and later integrated with the instructions provided by local partners. These privileged observers were subjected to semi-structured interviews in order to validate and integrate the analysis carried out by the operational core of Sapienza University of Rome.

These interviews have allowed, on the one hand, to highlight the main obstacles, priorities of intervention and possible synergies, integrating and enriching the results of previous analysis, and, secondly, to rebuild the network of major stakeholders to be involved in the subsequent phases of the participate process.

Following the interviews, the organization of workshops for public discussion has also provided opportunities to better address the design capabilities of local partners, to define

methodologies and tools, to promote policies that seize opportunities to attract resources on the territory.

This process has allowed to identify the main obstacles and possibilities for endogenous development, based on the exploitation of local resources and potentials and to build common multi-sector and medium-long term territorial strategies. The main critical issues seem to lie in the inability of "networking": the scarce degree of cooperation between municipalities, between municipalities and administrations, but also among the socioeconomic stakeholders, trade associations, tourist promotion agencies, and even voluntary organizations.

From these key points we tried to identify shared strategies to facilitate interaction between the different components of this chain of public and private stakeholders.

In this regard, the Mountain Community of Alto Sangro represents an authority able to foster the integration and coordination of policies promoted by municipal administrations, but at the same time it seems to somehow exacerbate local "conflict" and sometimes it doesn't really seem to be representative of the emerging bottom up instances.

The design process started by setting goals and strategies within a needs-performance approach. The main objectives are: to re-populate the villages; to attract new businesses; to recover villages recognizing their cultural value; to respect their appearance and their construction techniques; to maintain their overall structure and the agricultural landscape; to promote the development of and maintenance activities and respectful exploitation of local natural resources; to connect the building systems to supply network services; to ensure the automotive accessibility of villages and accessibility of individual buildings; aiming to locally close production/consumption cycles, in particular by producing energy from renewable resources; to optimize living standards consistent with the needs of contemporary living; to achieve the maximum degree of environmental and thermohygrometric comfort.

4. Application on the pilot project

In order to give more substance to the design guidelines, we have focused on the "Pagliara" in the municipality of Opi, in the Valley of Sangro (Fig. 1). The recommendations that came from this work on a pilot project obviously have a substantial connection with that specific context, but they can quite easily be adapted to other situations, given the large number of rural villages in a state of partial or total abandonment that characterizes the entire valley (as well as many areas in Mediterranean Italy).

The study for the rehabilitation of "Le Pagliara", the rural area of the small hamlet of Opi, located in the core of the National Park of Abruzzo in central Italy, aims at identifying the tools and verifying the feasibility of the transformation of the rural complex in a touristic-didactic attraction that will maintain the original productive nature of the complex.

The Municipality of Opi (AQ) is located on a hill in the upland of Alta Valle del Sangro, at 1150 m above the sea level, surrounded by mountains reaching almost 2,300 m. Probably founded in the Middle Ages, the hamlet is included in the list of the most beautiful hamlets of Italy. Despite that, nowadays it has a population of 441 inhabitants, with an increasing number of youth leaving to study and work in the bigger centres in the vicinity. The climate is particularly cold with an average temperature of 16,3°C in July and -0.8°C in January (climate zone: F).

At a regional level, a first assessment has revealed significant potential for redevelopment, marked by a strategic location and a well-structured system of connections, and a particular richness of natural and cultural heritage that allows great attractiveness potential.

Hamiet of Opi

Hamiet

Fig.1 - The hamlet of Opi and the rural area "Le Pagliara"

a) Areal view

b) New functional asset of the area

At a closer scale, the network of buildings in state of decay but of recognized historical and architectural value has shown to have great potential for transformation as long as the operations are planned on compact sectors, taking into account all or most of the buildings and the open space in-between.

The buildings that housed the former stables in "Le Pagliara" are connected by a dense network of multi-scalar relationships that need to be valorized to promote a socio-economic development, facilitated by the great natural value and sports tradition of the area.

The iconic complex consists of 10 structures built in the XVIII century to host farming activities, with a great historical and architectural value in state of decay. The construction type, narrow units with small and few openings, hosting stables on the ground level and barns in the upper floor, are perfectly suitable for farming but challenging for any kind of transformation.

The peculiarity of the case study, which made it particularly attractive for triggering an active participation, lies in its ownership situation. The "Pagliara" complex is in fact composed of ten buildings, each divided into parcels provided with independent access, privately owned but lying on state-owned farmland. Furthermore, the cadastral status is updated to the 1984 earthquake and the seventy private parcels are undivided between the heirs of the historical owners resulting from the Land Registry. This situation was the main reason for the disrepair of the buildings, since any intervention would result in a too costly or complex regularization of properties for individual inhabitants.

5. Specific goals of the participate renovation project

Following the general objectives that guided this research (land conservation and renovation, sustainable operation and management of existing buildings, revival of tourism and promotion of local farming and food industry) we have tried to conform a design scenario that reflects the demands of the inhabitants and their effective economic and technical capacity, maximizing the use of renewable energy sources to achieve optimal levels of energy efficiency and living comfort.

To this end, the survey on the "Pagliara" was oriented to define transformation scenarios by a set of specific objectives on the architectural level and a set of objectives on a socio-economic level.

Architectural level

- the allocation to each building/parcel of a main activity properly regulated for the synchronic use of indoor and outdoor spaces, trying to avoid situations of disorder or hygienic incompatibility between functions, and to improve the microclimatic performance of the complex. Among the uses proposed, we assessed the feasibility of introducing activities for livestock production, crafts, teaching and playing, hiking and sports, exposition and research, accommodation;
- the recovery and restoration of the original architectural style, when altered, within the aim to preserve typical details (feeders, barrel vaults, fountains, etc.) both inside and outside of buildings, but also to allow the insertion of new features to comply with contemporary regulations;
- 3. the planning of a techno-morphological innovation through minimum intervention on the existing or through the design of new structures, always in respect of the historical and architectural value of the complex;
- 4. the development of innovative models of traditional spaces in terms of use, management, equipment and the inclusion of compatible and reversible technological systems and materials for an improved energy performance and to achieve levels of thermal and psycho-perceptive comfort both indoors and outdoors.

Socio-economic level

- 1. the choice of a collective intervention on the properties intended primarily to convey individual interests and possibilities in a unitary process of renovation, and secondly to offer joint and cost-effective solutions for a systematic regularization of the property status and to prevent possible violations of building regulations;
- the proposal of a flexible form of share or cooperative association by the municipality
 and some local entrepreneurs, aimed at integrating owners or citizens with business
 interests and/or emotional connection with the complex, and to detect owners not
 interested in the project or economically unable to undertake any type of activity.

A careful study of the activities and economic potential of the territory is structured specifically to formulate an integrated economic project that does not overlap, but reinforce the existing network on the local activities.

6. Methodology of a participate approach

During the first phase of cognitive recognition of the territory, the operative methodology was based mainly on a quantitative-qualitative analysis of the state of the art, aimed at establishing:

1. territorial factors to determine the socio-economic success of the renovation project;

2. morpho-techno-typological factors to determine the transformation feasibility, simultaneously considering four subjects/issues: the aggregate system (the high concentration or the isolate position of buildings is a fundamental parameter for the comprehension of the fabric's behaviour within environmental conditions); technomorphological characteristics allow to recreate the shape and the spatial organization of buildings, degradation level, materials and technologies of its components interfering on the energy behavior of the structures; uses (if the calculation directives consider the use of spaces for their energy requirements, in vacant buildings it is necessary to consider the pre-existing and foresee use in transformations); plant systems (when facing structures lacking such systems, it is important to identify historical remains of their original passive operation, or the elements that, despite their original role, can be transformed in this sense).

For the development of the project, though, the need to establish a connection with local stakeholders was more and more necessary. With the help of experts in communication, we have established a communication plan aiming to raise awareness among the inhabitants about the project's intents and possible outcomes. In fact, the communication plan has two main goals: on one side to orient the owners of the stables towards a positive consideration of the project and encourage a collaborative attitude; on the other side, to ensure a favorable public opinion, involving the lion share of citizen towards an active standing on the project. Being to raise awareness the main objective of the process, through overcoming all possible doubts and stressing all the benefits that might come with the project, the leverage to be used should to be the confrontation between the progressive fall in price of the real estate in the current situation, against its potential increase of value in case of a new destination of use as well as the potential economical incomes for the whole municipality.

Therefore the target of the communication plan is considered to be both the owners of the buildings (average-high age range) and the citizenry (all age ranges are considered). The overall inhabitants of the village take on an essential role indeed, even though they are not directly involved in the project: a public opinion generally favorable can have a significant drawing effect for those who might still be reluctant.

In order to do that, the plan follows four main stages of action:

- the first step would be to verify the comprehension of the project at the present situation and to understand the overall perception of the project. Such analysis is meant to determine the messages to be sent from now on and to rectify potential misleadings in communication;
- 2. in the second step, once the message is defined, a campaign to raise public awareness should be launched;
- in the third step, communication experts should arrange initiatives focused on the owners' needs, with the elaboration of brochures dealing with all the doubts encountered in the first phase. Only after that, the owners should be surveyed through direct interviews;
- 4. in the fourth step, the owners should be gathered together for a collective direct discussion.

The communication tools and media are set accordingly to each stage of the process:

 step 1. A preliminary survey to submit to the citizenry both through direct interviews (lead by the volunteers of the local civil service) and through social media (e-mail and Facebook);

- step 2. Public campaign via web media (Facebook, newsletter, Municipality institutional website);
- step 3. Custom brochures and full surveys to submit to the owners via scheduled meetings.

Fig. 2 – Communication Plan: tools and time-schedule

Time schedule Communication Tools and Media step1. Preliminary Survey survey opening and feedback collection via direct interviews lead by volunteers of the 2 weeks local civil service and social media (e-mail, Facebook); data analysis, weaknesses highlight + elaboration of message to send 2 weeks step2. Campaign for Public Awareness blog, forums, newsletter via web media (e-mail, Facebook, Municipality institutional website); 3-4 weeks step3. Brochure and Full Survey via mail and direct interviews: space for discussion and settlement 2 weeks step4. Collective Discussion sessions for open discussion and partecipate design exercises; 1-2 meetings

The time schedule is also a critical element to be considered in a participate process, as it allows the appropriate span for the ideas to spread and set in the minds of the citizens (Fig. 2). For the specific matter, once the preliminary survey is prepared and distributed (*step 1*), it is important to leave it opened for at least a couple of weeks. Consider that two more weeks would be then necessary for data elaboration and processing, in order to highlight weaknesses and strengths and to elaborate messages and keywords to be spread.

The public awareness campaign (*step 2*) can last between three and four weeks; although it might appear as an action of short importance, this step assumes a great value, considering that information needs a certain time to settle and it is crucial to seep it in with a constant and non-intrusive manner.

In the third phase, a few days to give space to family discussion and idea elaboration should be necessary after sending the brochure to the owners (*step 3*). After this span, the final

surveys can be distributed. In order to evaluate in what measure and which effects the communication initiatives have produced, a final assessment phase should see a comparison between the outcomes of the full surveys with the data collected in the preliminary steps. During the workshops organized to host the public discussion between owners, public and private stakeholders and citizenry (*step 4*), it is of significant concern to convey and elaborate ideas without imposing a prevalent or given view. To this end, the meetings should be structured through sessions of open discussion and participate design exercises allowing every stakeholder to express its personal ideas and moderatos to methodically collect inputs. Graphic-visual tools can help to facilitate a more direct comprehension of the discussion topics in a participate design processes.

7. Results

In order to formulate an economic and social project integrated with the territory, the SWAT analysis conducted on the network of Opi, Pescasseroli, Alfedena Civitella Alfedena, Barrea and Villletta Barrea has allowed us to bring the attention on the activities of greater economic feasibility, proposing an integrated program for the territory, and to trigger a constructive discussion on mutual opportunities in planning a shared marketing strategy. On the basis of the information received by the local government in the first step, and in consideration of the economic and social potential of the territory as well as the typology and morphology of the buildings, it was possible to establish an indicative layout of transformation, which sees the division of the complex in three poles:

- 1. the education sector for children and families;
- 2. the productive sector for research and retail;
- 3. the accommodation and organization sector.

Compartmentalization allows the organization of compatible functions for a proper management of flows and activities, while helping to design in-between spaces compatible and integrated with functional compartments.

Trying to identify the transverse connections between sectors to highlight the synergistic operation of the center, the new functional layout derives from the identification of buildings' adaptability. Buildings with high convertibility are supposed to locate totemic functions (educational museum, restaurant of local products, research center and innovative center for hiking and sports). We also identified areas for new constructions and reprogrammed access, paths and parking through a differentiation by users and permanence duration.

Finally, in order to develop a framework of operational guidelines for the retrofit of the buildings that could highlight their architectural and cultural quality without altering the original characters but at the same time allowing an adjustment to meet the performance requirements of new uses, it was possible to conform different transformation scenarios that systematizes the degree of alteration of the original characters, the economic feasibility of operations and simulations of energy performance. In order to define the refurbishment scenarios, we needed to determine the adaptability to transformation of existing constructions, according to indicators relating to:

- "uniformity of current use" for indoor and in-between spaces allows to identify uniform divisions and reduces the need for displacements;
- "accessibility" and proximity to roads influences the regulation of users/workers pedestrian or vehicular access, parking, load/unload cycles;

- "alteration of original characteristics" enables to operate consistent transformations over buildings, if it does not compromise the overall historical value of the district;
- "requirements adaptability" states the aptitude of the construction to positively respond
 to prescriptive requirements in the change of use. That includes safety, hygiene and
 healthiness of indoor spaces requirements;
- "dimensional adaptability", for the fragmentation, distribution and dimensions of indoor spaces affect the kind of new functions that can be installed.

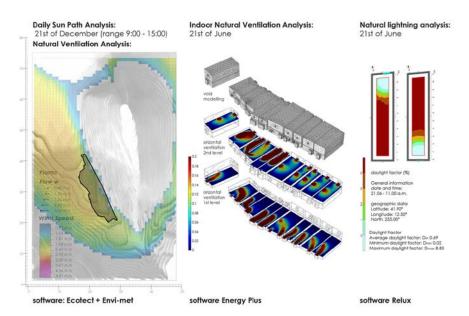


Fig. 3 – Study of the ecological metabolism of buildings: natural lightning and ventilation

As for the energy upgrade of the historical building stock, the approach of this research is to highlight peculiar bioclimatic characteristics of the building typology, the so-called "ecological metabolism" (Davoli, 2010), and to work for the restoration and enhancement of such systems through passive solutions and innovative technologies (Fig. 3).

Staying in line with the principle of "minimum intervention" on significant buildings, a correct use of most recent technologies for energy refurbishment provides non-invasive solutions that can be implemented with little or no significant impact on the overall appearance of the building while increasing its energy efficiency and assuring thermohygrometric, visual, and acoustic comfort, towards "compatibility" and "reversibility" (Cimini, 2014). We have outlined three intervention scenarios (Fig. 4) expressing the level of respect/alteration of the historical-morpho-technological character and the fulfilment of performance requirements regulations for new uses of the buildings.

They include "essential, advantageous and recommended interventions" to work on structural reinforce, natural lightening and ventilation, HVAC systems, moisture protection and energy savings:

- a "soft refurbishment scenario", that includes operations that do not significantly alter the overall external appearance of the complex and introduce "essential" interventions for the enhancement of the energy performance and indoor comfort of the buildings;
- an "intermediate refurbishment scenario", that includes operations that slightly alter the
 external appearance of the complex, sacrificing additional identities or elements that
 have been altered over time, and can no longer be considered as essential parts of the
 original building. This scenario includes both essential and "advantageous"
 interventions;
- a "hard refurbishment scenario", that includes invasive operations on determined elements designated as expendable, with possible volumetric modifications for the optimization of energy gains and minimization of losses with the use of essential, advantageous and "recommended" interventions.

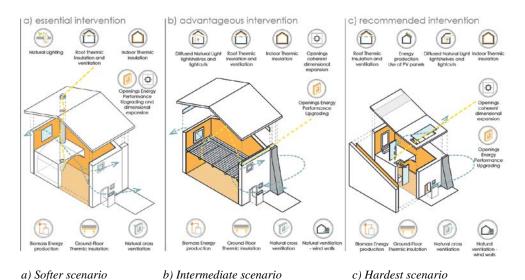


Fig. 4 - Retrofit scenarios: essential, advantageous and recommended interventions

Starting from the promotion of the project on social networks, we organized a series of group meetings in order to gather all the owners and citizens interested in the project and trigger a first open discussion. After these meetings, the need to facilitate the anonymity of discussion was clear: preliminary questionnaires targeted for owners and for people with potential interest in the project were then handed out (Fig. 5). Through a multiple-choice formula, these questionnaires aimed at inquiring the willingness of participation according to five degrees of involvement (and therefore of financial commitment), furthering flexible

entrepreneurship. An open-answer section looked into suggestions and intentions on the future development of the project.

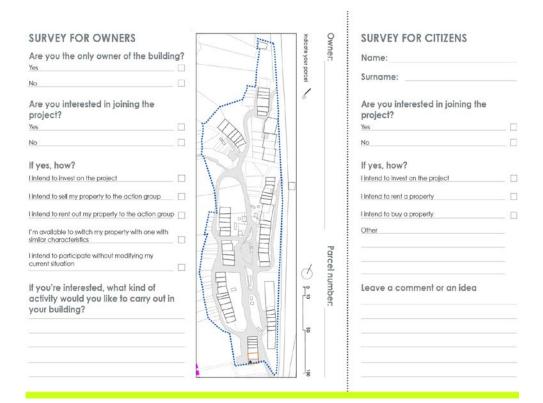


Fig. 5 – Synthetic survey: model for owners and for people concerned

The low turnout observed in the first meetings, mainly due to lack of interest and scepticism about the feasibility of the operations and a lack of confidence in local government, partially overcome by the intervention of outside experts, was faced with a radical change of strategy. Scheduled meetings followed early collective meetings with individual owners or groups of owners with similar interests, in order to illustrate more clearly the project and to welcome criticism and suggestions in a more open and informal way. This intermediate step, and the following information campaign through social networks and public tenders, has seen a real growth in interest in the next collective meetings and in the delivery of the completed questionnaires.

8. Conclusions

Looking back at the experience, it is possible to draw three key considerations in approaching the renovation of historical districts:

- the importance of a unified approach in the redevelopment to endorse economic and environmental costs. The definition of the three scenarios of intervention allows controlling the feasibility of transformation in terms of cost, ease of implementation and payback period of the initial investment by an evaluation of economic and environmental benefits;
- 2. the importance of establishing a framework of rules agreed upon by experts, residents and local governments to ensure a compliant and homogeneous development to counteract the possibility of the project being carried out with dilated timing and mixed initiatives. The definition of the scenarios and the classification of interventions is accompanied by guidelines and exemplifying indication;
- 3. the importance of a good communication strategy for the project and the search for an effective way of involving citizens in the redevelopment choices, in order to highlight cultural identity. This process, which lasted over a year and is still ongoing, has highlighted the need for settling the idea before it could take a constructive discussion, determining the timing and communication as key elements for the success of a participatory process.

In conclusion, renovation is meant not as a simple protection and preservation of assets and resources, but as an action based on a general process of architectural, energy, social and economic revitalization. In the absence of a national specific regulation on energy upgrading of the built heritage, operational scenarios might require new arrangements with the current conservative regulations to carry out in partnership with local and regional authorities. To assess the feasibility of the intervention, it will be necessary to verify the willingness of owners to participate, with local assembly to discuss the transformation.

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Alessandra Battisti

Dipartimento di Pianificazione, Design e Tecnologia dell'Architettura, Università di Roma "La Sapienza" Via Flaminia 70 – I-00188 Roma (Italy)

Via Fiaminia 70 – 1-00188 Roma (Italy)

Tel.: +39-339-7739471; email: alessandra.battisti@uniroma1.it

Silvia Cimini

Dipartimento di Pianificazione, Design e Tecnologia dell'Architettura, Università di Roma "La Sapienza"

Via Flaminia 70 – I-00188 Roma (Italy)

Tel.: +39-339-7739471; email: silvia.cimini@uniroma1.it

