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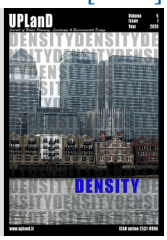

Research & experimentation
Ricerca e sperimentazione

A NEW APPROACH TO URBAN PLANNING. A REITERABLE MODEL OF CO-HOUSING

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HIGHLIGHTS

- Innovative and multi-scale approach to territorial planning that modifies the Italian planning system with the aim of radically simplifying it.
- Definition of a repeatable urban model for territorial redevelopment.
- Practical implementation of the urban model on a sample level to support the methodological proposal of urban regeneration.
- Urban control tools and techniques based on inclusive and sustainable solutions.

ABSTRACT

The discussion on the territorial planning tools and on their reform has emerged in the Italian urban planning culture in the last thirty years, that is, since the old regulatory model of the 1942 law no. 1150 showed insurmountable limits which led to its crisis. This study presents a new approach to urban planning based on hierarchical levels, with the aim of modifying the entire Italian planning system and radically simplifying it.
This research, in particular, focuses on the last level of advanced planning. In relation to this level, a practical application of the Implementation Urban Plan is shown, in support of the indicated methodology. The proposal is carried out on a sample level, in the municipality of Pomigliano d'Arco, presenting a model that can be considered a tool for the regeneration of the territory based on the use of inclusive and sustainable dynamics.
This plan, inserted in the logic of experimenting with efficient settlement models from the urban, social and economic point of view, is only a model that, by way of example, can be replicated in several territorial areas, with due diversifications depending on the context considered. The decision to present a small-scale operational example derives from the need to show an application of the method presented, with the desirability of intervening on contiguous singular qualities which can contribute together to the regeneration of the entire municipal and supra-municipal territory.

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1. Introduction

Planning tools have been the subject of a lively discussion within Italian urban planning culture since the 1980s, at a time of profound crisis in the regulatory model of the 1942 Fundamental Law no. 1150. From that moment on, urban planning began to show signs of intolerance, highlighting the limit of having dealt predominantly previously with the form of the plan rather than its contents, and so it became entangled in a complex and unnecessary hotch-potch of regulatory frameworks, also because of the activation of regional competences (Oliva, 2014).

This research aims to launch the scientific debate towards the construction of a different way of planning, through a multi-scale approach (Russo, 2015), which is selective and pragmatic, able to address the complexity of urban phenomena, to ensure an overall vision but also to get down to the level of the local project, without forgetting about its objective of contributing to change the entire Italian planning system with the aim of simplifying it, starting from the form of the urban planning process. Planners today, conditioned by specific operational codes and bound by current regulations, have ended up separating the planning from the real needs of the community (Jacobs, 2009). Because of this situation, the purpose of this research is to promote discussion on the issue of the reform of current urban planning processes considered obsolete and confusing. The correct direction of planning should consider involving multiple factors and stakeholders in the spatial planning process in order to identify a participatory development strategy, with the hope of solving the widest range of real and critical issues that exist through tools and techniques of urban control so as to achieve inclusive and sustainable settlements, as advocated by objective 11 of the Agenda 2030's SDGs (Sustainable Development Goals) (United Nations, 2015).

The urban planning arrangement needs a different approach to planning. Therefore, this study recommends an alternative to the traditional one, making at the same time a comparison with the reference regulatory framework of Italian planning and then showing a practical application as regards the last level of the proposed methodology, in particular with the case study of the Urban Implementation Plan (PUA) of the municipality of Pomigliano d'Arco. It serves, by way of example, as a model to experiment with an intervention based on the concepts of sustainability and socio-ecological resilience, i.e. the capacity of the systems to adapt themselves to new circumstances (Carpenter et al., 2001), as a potential for the creation of new actions aimed at innovation and development (Adger, 2006). This experimentation can be replicated in several territorial areas, even contiguous ones, with the aim of intervening on complex urban realities and avoiding further land consumption, through the "soil project" (Secchi, 1989). The methodological application is articulated in a sequence of phases: the initial one investigates the reference context and justifies the choices of the territorial sample examined, through a process of analysis, with the second phase researching on the historical and cultural backgrounds in order to determine the architectural strategies of intervention, while the third one explains the project actions and the results achieved.

2. Methodology: a new approach to urban planning

The methodological solution addressed in this study is a new approach to urban planning. The method indicated starts from making large-scale considerations, with the aim of simplifying and speeding up current urban planning processes. Bearing in mind this aim, an alternative planning tool, called rationalized planning, is proposed. It overcomes the disadvantages and limitations of the traditional planning characterized by uncertain times, endless bureaucratic interventions, individualism and a system which can only be described as confusing. In order to understand the benefits and differences of the method, a comparison between traditional planning (currently in force) and the changes made by simplified planning is shown below.

The 1942 State Urban Planning Law (Law 1150, 17th August, 1942) introduced three levels of planning. Nowadays reference should be made to the regional indications that have extended to four such organizations. In particular, in Campania (Regional Law 16, 22nd December, 2004) has the following order in force:

1. Regional Territorial Plan (PTR);
2. Territorial Plan for Provincial Coordination (PTCP);
3. Municipal Urban Plan (PUC);
4. Urban Implementation Plans (PUA).

Figure 1: Comparison between traditional urban planning (a) and rationalized urban planning (b).
Source: author's elaboration (2019).

This hierarchy provides for a cascade order. The lower level plans must follow the general indications contained in the upper level plans, aligning themselves to them in territorial planning. This bureaucratic model, therefore, obliges individual territories to adapt municipal plans to the superordinate plans, making the system slow and confusing, as it is characterized by the long implementation and planning times of the individual plans. For this reason, this research proposes a modification of the final two levels of planning, through the definition of a Supra-Municipal Structural Plan (3rd level of planning) that provides for collaboration between several municipalities and from which we move directly to the Implementation Urban Plans (4th level of planning), which is reduced to a single typology. The organisation of the urban planning process is modified thus (Fig. 1):

1. Regional Territorial Plan (PTR);
2. Metropolitan Territorial Plan (PTM);
3. Supra-Municipal Area Plan (PAS);
4. Urban Implementation Plan (PUA).

In this way, the first level of the proposed planning remains unchanged, as well as the second level, and so it is possible to refer to the Metropolitan Territorial Plan established by Law 56, April 7th, 2014 (Moccia & Sgobbo, 2016).

At the third level, the Supra-Municipal Area Plan is established. It is based on the collaboration between municipalities belonging to a metropolitan area and it triggers economic advantages, reduces bureaucratic times and facilitates its implementation. Other objectives of this plan are the abolition of territorial expansions in order to avoid further soil consumption, the protection and preservation of the existing fabric with criteria of supra-municipal and physiographic homogeneity, the re-development of dense areas through the re-design and re-organization connected to densification and volume increases in favour of the improvement of green areas and, ultimately, the protection of agricultural areas.

The last level of planning is that of pursuing the very aim of simplifying the current bureaucratic planning process. It provides for a reduction in the Urban Implementation Plans to a single typology, carried out through two possible instruments, i.e. the Program Agreement (art. 34 of Legislative Decree no. 267/2000) and the Urban Transformation Company (art. 120 of Legislative Decree no. 267/2000) which integrates and coordinates the action of the public and private sectors in implementing the re-development interventions on the territory.

The involvement of different stakeholders, in the drafting of the urban plan, is fundamental to cover the widest scenario of possible existing problems and critical issues, which, thanks to the collaboration of multiple subjects, can be addressed by adhering to different approaches and skills. Participation, in fact, can represent a basic element in territorial planning, as it is able to raise and take on board conflicting issues as well as environmental, economic and social needs (Bastiani, 1999; Sgobbo, 2018).

From the comparison between the two planning methodologies it is possible to deduce the advantages deriving from the simplification of the current urban planning. They are made concrete by the improvement of the implementation times of

the urban plans, in the bureaucratic process being less involved and in the consequent economic advantages obtained thanks to the collaboration between various stakeholders and institutions.
After indicating the general process of rationalized urban planning and its results, the study focuses on the last level, the Urban Implementation Plan (PUA), supporting the methodological proposal with an example of intervention carried out on a sample area, the municipality of Pomigliano d'Arco. The decision to present an operational experience on a small-scale level, therefore of a small urban area, comes from the desire to show an application of the proposed method with the desirability of intervening on contiguous singular qualities that can contribute together to the regeneration of the entire municipal and supra-municipal territory, considering the urban project as a complex system involving different scales of action (Ingaramo et al., 2011).
Therefore, this implementation plan is only an illustrative model of re-development of what already exists that can be replicated in several territorial areas, with due diversification depending on the territorial area considered. Urban regeneration and the containment of land use are two priorities of territorial policies in Italian and international contexts that must act as a driving force for any planning intervention (European Environment Agency, 2006).

3.1 The urban-legislative framework

The Municipality of Pomigliano d'Arco comes under the jurisdiction of the Territorial Plan of the Campania Region (1st level of planning) and it is located in the Metropolitan Area of Naples (2nd level of planning). As far as the third level of planning is concerned, the Municipality has currently in force a variant of the 2005 Municipal Urban Plan (PUC). The plan was drawn up to replace the never approved 1979 General Regulatory Plan (PRG), which was inadequate from the point of view of urban planning standards. This plan, frozen out and left unimplemented by the provincial administration, has led to a situation of illegal building, the result of speculation that in the 1980s did not respect the construction rules.
According to this research, the objective of the rationalized planning process is to replace the traditional PUC through the formation of a Supra-Municipal Area Plan (PAS). This plan is not dealt with here but its drafting is considered as an hypothesis in order to draw up a PUA that can be inserted directly within the supra-municipal sphere.

3.2 The urban development of the municipality of Pomigliano d'Arco

The primitive inhabited nucleus of Pomigliano d'Arco developed in the Roman period according to non-regular layouts and tracks was due to the presence of two systems, one mountainous (the Somma-Vesuvius massif) with the other being a water system (the system of the Regi Lagni), whose relative eruptions and overflows contributed to the exclusion of the Pomigliano territory from the all-encompassing regularization imposed by the Roman centuriation (Basile et al., 2009).
Thanks to the maps of the Italian Military Geographic Institute (IGMI) and the historical cadastre, it is possible to retrace the urban evolution of Pomigliano d'Arco back to 1876. The city is mainly structured around three founding nuclei in the form of triangular blocks. On this anomalous topographical structure Pomigliano d'Arco developed as an agricultural centre of modest dimensions. This condition remained almost unchanged until the original foundation plan of the city, as documented in the 1936 IGMI map, was substantially modified by the construction, in the northern area, of a large industrial installation, the "Alfa Avio" (Basile et al., 2009).

Figure 2: Territorial framework. (a) Italy. (b) Campania. (c) Metropolitan Area of Naples. *Source: author's elaboration (2019).*

(a) (b)

Figure 3: Graphic reconstruction of the 1939 PRG by Alessandro Cairoli (a); Graphic reconstruction of the urban extension to the 1942 PRG by Alessandro Cairoli (b). *Source: author's elaboration (2019).*

The plant for the construction of military aircraft was requested by B. Mussolini which considered the territory of Pomigliano d'Arco as the ideal place for the strengthening of the Neapolitan war production. The project was entrusted to the milanese architect A. Cairoli who, in addition to the industrial plant, planned a range of accessory services and a residential area, called "Le Palazzine", for the factory workers (Piano Cairoli) (Fig. 3). In this way Pomigliano d'Arco went in the space of a few years (1939-43) from being a rural village to becoming an industrial centre. In 1942 the architect also planned a rational extension to the residential area that, in the end, was not implemented due to the onset of the Second World War (Stenti, 2003).
Following the aerial bombardments during the war a large part of the factory was destroyed and, starting from the 1950s, the uncontrolled and unregulated growth of the city began characterized by squatting and building speculation. The lesson of rationality as preached by the settlements of the Cairoli Plan had no effect on the growth of Pomigliano d'Arco. The rapid urbanization of the agricultural areas led to the impossibility of a possible orderly growth, as can be evinced by the urbanistic direction given by the clear morphological-type layout of the workers' residences. The lesson of clarity, order, consequentiality and rhythm provided by the "Palazzine", was not taken on board by the newly expanding city which simply tended to take over the existing free spaces through building low-quality housing. In this way the surviving buildings of the Cairoli Plan were incorporated into the urban fabric until 1996, when the IGMI cartography showed the complete absorption of the workers' residential district into the uncontrolled surrounding fabric (Stenti, 2003). The current situation of Pomigliano d'Arco, documented by the aerial photogrammetry of 2014, shows, therefore, an urban system made up of the growth of "spontaneous" buildings and characterized by a low morphological-quality level, degradation as well as urban and social marginality.

4. Overcoming utopia: design choices

The study of the urban evolution of the municipality of Pomigliano d'Arco, highlights a fundamental historical event, namely the transition from an agricultural centre to an industrial one with

the implementation of the 1939 Cairoli Plan. The above-mentioned episode controls the choice of the scope for intervention by the PUA. It is precisely from the immaterial signs left on paper by the lack of residential expansion in 1942 that the mechanism for re-developing the existing one has been grafted. By superimposing, in fact, the Cairoli extension project onto the current aero-photogrammetry, dated 2014, it is possible to obtain the boundary of the area under study, located in the north-east area of the municipality of Pomigliano d'Arco.
In order to adequately orient the design choices of the implementation plan, the historical roots of the identified area must be taken into consideration. It is possible to imagine that the architect Cairoli based the origins of his planned proposal on the European experiences of nineteenth-century workers' villages, ideally and morphologically based on the "home-working-social life"triad. Next to the aeronautical plant, the architect placed a series of ancillary services and a district for the factory workers, living proof that he was sensitive to the question of the workers' living conditions (Stenti, 2003). The arrangement of these facilities follows a certain formal symbolism, evident in the morphology of the industrial settlement, which refers to its function and to the triad mentioned above. With the help of shadows projected on the ground, the image of a biplane is visible, whose double wings are made up of the factory and the services, while the tail is formed from the residences (Fig. 4).
The thematic reference substratum is, therefore, identifiable with the workers' issues, insisting on the link between the settlement form and the reform of the social order. This relationship has always existed in the past and has been dealt with extensively over the centuries, but it has often highlighted the dualism between "concept" (ideological proposals) and its "realization" (design experiences). By carrying out a critical research project on the ideal and concrete experiences manifested in history in relation to this dichotomy, it is possible to trace the relationship highlighted above to back around 1500 and 1600, when we begin to theorize on the "forma urbis" to the point of giving rise to a flowering of new urban planning ideas that, under the guise of ideal cities (Sciolla, 1975), set themselves up , in relation to the existing ones, as possible alternatives. Very often the vague innovations are only formal, geometric and defensive, but in this research new ideas burst forth both in the technical field and in the field of social order, paving the way for utopias (Astengo, 1966).
With the Enlightenment period in the mid-eighteenth century and its attention to society and the common good, the ideation of ideal cities was once again successful. Concrete projects were hatched linked to the needs of the new industrial complexes, to which, for practical and philanthropic

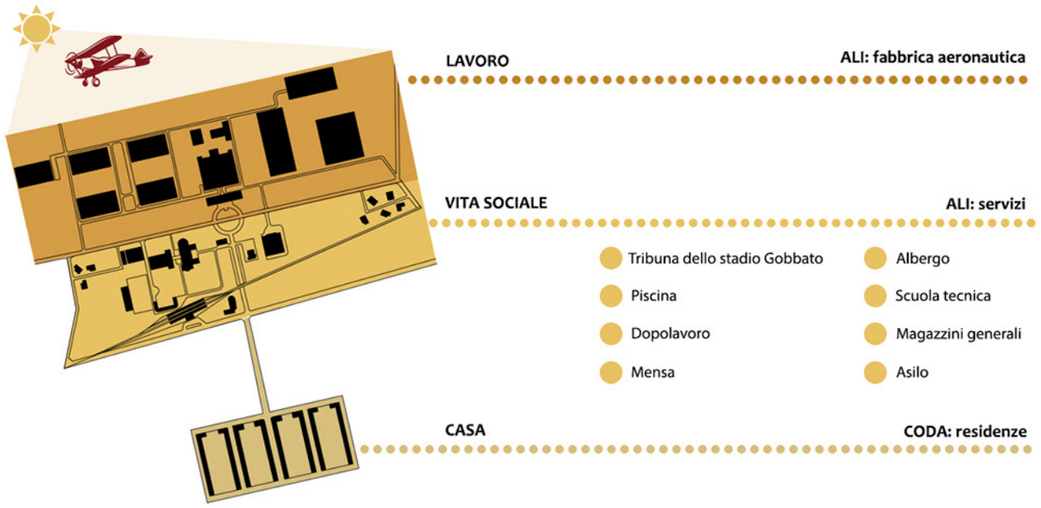

Figure 4: Formal symbolism in the Cairoli Plan of 1939. *Source: author's elaboration (2019).*

reasons, working-class towns were combined. It is possible to cite the case of the Saline royale, in France (Frampton, 2008), and the Real Colonia of San Leucio, in Italy (Ferraiuolo, 1995; Bagnato, 1998; Pignataro 2001), in which King Ferdinand instituted a special statute in 1789, establishing laws and rules of conduct.
In the nineteenth century there was a heated debate on the problems of the capitalist city. Utopian Socialism (Zevi, 1962; Bravo, 1974; Ragon, 1974; Middleton et al., 1980) tried to correct its guidelines through plans for the reform of society based on alternative settlement models. For this reason, Fourier and Owen's proposals of self-sufficient productive communities (Benevolo, 1985) aimed at improving the living conditions of workers through the creation of housing and so services were born. This thought is translated into the concrete experiences of both European and Italian workers' villages. The urban-industrial space is the object of a double interpretative key. On the one hand, it is investigated and represented as the place of greatest concentration of environmental degradation and social discomfort. On the other hand, it is considered as one of the most appropriate environmental contexts to experiment different forms of co-habitation, welfare, cultural cohesion and political-social redemption.
For example, the English working-class towns, the Grand Hornu complex in Belgium, the French Citè Ouvrieres, the German Colonies and the Italian industrial districts of Crespi d'Adda and Schio (Sica, 1992) can be cited as appropriate examples. All these experiences have in common the above-mentioned "home-working-social life" triad, so that, alongside the construction of the industrial plant, it was decided to improve the conditions of the workers through the inclusion of residences and services.
Having researched the historical roots of the area in question on the link between settlement form and social order, the objective of the PUA as regards Pomigliano d'Arco is to reconsider and renew this relationship through design solutions that recover the social dimension in its connexion to an adequate urban form. The aim is to overcome the dichotomy highlighted in the past by proposing a concept applicable in reality and no longer an utopia. With regard to this, the present study uses co-housing as the founding solution for the urban system of the implementation plan. It does not represent a utopian thought but it is the real design concretization of a basic idea, i.e. the sharing of spaces. Through the formal solution of co-housing it is possible to establish a correct balance between social inclusion and the morphology of urban settlement. In this case a planned model is defined, replicable on several territorial areas, which is based on an innovative and sustainable solution for land use.

5. Design goals and strategies

The process of rationalized urban planning dwells, in this research, on the last level, with the definition of a single type of Urban Implementation Plan, accompanying the methodological planning proposal with a practical example of a plan for the town of Pomigliano d'Arco.
Following the analysis and considerations carried out on the choice for the reference municipality for the PUA and the choice of the design solutions to be adopted for the case in question, the operational methodology to be followed for the definition of the urban model of co-housing is shown below.
The operational process of the plan-model formation foresees a sequence of phases. The first step consists in determining the main needs for urban regeneration, identified thanks to the analyses (Carbonara, 1992) carried out beforehand on the area and which have revealed the main critical points, such as the presence of pockets of urban and social degradation and marginality, the growth of a large part of the "spontaneous" city, marked by low morphological-quality levels and important deficits in the provision of services.
The needs identified, which are different for each territorial area considered, are expressed by development factors. In the present case, three of them have been considered:

- the identity lever: the study of the identity of the place is the starting point for the definition of intervention strategies for an adequate adaptation of the existing ones to the changes imposed by the natural course of events, in order to obtain a resilient and flexible solution;
- the socio-economic lever: the project enhances social interests by making them the focus of urban regeneration through co-housing and promotes economic aspects through the strengthening of commercial axes and the inclusion of attractive activities;
- the eco-sustainable lever: the redesign of the urban conformation is based on a renewable

use of resources and on current ecological and eco-sustainable systems.

These development factors in turn take the form of a series of project actions. For the PUA of Pomigliano d'Arco ten project strategies are identified, supporting the main solution of co-housing, in order to achieve an efficient settlement. Co-housing is a way of living that combines the independence and privacy of one's own home with the possibility of sharing common spaces and services (Ruiu, 2013). The advantages deriving from such a system are enhanced by an improved and calibrated use of the land, through the reduction of private spaces, thus obtaining the improvement of social and environmental welfare conditions (action no. 1).

The Plan foresees a substantial modification of the urbanized territory with a planning based on a rational allotment of the area in order to obtain a fair distribution of the population over the territory, the integration of all social classes and the improvement of the infrastructural system and mobility (action no. 2). In spite of the total redesign of the territorial area, the project maintains some invariants, represented by the buildings of the Cairoli Plan, i.e. the historical "Palazzine", some buildings dating back to the 1962 INA-Casa, a cult building, and finally, the main axes, orthogonal to each other, identified by the original setting up of the Cairoli Plan. Connected to the co-housing solution there is, moreover, the use of the open court building typology, which is the housing solution that best lends itself to the definition of a balanced relationship between social life and the settlement form, since the court is the convivial and meeting place and promotes integration (Fig. 5). The courts designed in this case have cuts to improve the pedestrian crossing, the flow of fresh air and better sunshine (action no. 3). Within the courtyard building typology there are a series of social housing modules grafted on, i.e. each residential building is obtained through the aggregation of standard housing cells designed for social typologies (action no. 4).

For the Pomigliano d'Arco Plan, solutions are adopted to encourage and adapt to the existing one, more precisely, an adaptation to the urban planning standards in force is determined (action

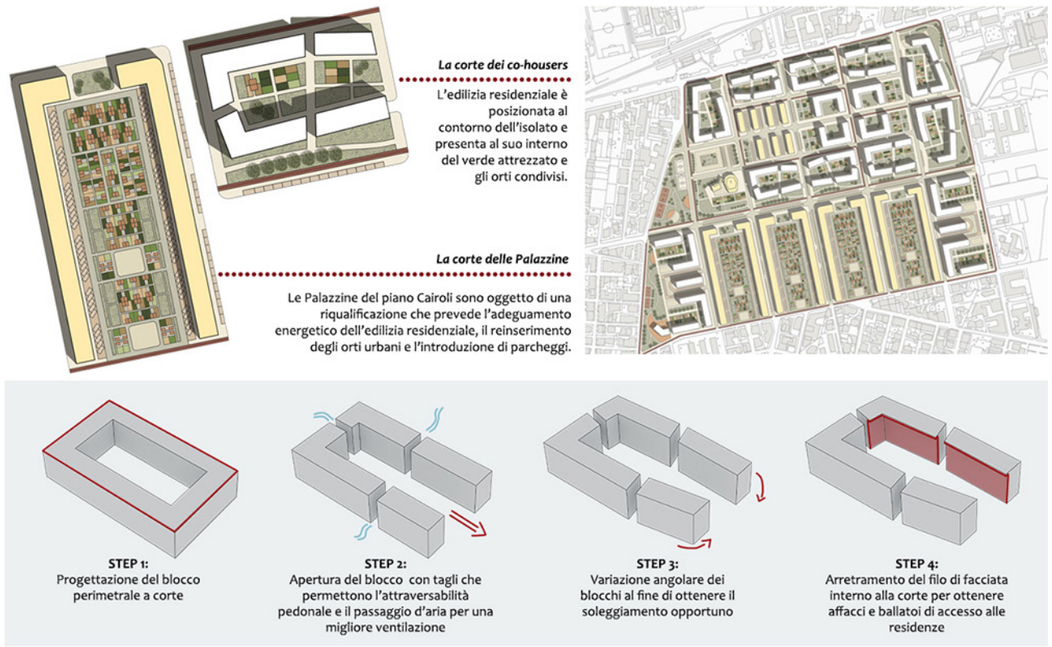

Figure 5: Planivolumetric of the PUA and identification of the volumetric formation process of the co-housing residences. *Source: author's elaboration (2019).*

no. 5). This approach involves the introduction of new urban and environmental actions, such as the exclusion of all new soil consumption and the increase in plant cover on permeable, public and private open spaces within the urban fabric (Oliva, 2014).

The Plan is also concerned with economic aspects through the strengthening of the commercial axes, with the identification of economic levers for the production of wealth and the inclusion of productive and profitable activities (action no. 6).

Cities and in general the settlement system, as places of concentration for human activities, are comparable to a low efficiency "machine" that uses energy and so causing a high level of dissipation and therefore a high level of pollution. The future of human settlements depends on the use of renewable energy sources, energy saving and reduction of pollution (Colombo, 2012). To this end, sustainability is achieved through the adoption of a number of systems including the use of renewable sources, the use of solutions such as photovoltaics, rainwater recovery, the centralization of ecological systems, soil permeability (action no. 7).

The Plan provides for the inclusion of numerous well-equipped green areas, both public and residential, which represent the heart of sociality and produce environmental regeneration, together

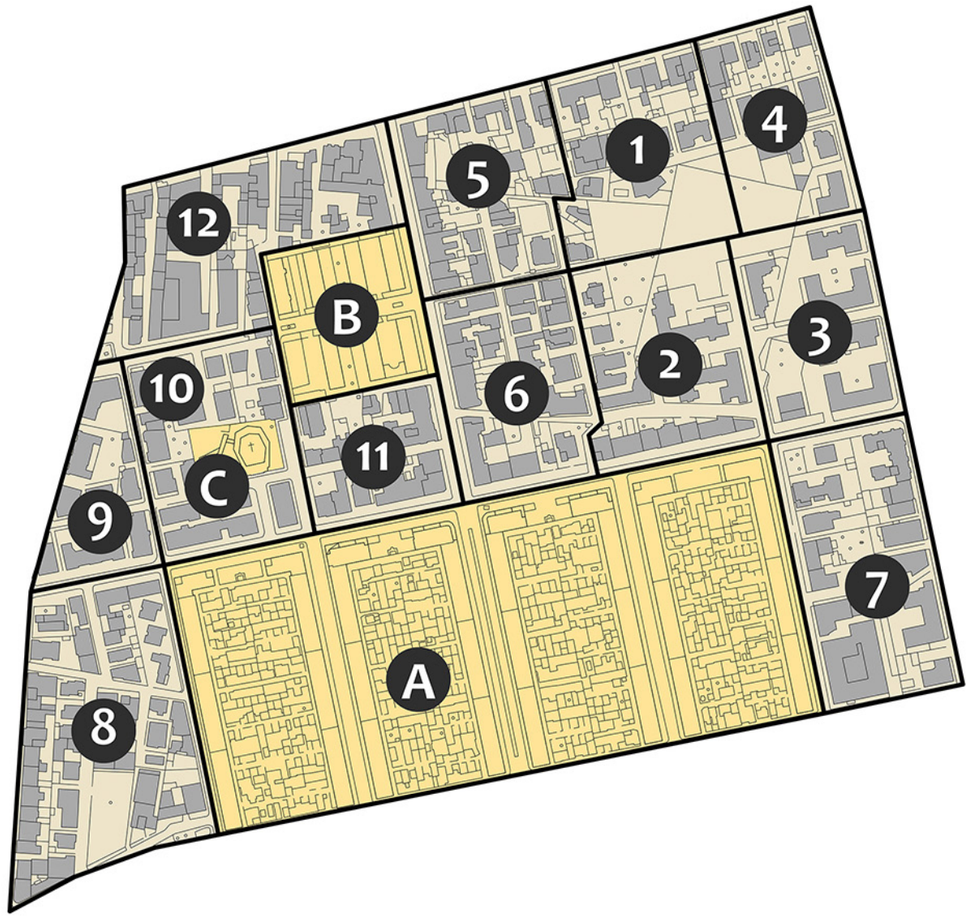

Figure 6: Minimum areas of intervention identified for the realization of the PUA. *Source: author's elaboration (2019).*

with the inclusion of green strips of fences around the building that contribute to the reduction of noise pollution, giving air to the saturated surrounding fabric (action no. 8). The original rural dimension, foreseen by the Cairoli Plan, is recovered through the insertion of shared urban gardens (action no. 9). These strategies contribute to the rebalancing between natural and urbanized areas which the phenomenon of uncontrolled growth in the city had completely subverted.
A further action for the regeneration of an area of Pomigliano d'Arco concerns the sustainable arrangement for roads and mobility. This objective is arrived at through limiting the use of polluting vehicles, through the development of soft mobility (Fistola et al., 2014) with the inclusion of a cycle path, with relative bicycle rental points, and the improvement of pedestrian routes. This can also be achieved through the promotion of electric cars combined with the car-sharing solution that makes it possible to reduce the amount of cars used in the area as well as through the decongestion of the urban fabric with the rectification of existing roads and the definition of new roads and the inclusion of public car parking areas (action no. 10).
All the project strategies identified contribute to the redevelopment of the reference area, through the use of flexible solutions that can be transformed over time, in order to set up resilient planning (Colucci, 2013; Losasso, 2016)
The PUA also ultimately addresses the economic feasibility of the project. In order to calculate costs and revenues, the plan area is divided into minimum areas of intervention (Fig. 6). These compartments are assigned numbers for the sequence of the construction of the equipment and project residences, while letters are assigned to the areas where conservative restoration is necessary, i.e. the areas hosting the Cairoli Plan invariants.
The starting point for the construction process of the plan is identified in the one that has, as things stand, the largest number of vacant areas and the smallest number of existing housing units. The number of residents in the chosen sector will have to be transferred elsewhere for the demolition of the housing as has been determined. The maximum capacity of the sector following the transformation has been identified and the number of places available to accommodate the residents of the next sector in the intervention has been counted. Since the plan will be carried out through a STU and, therefore, through the integration between public and private bodies, the costs and revenues relating to the two categories are determined through the definition of tables indicating the financial analysis for each sector. The process is repeated for all the sectors as identified to obtain the overall estimate. Finally, in order to understand if the intervention is sustainable, financial verification will be carried out through the calculation of VAN and TIR indicators, with a capitalization rate varying between 6% and 10%.

6. Conclusions

In a framework of objective criticalities and increased awareness of the role that urban planning is taking on in contemporary reality, the need and urgency to provide sustainable and innovative solutions is highlighted, offering a new vision of the territory that rejects the merely representative and formal dimension.
The construction of a different way of planning, more attentive to the real needs of the territory and the community is achieved, in this research, through a methodological and applicative proposal of a dynamic process of urban planning, which involves multiple factors and actors in order to identify a participatory development strategy. In particular, emphasis is given to the final step of the indicated planning method, i.e. an operational example of an Urban Implementation Plan is shown, which acts as a repeatable model for the requalification of infra-municipal territorial areas, based on the recovery of the social dimension, through the solution of co-housing. The objective achieved by the above-mentioned example is to promote the debate on the reform of the urban planning process, through the experimentation of models of development and the design of the territory, which are able to embrace the changes taking place in society and to question the real existing problems, overcoming the limited and confusing operational codes at present in force.

References

Adger, W.N. (2006). Vulnerability. *Global Environmental Change*, *16* (3), 268-281. doi : 10.1016/j.gloenvcha.2006.02.006

Astengo, G. (1966). Urbanistica. In *Enciclopedia universale dell'arte* (Vol. XIV, pp. 541-642). Venezia-Roma, IT: Sansoni.

Bagnato, A. (1998). *San Leucio: una colonia borbonica tra utopia e assolutismo*. Roma, IT: AGRA.

Basile, G. & Esposito, A. (2009). *Storia di Pomigliano d'Arco. Dalle origini ai giorni nostri.* Napoli, IT: Comune di Pomigliano d'Arco.

Bastiani M. (1999). *Pianificazione territoriale, pianificazione partecipata.* Atelier del Futuro. Napoli, IT: Edizioni CUEN.

Benevolo, L. (1985). *Le origini dell'urbanistica moderna*. Bari, IT: Laterza.

Bravo, G.M. (1974). *Le origini del socialismo contemporaneo 1789/1848*. Firenze, IT: Sansoni.

Carbonara, L. (1992). *Le analisi urbanistiche. Riferimenti e metodi*. Roma, IT: Carocci.

Carpenter, S., Walker, B., Anderies, J.M., & Abel, N. (2001). From Metaphor to Measurement: Resilience of What to What?. *Ecosystems*, *4*, 765–781. doi: 10.1007/s10021-001-0045-9

Colombo, L. (Cur.). (2012). *Città Energia, Atti del Convegno Nazionale.* Potenza, IT: Le Penceur.

Colucci, A. (2013). Resilienza e sistemi urbano-territoriali. Approcci e strategie. *Valutazione Ambientale*, *23*, 7-14.

European Environment Agency. (2006). Annual Report. https://www.eea.europa.eu

Ferraiuolo, A. (1995). San Leucio 1843: dall'utopia al mito. In *Territorio, istituzioni, politica, economia* (pp. 73-81). Napoli, IT: Edizioni Scientifiche Italiane.

Fistola, R., Gallo, M. & La Rocca, R. A. (2014). Nuovi approcci per la gestione della "mobilità dolce" all'interno della città. I sistemi di bike-sharing. In *La città sobria* (pp. 307–316). Napoli, IT: Edizioni Scientifiche Italiane.

Frampton, F. (2008). Storia dell'architettura moderna. Bologna, IT: Zanichelli.

Ingaramo, R. & Voghera, A. (2011, 24-26 marzo). *Sperimentare un progetto per l'abitare*. [Relazione a convegno]. Abitare l'Italia. Territori, economie, diseguaglianze, XIV Conferenza SIU, Società Italiana degli Urbanisti, Torino, IT.

Itard, L., Meijer, F., Vrins, E. & Hoiting, H. (2008). *Building renovation and modernisation in Europe: state of the art review*. Delft, The Netherlands: OTB.

Jacobs, J. (2009). *Vita e morte delle grandi città.* Bologna, IT: Piccola Biblioteca Einaudi Ns.

Losasso, M. (2016). Climate risk, Environmental planning, Urban design. *UPLanD - Journal of Urban Planning, Landscape & Environmental Design, 1*(1), 219-232. doi: 10.6092/2531-9906/5039

Mangialardo, A., & Micelli, E. (2019). Condannati al riuso. Mercato immobiliare e forme della riqualificazione edilizia e urbana. *Aestimum, 74*, 129-146. doi: 10.13128/aestim-7384

Middleton, R. & Watkin, D. (1980). *Architettura dell'Ottocento*. Milano, IT: Electa.

Moccia, F.D., & Sgobbo, A. (2017). La Città Metropolitana di Napoli. In: G. De Luca & F.D. Moccia. (Eds.), *Pianificare le città metropolitane in Italia. Interpretazioni, approcci, prospettive* (pp. 289-326). Roma: INU Edizioni

Oliva, F. (2014). L'urbanistica italiana e la città europea. *Urbanistica, 152*, 5-11.

Pignataro, G. (2001). Ferdinandopoli ieri e oggi. In *Cronaca leuciana: aspettando il Duemila tra storia, arte e tradizione* (pp. 103-110). Caserta, IT: Farina.

Ragon, M. (1974). *Storia dell'architettura e dell'urbanistica moderne* (Vol. II). Roma, IT: Editori Riuniti.

Ruiu, M.L. (2015). Le nuove forme dell'abitare sociale: il co-social housing. *Sociologia urbana e rurale*, *107*, 53-69. doi: 10.3280/SUR2015-107005

Russo, M. (2015). Multiscalarità. Dimensioni e spazi della contemporaneità. *Archivio di Studi Urbani e Regionali*, 113(2). doi: 10.3280/ASUR2015-113001

Sciolla, G.C. (1975). *La città ideale nel Rinascimento*. Torino, IT: UTET.

Secchi, B. (1989). *Un progetto per l'urbanistica*. Bologna, IT: Piccola Biblioteca Einaudi Ns.

Sgobbo, A. (2018). Resilienza e rigenerazione: l'approccio water sensitive urban planning come strategia di sostenibilità urbana. *BDC - Bollettino Del Centro Calza Bini, 18*(1), 105-126. doi: 10.6092/2284-4732/6061

Sica, P. (1981). *Storia dell'Urbanistica, L'Ottocento* (4. ed., Vol.2, pp. 898-954). Bari, IT: Laterza, Collana Grandi Opere.

Stenti S. (2003). *Città Alfa Romeo. 1939, Pomigliano d'Arco quartiere e fabbrica aeronautica.* Napoli, IT: Clean Edizioni.

United Nations. (2015). Transforming Our World: the 2030 Agenda for Sustainable Development. https://sustainabledevelopment.un.org/post2015/transformingourworld

United Nations. (2016). New Urban Agenda, United Nations Conference on Housing and Sustainable Urban Development. http://habitat3.org/the-new-urban-agenda

Zevi, B. (1962). *Storia dell'architettura moderna*. Torino, IT: Einaudi.