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## Article

# Preservation and Redevelopment of Cultural Heritage Through Public Engagement and University Involvement

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**Abstract:** In recent decades, there has been a growing awareness of the importance and desirability of fostering the involvement of more actors, and in particular local communities, in the protection of cultural heritage. Since universities have long been asked to become promoters of actions aimed at increasing society's general level of well-being through interventions with cultural, social, and educational implications via technology transfer and knowledge sharing, a mutual collaboration between different researchers of the Politecnico di Torino, public administrations, and local communities has been consolidated over the last few years to provide a proactive contribution to both the preservation of cultural heritage and the social and economic development of the territories. A new educational methodology with direct and mutual collaboration between teachers and students, local communities, and policymakers was tested. The experiences conducted so far testify to the university's ability to fulfil its training, research, and "Third Mission" tasks, both by responding to the needs of the territory and by transmitting up-to-date work methodologies, disciplinary skills, attention to context, and dialogue with local communities. The work carried out, appreciated by citizens and municipal administration representatives, was able to provide hints and stimuli for new opportunities and actions to be undertaken, foreshadowing possible development trajectories of the contexts investigated.



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**Keywords:** cultural heritage; education; community engagement; Third Mission

## 1. Introduction

In recent decades, there has been a growing awareness of the importance and desirability of promoting the involvement of more actors, particularly local communities, in the protection of cultural heritage. The need to abandon a dirigiste approach to cultural heritage intervention (from the acknowledgement to the management) in favour of a participative approach, which recognises the local community as having an important role to play in activating policies for the protection of cultural heritage (tangible and intangible), is a widely debated theme in the international context to promote inclusive and dynamic actions that contribute to sustainable development and "offer long-term conservation and co-management for the good of the heritage and the good of the community" [1] (p. 3) [2]. This paradigm shift is reflected in the documents of both UNESCO and the Council of Europe. As far as UNESCO is concerned, the World Heritage Committee, in drafting the Budapest Declaration in 2002, calls on the international community to promote "the active involvement of our communities at all levels in the identification and protection of our World Heritage properties" [3], (art. 3, f). It also invites Member States to engage in communication activities aimed at increasing "public awareness, involvement and support for World Heritage" [3], (art. 4, d), recognising the critical role of communities in heritage conservation. In 2011, the Recommendations on Historic Urban Landscape identified Civic Engagement as a tool that, by involving a heterogeneous set of stakeholders and enabling them to identify the key values of their urban areas, fosters the development of "visions that reflect their diversity, set goals and agree on actions to safeguard their heritage and promote

sustainable development” [4] (art. 24) [5,6]. These concepts are taken up in the drafting of the Operational Guidelines for the Implementation of the World Heritage Convention, emphasising that the inclusive participation of local communities; indigenous peoples; governmental, non-governmental, and private organisations; and other stakeholders is a necessary condition for the sustainable protection, conservation, and management of natural and cultural heritage [7]. Similarly, in the European context, the Faro Convention (2005) affirms that states should promote a participatory valorisation process based on the synergetic collaboration of public administrations, private citizens, and associations, i.e., a “heritage community” which, according to the definition given in Article 2, “consists of people who value specific aspects of cultural heritage which they wish, in the context of public action, to sustain and pass on to future generations” [8] (art. 2).

While actions for the conservation and enhancement of cultural heritage will be all the more effective if they are the outcome of a shared process with the communities of reference, the implementation of appropriate and “quality” interventions requires the elaboration of proposals “based on feasibility and detailed studies to determine the characteristics and values of the cultural heritage, the state of conservation, the needs and opportunities, the risks and objectives of the project” [9] (p. 36). It is considered important to promote the activation of education and training activities based on real practices, capable of responding to the needs of conservation and management of cultural heritage, considering “the value attributed by each community to the cultural heritage with which it identifies itself” [8] (art. 12). Since universities have long been asked to become promoters of actions aimed at increasing society’s general level of well-being through interventions with cultural, social, and educational implications via technology transfer and knowledge sharing, they can play an essential role in this process, involving researchers, students, public administrations, and local communities in the design of projects aimed at fostering the preservation, enhancement, and exploitation of the potential of cultural heritage, considered a resource for sustainable development and quality of life [6,8,10–16]. Therefore, a mutual collaboration between different researchers of the Politecnico di Torino and local public administrations has been consolidated over the last few years in the context of educational and research activities on the conservation and enhancement of cultural heritage, focusing on vernacular architecture. To provide a proactive contribution in proposing projects to preserve both the cultural heritage and social and economic development of the territories, a new educational methodology with direct and mutual collaboration between teachers and students, local communities, and policymakers was tested. Based on the data acquired through on-site surveys and discussions among researchers of the Politecnico di Torino, citizens, and public administrations, projects were proposed according to the needs expressed by the local community. By paying specific attention to living heritage, local traditions, and the territories’ peculiarities, potentialities, and recognised critical issues, proposals were designed to improve inhabitants’ life quality and preserve local resources through technically and economically sustainable interventions.

The investigation aimed at highlighting the pivotal role of universities in both educating students through a multidisciplinary approach towards the design of the project and being the expression of an understanding of cultural heritage, its contexts, and values, in line with the thinking of Alois Riegl, who, at the beginning of the 20th century, introduced a system of values (historical, artistic, as memory, contemporary, antique, and utility value) that underpins the appreciation of assets and guides the consequent act of protection and restoration [17,18] (p. 200). Since cultural heritage is not a universally recognised “datum”, but the outcome of historical construction and the expression of times that change according to knowledge, needs, and communities, promoting the engagement of citizens and policymakers in the identification of values and needs is an indispensable prerequisite for defining possible development trajectories [19,20].

## 2. Materials and Methods

The academic activities carried out in Magnano and Romano Canavese were the occasion to experiment with an interdisciplinary teaching method based on establishing a close relationship with the local community. These activities were conducted within the framework of memoranda of understanding stipulated between the Politecnico di Torino—Department of Architecture and Design and the Municipal Administrations (2014, 2018), with the aim of promoting fundamental and applied research and encouraging the generation and development of knowledge-based processes through interaction with public and private actors operating in the territory, contributing to the creation and transfer of knowledge. The parties involved in the protocol undertake to cooperate in training, research, and “Third Mission” activities on topics of common interest. In this specific case, the parties agreed to jointly invest in the identification, promotion, and development of initiatives and research programs aimed at sharing experiences and information concerning the cultural heritage of the municipalities of Magnano and Romano Canavese, respectively, to enhance the territories and their resources.

The multidisciplinary ateliers “Restoration Project” and “Compatibility and Sustainability of Architectural Restoration” of the master’s degree course “Architecture for the Sustainable Design” require students, through the coordination of the disciplines of restoration, surveying, and representation, to develop a project for the restoration, recovery, and valorisation of an architectural artefact based on a real situation, developing issues related to conservation, consolidation, regulatory compliance, and the design of new compatible functions for the redevelopment of the artefact and the urban environment in which it is located. The proposed activity is motivated by the desire to verify the possibility of conducting didactic experiences to establish moments of exchange, meeting, and collaboration between the sectors of advanced research in the field of heritage conservation and valorisation and local realities. Assuming that the students would be able to analyse the built heritage and establish an effective dialogue with local stakeholders, they were asked to draw up a project for the conservation and reuse of built heritage of cultural interest and its surroundings based on knowledge of the physical and cultural peculiarities of the property and its context, experimenting with approaches that include a structured critical analysis at different scales of heritage and comparison with the various actors [12,13,16,21].

As underlined by Oladeji, Grace, and Ayodeji, UNESCO has always been at the forefront of advocating for a bottom-up approach in heritage practices rather than top-down interventions by governments. Moreover, active participation entrenched in social connotation is a prevailing feature of 21st century democratised cultural heritage practice (Chitty, 2017) [22] (p. 2). The adoption of a bottom-up approach also led to cultural and social sustainability in heritage management. With reference to the “Guideline document for the quality of architectural restoration projects” recently elaborated by members of the scientific society SIRA, “co-evolution requires a holistic vision and an integrated approach that considers the interconnections between cultural heritage, natural environment, social and economic context. It means considering cultural heritage not only as an object to be preserved, but as a dynamic actor that can contribute to change and sustainable development” [23] (p. 10), refs. [16,24,25].

Community participation helps communities strengthen their intellectual capacity and intricate link to communal heritage physiognomies, fostering social cohesion, inclusion, bonds, trust, and linkage between the government (at the top) and other categories of people at the grassroots level (at the bottom). To help local communities and students face reciprocal viewpoints and challenges, several didactic frameworks have been investigated.

The selected reference model is the iterative application of the “keying, framing, modelling” method proposed by Kroeber (1963), Shils (1981), and Schwartz (2018) [26]. As the pedagogical model was derived from the field of social studies, the ateliers faced several methodological challenges in terms of interacting with external stakeholders, managing the complexity of a conservation project, and educating the students to become responsible social agents in preserving cultural heritage and to answer the question about today’s

reasons for conservation versus the creation of new architectures. This method was chosen and tested as it is considered the most appropriate pedagogically, allowing an embrace of the spectrum of the student's experience from the knowledge phase to that of synthesis and proposal, which requires a continuous comparison with stakeholders. The interdisciplinary approach developed in the two courses was designed to overcome the dichotomy of teaching and learning conservation through the iterative process of translating the theoretical framework into a project to practice the interlocutory skills of critical thinking as an effect of the deuterio-learning approach, according to which one simultaneously learns what one is supposed to learn but also something extra about the context and the world in which what one is learning occurs (Bateson, 1973) [27]. The "keying, framing, modelling" pedagogical model was taken as a reference to answer the questions mentioned above with reference to the fundamental concept of "value" as the keyword driving the fictional projects proposed by the students to the community, composed by citizens of different ages living and working in Magnano or Romano Canavese.

Each person orients their actions based on the meaning attributed to tangible and intangible assets [18] (p. 200), [19]. Preliminary recognition of values in intervention on the existing is essential, as it determines the way of working on it; the conservation and recovery of heritage find justification in the different values attributed to it. [18]. In fact, these activities conducted in collaboration with the municipal administration and the community were aimed at triggering a valorisation process, following Article 6 of the Code of Cultural and Landscape Heritage [28], to promote knowledge, understanding, and the use of cultural heritage in order to ensure its best public enjoyment, thus promoting a sense of identity and belonging to one's history and culture and contributing to the economic and social development of the territory.

The first challenge was related to the definition of what is valuable for those two territories; in particular, the students were guided by professors of the different disciplines involved in the ateliers to answer relevant questions (such as (a) what is "value" for the students and what is "value" for local communities?; (b) at what scale can the identified "values" be determined and communicated to local communities?; and (c) how to engage with local communities) aimed at identifying and communicating values (cultural, historical, landscape, memorial, affective, and utility) to the conservation and reuse projects. The classes comprised about 40 students from different Italian regions and some from abroad. The course consisted of 20 h of lectures and 40 h of fieldwork, with the aim of enabling students to carry out a professional activity and to acquire valuable skills for managing the project at different scales with a multidisciplinary approach.

Students were therefore asked to address the problem of the conservation and valorisation of historical-environmental heritage from the territorial to the architectural scale, experimenting with different approaches for a critical analysis of the existing, which made it possible to highlight the characteristics and specificities of both the territory and the built environment together with the resources and criticalities. The students were asked to reinterpret the identified "symbolic" values and to signify them (keying) into a preservation project able to frame how the local community identifies itself (framing) towards a model of a sustainable and compatible development project (modelling) of Magnano and Romano Canavese. The "keying" activity was guided by the teachers through continuous reviews based on critical dialogue and constructive multidisciplinary discussion, coupled with the dialogue established by students with the local community during on-site visits. The "framing" moment helped to reduce the complexity in meaning by selecting the most appropriate information and guided students in organising ideas and principles to be defined and interpreted. This provides a better understanding of the relationship between community participation in managing heritage resources and better communication of both the identified values and the enhancement project's objectives. "Framing" was conducted by combining theoretical lectures and continuous classroom review. "Modelling", on the other hand, took place through classroom discussions based on work produced by the students.

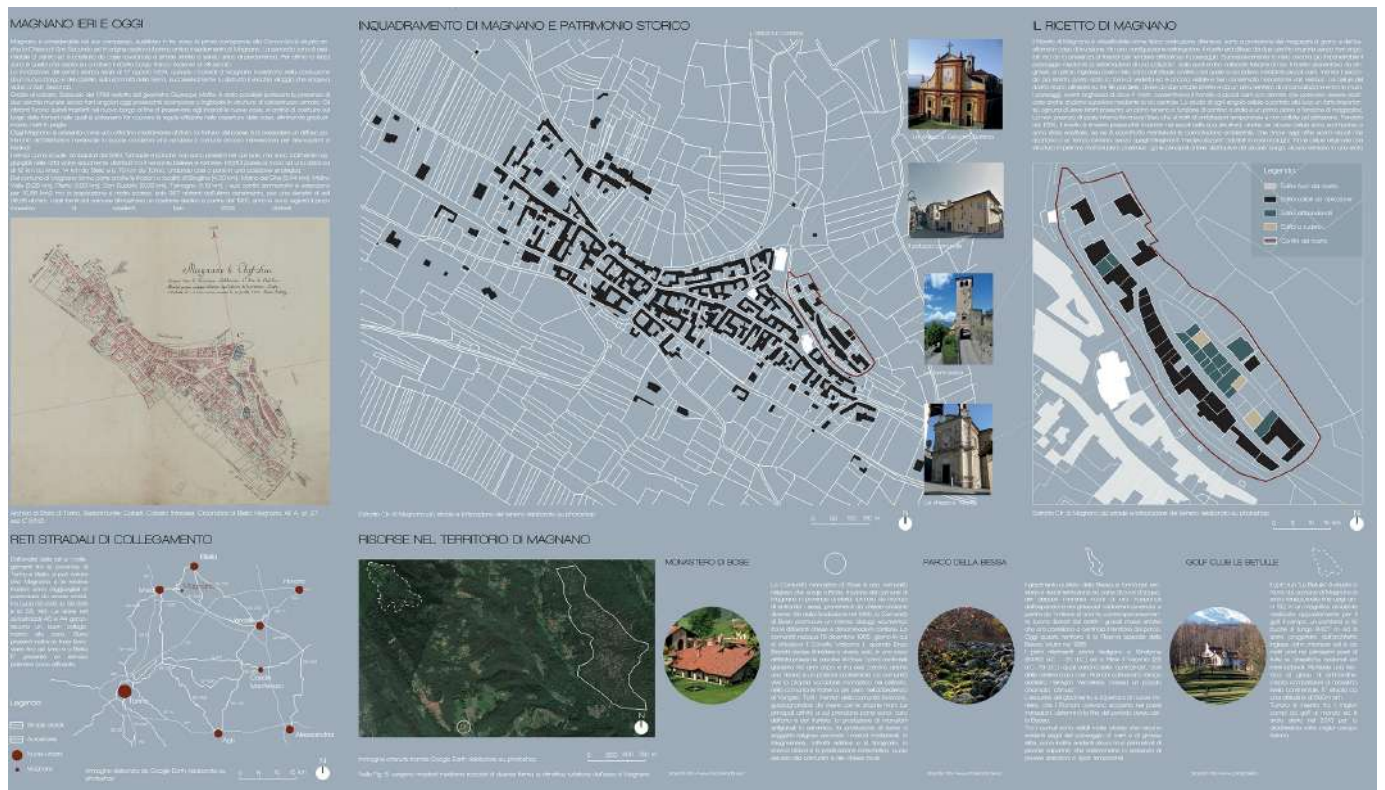
The pedagogical model was used to teach a critical way of reading the built heritage, its complexity, multidimensional values, and relationship with the context, as well as its reuse potentialities, its intrinsic values, and the relationships woven with the territory, to promote social, cultural, and economic development by leveraging the potential of the site.

A second challenge related to defining what “reuse” is in a conservation project. If reuse is critically linked to what is existing and is not a priori data, the students were asked to think how architectural language can translate the history and its stratifications into a contemporary preservation project that necessarily refers to the conservation and compatible reuse of an artefact as the result of its activity.

The ateliers started with a public debate in which local policymakers described their vision for both the cases of Magnano and Romano Canavese, followed by a shared visit to the villages. The visit revealed the presence of a diversified set of assets, both tangible and intangible, that constitute “material testimonies with civilisation value” [29], as well as a diffuse heritage consisting not only of architectural, historical, and cultural emergencies of recognised value but also of assets linked to material culture that represent the identity features of a community. The visit also involved artefacts of rural origin located in the historic centre, mainly in a state of abandonment, selected by the municipal administration for recovery and reuse projects, and made available by the owner population (mostly middle-aged people who inherited these assets from their parents and grandparents) for study and analysis by the students. Citizens were interested in the development of projects aimed both at enhancing the cultural landscape heritage that characterises their area and at preserving and restoring the built heritage that has long been abandoned, causing decay.

The focus of the public stakeholders was on economic and tourism development in the territory through an integrated enhancement project of their cultural heritage and their networking through the creation of new tourist-cultural itineraries. The primary role of the students was to act as mediators between private owners, the territorial vision of policymakers, local legislation, and conservation principles, standards, and best practices. In doing so, their role as social agents was critical in recognising cultural heritage as an “extension of the memorial” [20] (p. 145) and the place from which the community can reconnect to its past through the historical memory triggered by a project that can build a relationship between the population, the landscape, the territory, and sustainable development. More specifically, students became the primary agents of the process of heritage being acknowledged as cultural heritage to protect, save, and enhance, helping them to acquire more awareness of the principles of individual and collective responsibility declared by the Faro Convention [8] for its transmission to future generations.

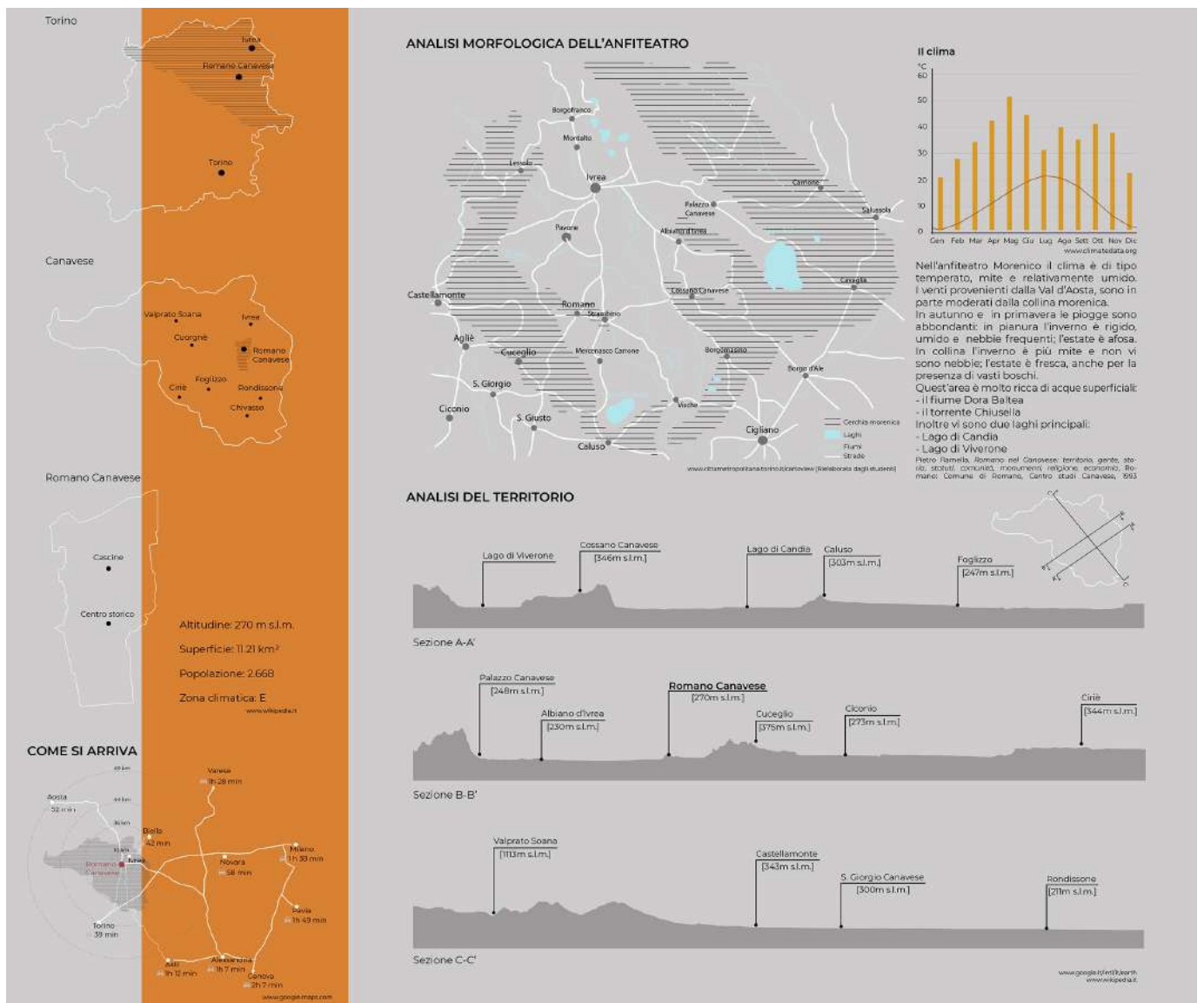
Firstly, and as part of the “keying” step, the students conducted a historical and territorial analysis of the tangible and intangible assets of Magnano and Romano Canavese through the study of direct and indirect sources to understand which values were the primary drivers of the preservation project (Figures 1–5). The study involved a series of in situ visits and surveys with the involvement of the communities to define a shared masterplan of the local cultural heritage system. The survey, based on previous teaching experience, was therefore articulated on several levels, starting with an analysis of the morphological characteristics of the area, the town’s plain volume features, its relationship with the landscape, and the identification of detracting features and elements, and then moving on to the architectural scale. At this stage, the main challenges among the students were mainly related to setting a common understanding of the concepts of social and historical memories, community and personal identities, values, landscape, restoration, and conservation principles, as well as intangible resources related to local traditions, customs, ancient crafts, territory specificities, historical/cultural and enogastronomic traditions (food and wine products related to the territory), events, and festivals related to popular culture.



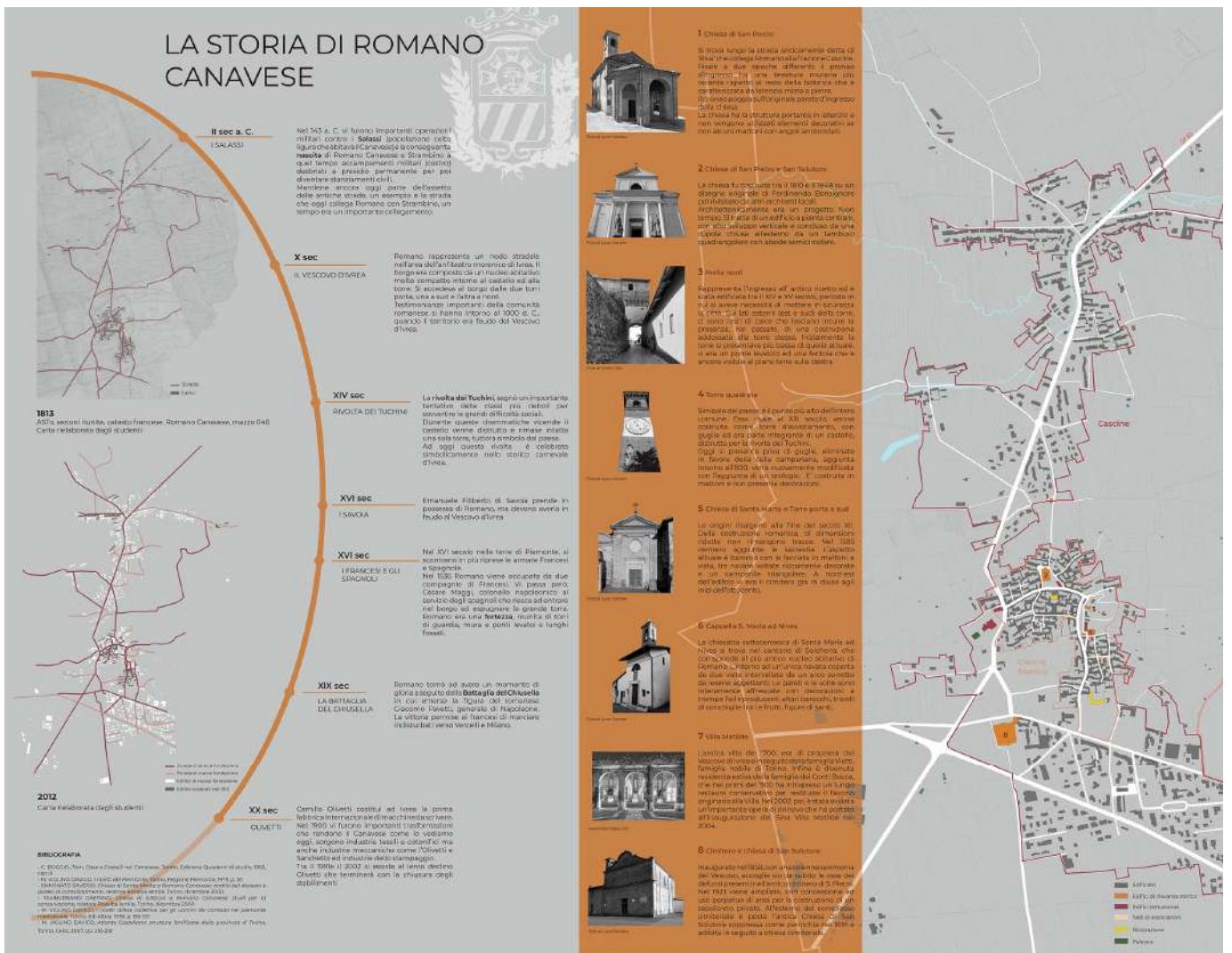
**Figure 1.** Territorial analysis of Magnano. This excerpt provides some information about the cultural heritage, the urban fabric of the historic centre, accessibility, and landscape resources in Magnano territory.



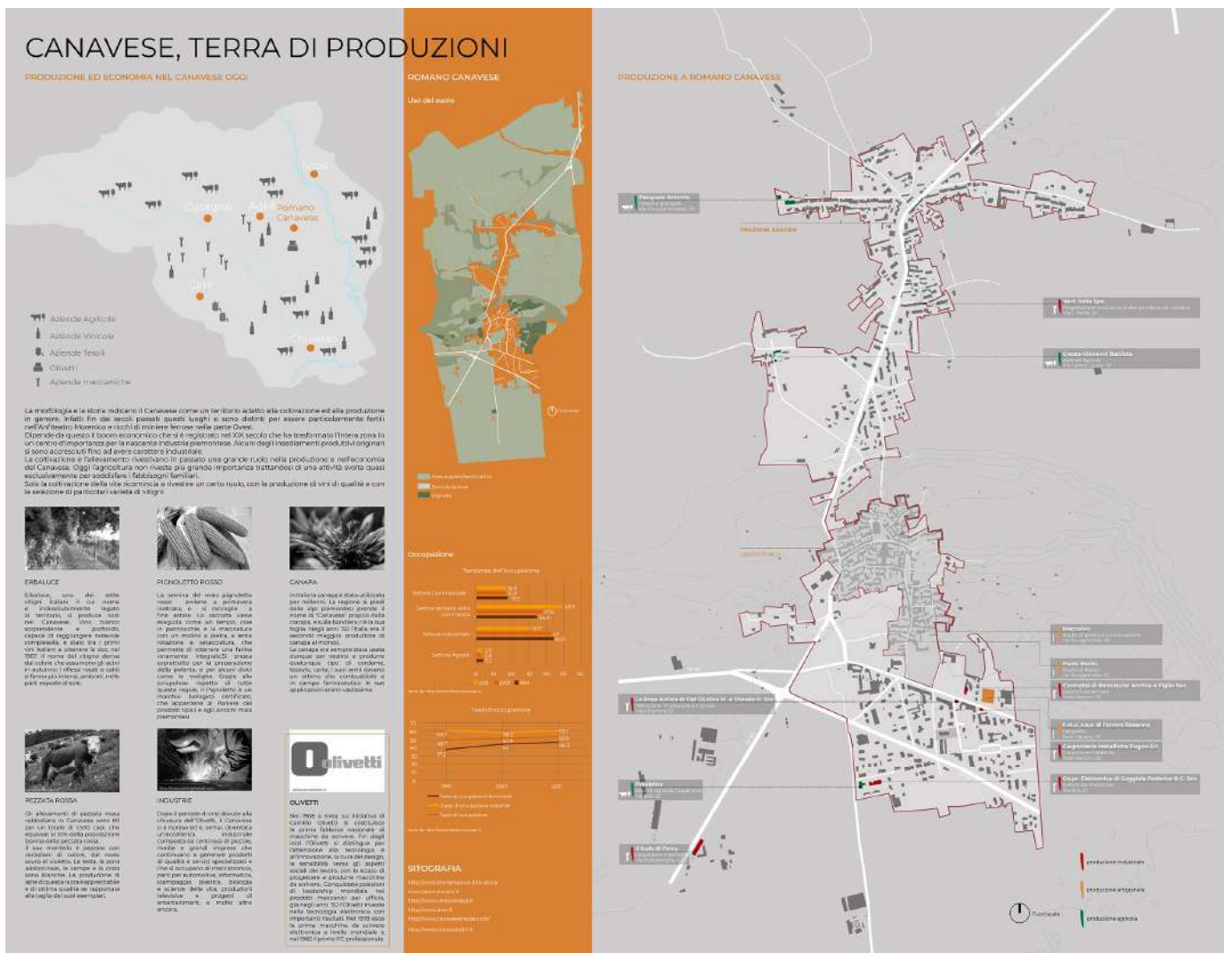
**Figure 2.** Morphological and territorial analysis of Magnano. The table identifies land use, water resources, accessibility, built heritage, and services.



**Figure 3.** Territorial analysis of Romano Canavese. This excerpt provides some information on the morphology of the Canavese territory with reference to the morainic amphitheatre and highlights some territorial and demographic data as well as data on accessibility and travel distances.



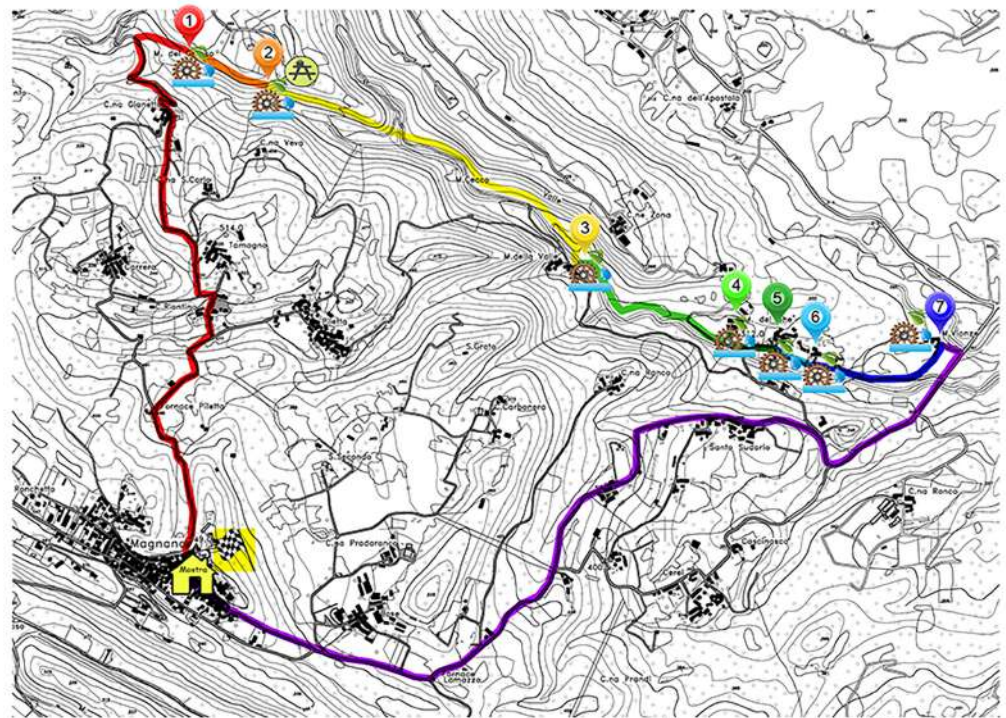
**Figure 4.** Historical analysis and architectural heritage of Romano Canavese. The table illustrates the historical events that have affected the municipality of Romano Canavese and the architectural heritage in the historic town centre.



**Figure 5.** Analysis of the cultural assets of Romano Canavese. The table identifies the production and agri-food resources of the municipality of Romano Canavese.

Once the main guidelines were settled, the students were divided into small groups of three/four to develop a detailed conservation project within the master plan to integrate the architectural heritage case studies into a recognised overall system (framing). The development of the restoration and reuse project, elaborated from analysis of the state of conservation and decay, therefore took into account not only the requests of the owners that emerged during the various discussions conducted independently during the students' inspections but also the requests for conservation and preservation, along with those of compatibility and sustainability linked to a reuse project that would take into account the resources and values identified within the territory.

The proposals elaborated by the students (modelling) are not limited to the architectural scale alone but also identify actions on a territorial scale aimed at enhancing the different assets identified through their networking. In this sense, the development of thematic itineraries (Figures 6 and 7) contributes to the preservation and enjoyment of the cultural heritage represented not only by individual architectural artefacts but also by the set of tangible and intangible assets connected to them. The valorisation and networking through punctual interventions calibrated on the resources and needs of the territory can, in fact, trigger a critical process of promotion of the local cultural heritage capable of creating a virtuous circle of mutual valorisation of the resources and potential present in the territory.



Estratto da carta tecnica regionale in scala 1:10,000, riscalato in 1:20,000

#### Mulino Rizzo (4)

Il Mulino Rizzo risale al 1870, esso era composto dal mulino, da una stalla e dalla legnaia. Il gruppo di cascine sorge a circa 100 metri a nord del fiume. Del mulino non si conserva più nulla se non la roggia (un canale lungo il quale scorreva l'acqua) retrostante la cascina principale ove il mulino aveva la possibilità di sfruttare la forza dell'acqua per girare. Presso il gruppo di cascine è ancora presente un forno ancora funzionante. Dietro la roggia è presente una sorgente d'acqua.

Fonte orale



14 - Mulino Rizzo, stalla, fotografia digitale, data 3/3/2013, Nikon Coolpix P100



16 - Mulino Rizzo, ilettoia, fotografia digitale, data 3/3/2013, Nikon Coolpix P100



17 - Mulino Rizzo, forno, fotografia digitale, data 3/3/2013, Nikon Coolpix P100

#### Mulino del Ghè (5)

Il mulino del Ghè risale al 1879. Questo complesso di cascine ospitava un mulino del quale non si conservano resti, tranne la roggia che permane in tutti i mulini e caratterizza il loro meccanismo. La roggia presso questo mulino è caratterizzata da una brusca discesa al fondo della quale c'è una vasca di raccolta dell'acqua. In corrispondenza della fine della discesa sono presenti dei resti metallici dove probabilmente si innestava un mulino. Il proprietario di questo complesso conserva nel giardino una macina di un mulino portata a valle durante l'alluvione del 1994. Questa macina veniva utilizzata per macinare la canapa.

Fonte orale



18 - Mulino del Ghè, roggia molinaria, fotografia digitale, data 3/3/2013, Nikon Coolpix P100



20 - Mulino del Ghè, discesa della roggia molinaria con bacino di raccolta dell'acqua, fotografia digitale, data 3/3/2013, Nikon Coolpix P100



19 - Mulino del Ghè, complesso, fotografia digitale, data 3/3/2013, Nikon Coolpix P100

**Figure 6.** Proposal of itineraries for the enhancement of the widespread heritage of mills in the Sorda valley near Magnano. The excerpt identifies possible routes to connect and network the hydraulic mills present in the area that were built between the 18th and 19th centuries.



### 3. Results

The “keying, framing, modelling” methodology was used within the master’s degree course in Architecture at the Politecnico di Torino as part of the ateliers “Restoration Project” and “Compatibility and Sustainability of Architectural Restoration” during the 2012–2013, 2014–2015, and 2018–2019 academic years.

The activities were conducted in two small towns of medieval origin at the base of the Serra Morenica in Piedmont, in the municipalities of Magnano and Romano Canavese. The municipal administrations, which supported the initiatives, recognised their importance and contributed to defining local needs to enhance tangible and intangible heritage through a multi-scalar and multi-dimensional shared project. The administrations also fostered the activation of a collaborative relationship with local communities and the owners of the buildings taken as case studies and made available archive material (historical maps, cadastral drawings, and community maps) and publications related to the historical heritage of the investigated territories.

The ateliers were conducted using a multidisciplinary approach and methodology through a continuous and supervised dialogue between different competencies, with a progressive transition from the cognitive to the design phase. Through the coordination of the restoration, geomatics applied to cultural heritage, and survey and representation disciplines, the first step was to analyse not only urban centres but also their wider municipal territory in order to identify their characteristics, specificities, and resources, the valorisation of which can significantly contribute to the preservation of elements that are significant evidence of knowledge, traditions, customs, and habits of the past, otherwise destined to abandonment and rapid decay.

The study and analysis of the territory and its direct and indirect sources together with continuous dialogue with the municipal administration and the local population (citizens living and working in those sites) made it possible to identify the resources characterising the cultural heritage, recognise its value, and highlight the problems and criticalities that limit its full appreciation. Figures 1–3 show the results of the cognitive survey activities, illustrating the geomorphological characteristics of the sites examined and their accessibility. Architectural assets were identified and examined, as well as landscape, cultural, agri-food, and enogastronomic assets, which constitute the territory’s identity features, in respect of which proposals have been drawn up for their conservation, recovery, valorisation, and use (Figures 4 and 5).

The protection of such a rich and varied heritage has led to the development of projects that, starting from recognising the potential of material and immaterial elements, can activate processes of protection and valorisation. The latter, as emphasised by the Code of Cultural and Landscape Heritage [28], represents the means to pursue not only an increase in the enjoyment of cultural heritage but also to promote its knowledge and, above all, improve its current and future conservation conditions.

To establish a territorial network, including an inter-municipal one, to connect the identified assets, the students, in the first instance, drew up project proposals for hiking routes and thematic tourist itineraries, bringing together the resources identified in the territories analysed.

The hiking trails, highlighting the “excellent points in a plot to travel” [30] (p. 237), were designed to encourage and facilitate the discovery and/or recognition of different resources and the attribution “of [...] value to the contexts in which the objects are located” [30] (p. 237), crossing the boundaries of single sites and involving a broader landscape. Figures 6 and 7 illustrate some of the thematic itineraries proposed. These are hiking routes that, taken on foot, on horseback, or by bicycle, pursue a twofold objective: on the one hand, to enable visitors to deepen their knowledge of the territories crossed, their history, and their traditions, and on the other hand, to stimulate their revitalisation by encouraging the acquisition of the necessary resources and guaranteeing their care and transmission to future generations.

Subsequently, individual artefacts were intercepted as testimonies that define the identity features of these places and the community that inhabits them for the elaboration of a restoration project. These projects were carried out starting from the study of what emerged from the on-site survey, the dialogue with the public administration and the citizens. As far as Magnano is concerned, the municipality shared with us the community maps (Figure 8) drawn up by the inhabitants as part of the “Programma di Cooperazione Transfrontaliera Interreg Italia-Svizzera” [31] carried out between 2013 and 2015. They allowed for better and more precise identification and localisation of resources and detractors but also clarified “the role of identity values and the territorial rootedness of local cultures” [32] (p. 129), as well as the relationships that bind citizens to their territory and to the assets that characterise it. It is not possible anymore “to deal [only] with environmental and cultural emerging assets, but it is necessary to [. . .] go into a new field, still to be explored, where the “expert knowledge” of the different disciplines is contaminated with ‘common knowledge’, of those who daily inhabit the sites” [33] (p. 3).

It emerged that there are not only ‘monuments’ of recognised value but also a widespread heritage represented by the numerous buildings in the historic centre and the remains of industrial archaeology. As Cesare Brandi states in addressing the topic of safeguarding the historic centre of a small town, if “in an ancient city the church, the palace, the square are preserved, and all the rest is destroyed, it will be like having cut a leg and replaced it with a mechanical limb” [34] (p. 132). It is, in fact, essential to implement an overall policy aimed at enhancing a broader set of cultural, material, and immaterial legacies, which, although fragile, characterise and define the genius loci and could be appreciated by citizens and tourists. It was therefore decided to design the reuse and enhancement proposals taking into consideration both the vernacular architecture and the needs of insiders (those who habitually live in the places and take care of them) and the identified cultural assets, which, arising the interest of outsiders (such as tourists), could contribute to acquiring the economic resources necessary to guarantee the conservation of the assets over time.

Projects were elaborated to promote the appropriate and renewed use of selected buildings through specific interventions that, by accompanying them in their evolution, intended to make them capable of responding positively to current users’ needs. The necessary changes were addressed and designed according to conservative requests arising from ascertaining the value of the built heritage [35]. Therefore, in-depth study of the architectural artefacts was first undertaken. The study of their history; analysis of the transformations they have undergone over time; a geometric/architectural survey; analysis of their architectural features, construction techniques, and materials (Figure 9); and their preservation status were performed (Figure 10).

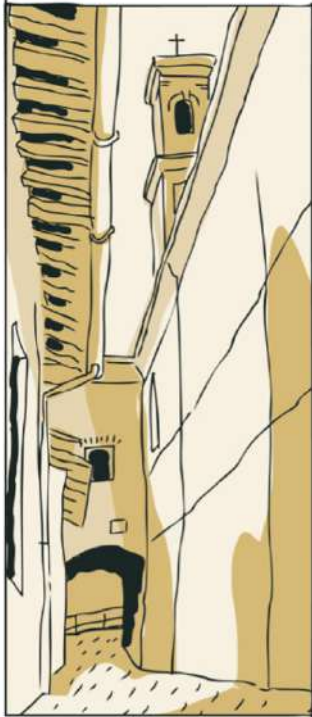
Subsequently, proposals were made to promote the “resignification” of these assets through interventions that, by shaping, transforming, and making them capable of meeting the new potential users’ needs, could both foster the restart of the preventive-maintenance process that ceased in recent years and give them back their lost vitality [36] (Figure 11). During the design of the projects, particular attention was paid to compatibility and sustainability aspects. As highlighted by Mario Dalla Costa, the conservation and reuse interventions should in fact represent an adaptation of the buildings to new needs through the aggregation of structures that, “indispensable to the new function, [...] [could give] a formal meaning and material, as well as a functional, characterisation to the differences introduced in the pre-existing context” [37] (p. 113). Figures 12–15 illustrate the reuse projects developed by the students with the intention of pursuing the objectives of conservation and compatible reuse of the assets while ensuring respect for the historic material and the legibility of the interventions.



È BELLO PASSEGGIARE PER LE VIE SILENZIOSE DI MAGNANO. CHI CI È NATO RITROVA I RICORDI DI UNA VITA; CHI CI È VENUTO A VIVERE SCOPRE OGNI VOLTA UN'ATMOSFERA SOSPESA, FUORI DAL TEMPO.



CERTO, NEGLI ULTIMI DECENNI IL PESE SI È SPOPOLATO; MOLTE CASE SONO CHIUSE E ALCUNE ADDIRITTURA FATTISCENTI. UN VERO PECCATO.



LA CHIESA DI SANTA MARTA È STATA COSTRUITA NEL '500 E PER UN PO' È SERVITA DA CHIESA PARROCCHIALE. UN TEMPO ERA DEDICATA AI SANTI SECONDO E BIAGIO. ANCORA OGGI È LA CAPPELLA DELLA CONFRATERNITA DI SANTA MARTA.



IL GRANDE PRATO DAVANTI ALLA CHIESA È UN POSTO MERAVIGLIOSO; UNA SPECIE DI PARENTESI VERDE TRA LE PIETRE DEI MURI. IL LUOGO PERFETTO PER INCONTRARSI, GIOCARE, FERMARSI A RIPOSARE UN PO'. GUARDANDO LA CHIESA, SULLA DESTRA C'È UN MURAGLIONE, IL SIRULIN; SOPRA SI TROVA LA TERRAZZA PANORAMICA DA CUI SI ACCEDA AL RICETTO. È SOLO UN MURO, CERTO, MA PER CHI VIVE QUI SAREBBE DIFFICILE IMMAGINARE IL PAESE SENZA QUELLE PIETRE, POSATE UNA SULL'ALTRA TANTI SECOLI FA.



QUELLA CHE SI VEDE QUI A SINISTRA, IN PAESE VIENE CHIAMATA "LA CASA DEL COLONNELLO". È UN VILLINO COSTRUITO NEGLI ANNI TRENTA E SECONDO MOLTI DETURPA IL PROFILO ARMONICO E UNIFORME DELLE ANTICHE CASE APPOLLAIATE SULLA COLLINA DEL RICETTO. IN PIÙ (PECCATO CAPITALE!) LA SUA TORRETTA SUPERA IN ALTEZZA LA CIMA DELLA TORRE.



LA CHIESA PARROCCHIALE DI MAGNANO È DEDICATA A SAN GIOVANNI BATTISTA. È STATA EDIFICATA NELLA SECONDA METÀ DEL XVII SECOLO, MA HA ACQUISTATO IL SUO ASPETTO ATTUALE NEI PRIMI DECENNI DELL'800, QUANDO È STATA RITOCCATA LA FACCIATA.



UN ALTRO MURO, MOLTO MENO AMATO, È QUELLO CHE SOSTIENE IL RICETTO. NEGLI ANNI '60, PER EVITARE SMOTTAMENTI E DANNI AL CENTRO ABITATO E AL RICETTO, È STATO RINFORZATO. IL RISULTATO È UN BEL PUGNO IN UN OCCHIO. SAREBBE BELLO RIPRISTINARE L'ASPETTO ORIGINALE (OVVIAMENTE SENZA TRASCURARE LA SICUREZZA).

**Figure 8.** Extract from the community map drawn up by Andrea Della Fontana. The image highlights the resources and detractors identified in the Magnano area. These maps allow us to understand the role of identity values and the territorial rootedness of local cultures, as well as the relationships between citizens and their territory (Mappa di comunità di Magnano, <https://osservatoriobiellesepaesaggio.org>).





Figure 10. Decay analysis. The table highlights the state of conservation of the rural artefacts under study, and for each decay identified, proposes a compatible restoration intervention.

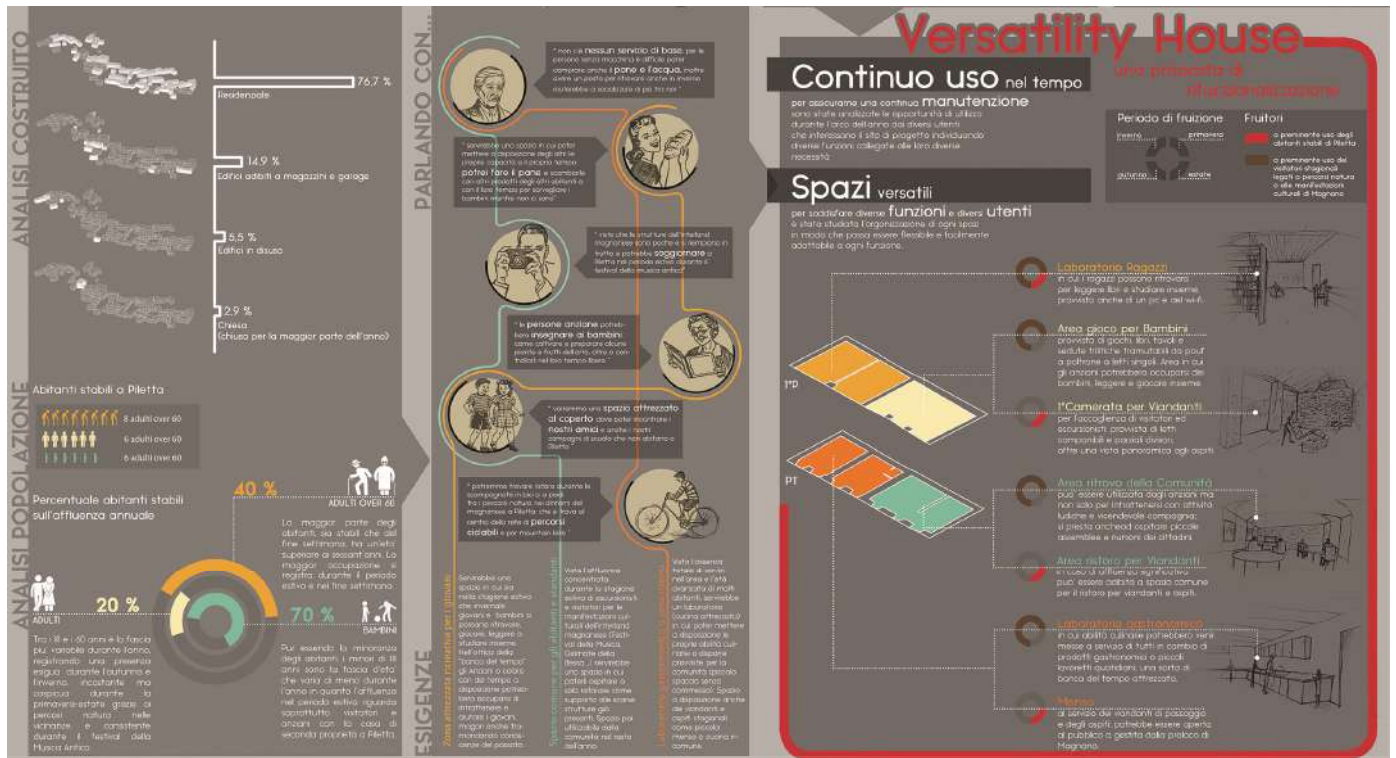


Figure 11. Demand framework expressed by the inhabitants of Piletta, hamlet of Magnano. The excerpt highlights the current users' needs and proposes compatible and sustainable reuse interventions.



Figure 12. Proposal for a reuse project of architectural heritage in Piletta, Magnano. Plans and facade.

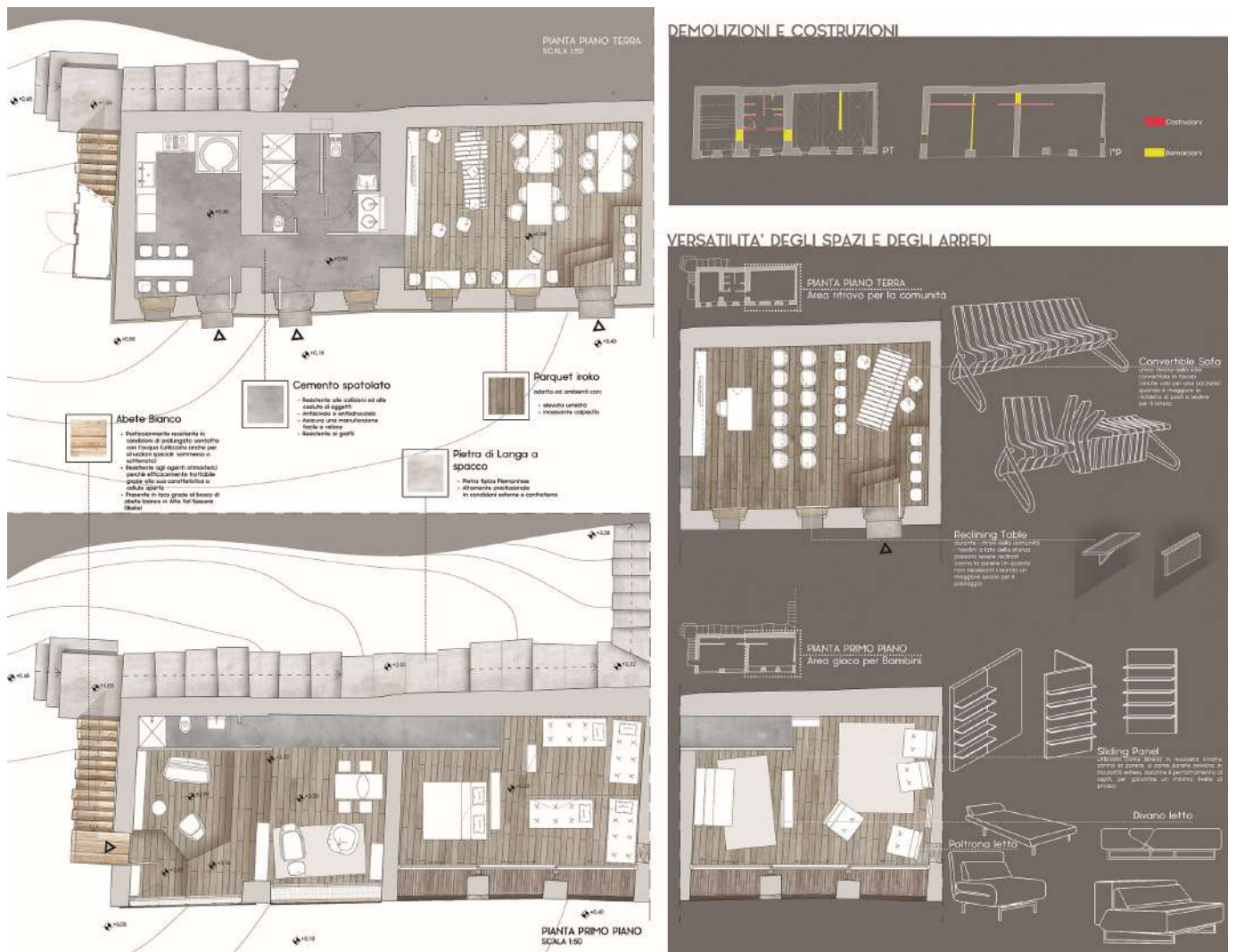
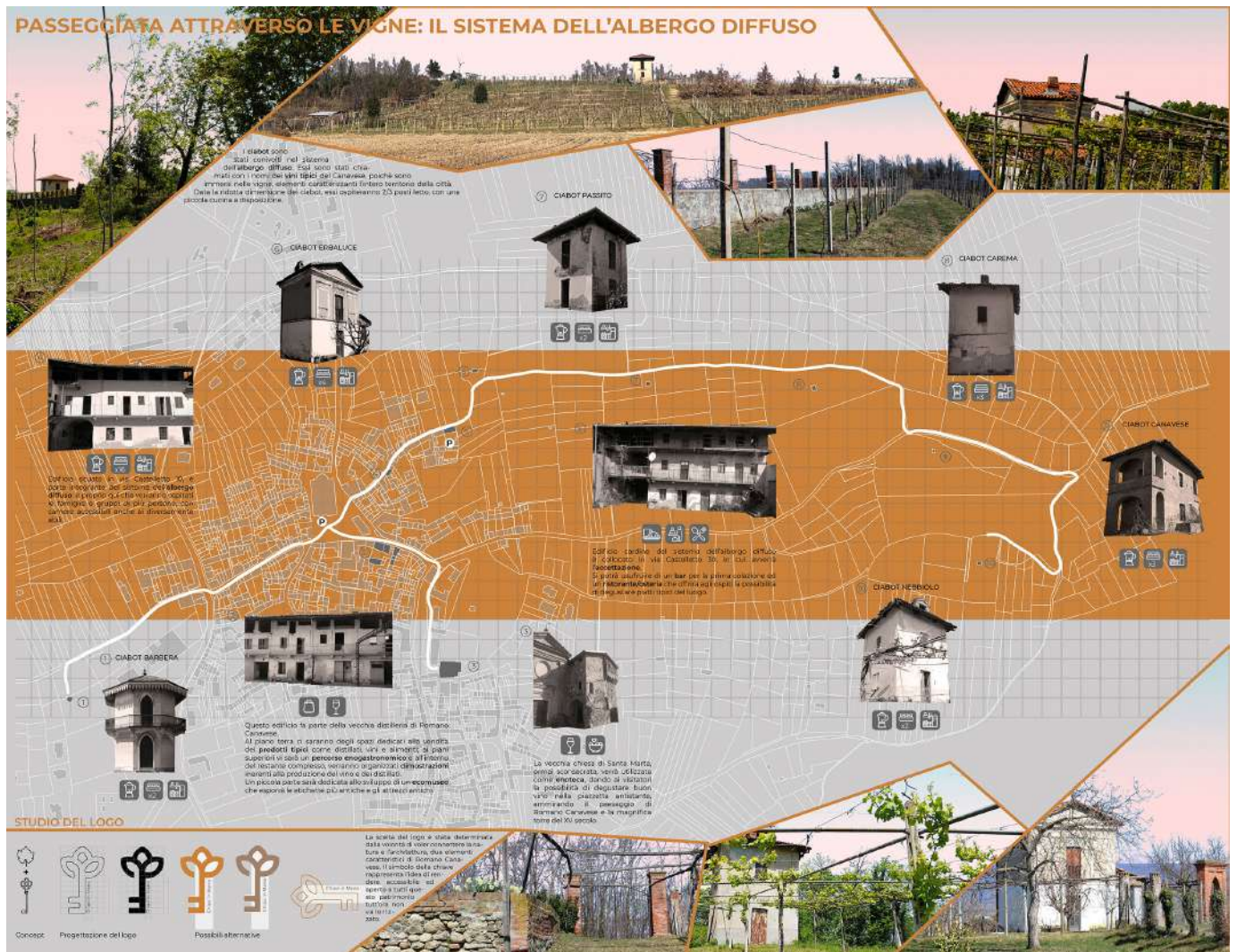
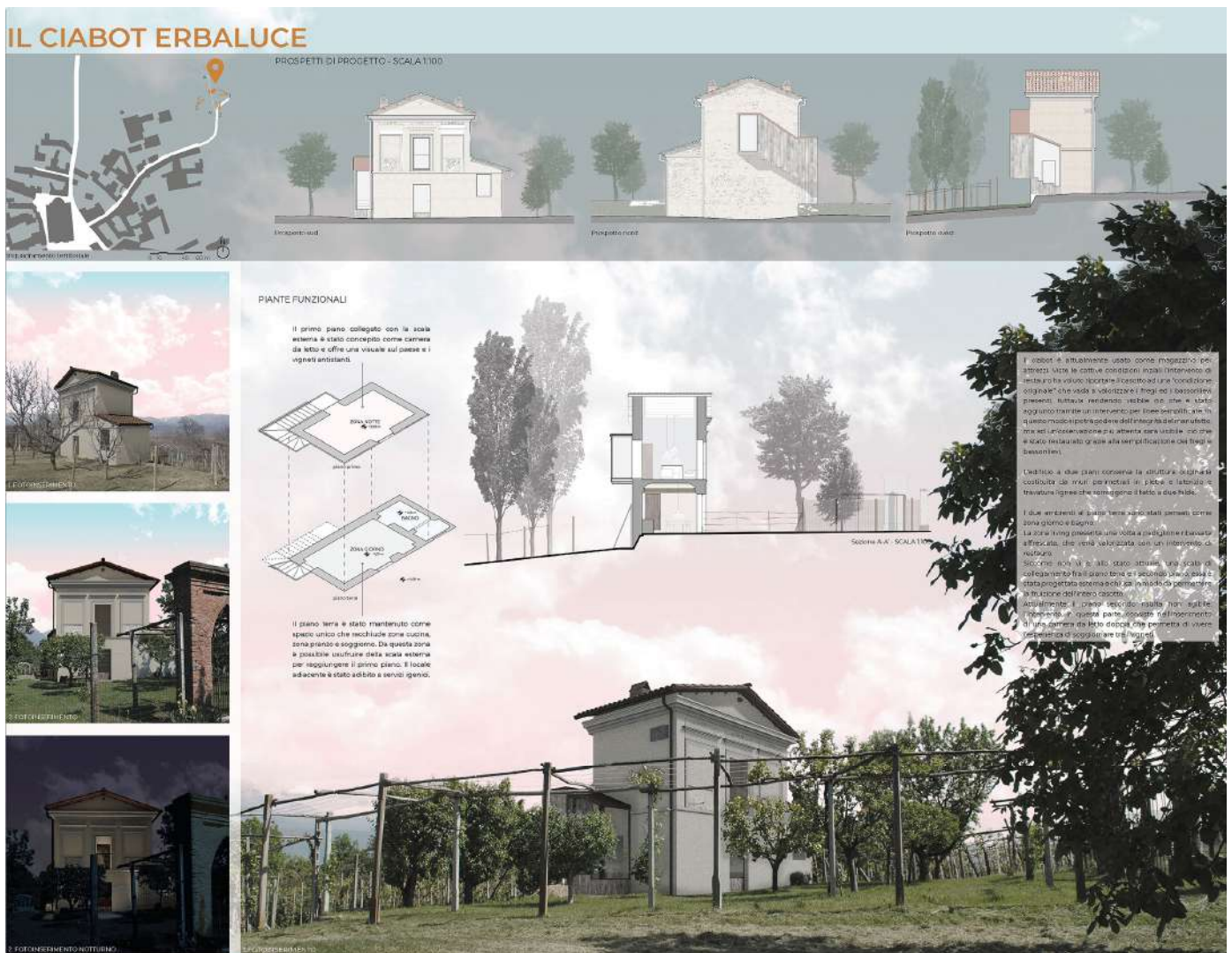


Figure 13. Proposal for a reuse project of architectural heritage in Piletta, Magnano. Plans and constructive details.



**Figure 14.** Metaproject for the enhancement of vernacular heritage in Romano Canavese. The table identifies a new itinerary aimed at valorising the “ciabot” in the vineyards and intercepting the case study.



**Figure 15.** Proposal for a reuse project of vernacular heritage in Romano Canavese. Renderings and landscape simulation.

The ateliers ended with a shared presentation of the students' works in front of a representative of the Ministry of Cultural Heritage and Activities, followed by a public debate, which was a final moment of checking and critical discussion of the driven cultural mediation process. Lastly, the results of the activities carried out and the project proposals were illustrated to the stakeholders through specific seminars and exhibitions (Figure 16) [38]. In the case of Magnano, the outcome of this choral work was shared through the preparation of two publications in digital version, which remain as a tribute to the administration and community of Magnano, and the film "Magnano e la sua gente", a documentary made using the iconographic material provided by the population itself [38]. The administration made the publications available on institutional websites, thus allowing communities and users to view the students' work.

As far as the didactic experience is concerned, the students learned the use of innovative methodologies and tools for surveying, they learned intervention techniques, they were able to conceive and correctly represent restoration and reuse interventions, and they were able to express their vision for the future of Magnano and Romano Canavese. The revival of local traditions, attention to the specificities of the territory, and the recovery of the vernacular architecture constitute a starting point for the development of conservation and enhancement projects in which the new generations are called upon to intervene.



**Figure 16.** Posters of the event for the presentation of the outcomes of the ateliers to the community. The events, which took place at the Polytechnic of Turin, were attended by the mayor of Magnano, the degree course supervisor, and teachers and students of the ateliers, who presented and discussed their project proposals and graphic designs as outcomes of their choral and critical work. The events were also an opportunity to present the e-book publication that illustrates all the students' work.

#### 4. Discussion

As stated by Icomos, “education and training are fundamental to meeting the multi-faceted demands of cultural heritage conservation and management” [9] (p. 53), and they directly impact on the achievement of quality outcomes in the interventions. Since “future conservation architects, building conservators and other practitioners should have training opportunities and be taught the following: good survey skills; techniques of interventions and valorisation; and analysis and development of conservation proposals” [9] (p. 55), the activities carried out aimed at promoting the acquisition by students of an appropriate methodological approach, necessary for the development of quality projects and capable of involving the community in the process of defining and managing cultural heritage.

Taking up the sociological concepts described by Barry Schwartz [27] (pp. 36–37), reinterpretation of the identified values through the three phases of “keying, framing and modelling” places the student/mediator in a preferred perspective position providing a complete and sophisticated overview concerning the involved stakeholders. The first phase (keying) is identified with the territorial analysis, the second phase (framing) corresponds to the data interpretation for the preservation project, and the third phase (modelling) can be identified as the one in which the students translate their analysis into a project proposal. As per expectations, the most critical stage is the second one, as the framing process

implies using all the taught paradigms to understand and investigate the boundaries of the conservation and reuse project [39] (p. 17). This process is the critical translation of the theoretical framework into design practice, where the selection process is the most difficult to communicate through the preservation project [39] (p. 22).

The detailed reading and analysis of heritage on a territorial and architectural scale, the debate with users of the assets, and the interpretation of the data allowed the students to highlight the characteristics and specificities of both the territory and the built environment, leading to the elaboration of proposals aimed at promoting the redevelopment of the artefacts studied through conservation and functional recovery interventions. The activation of the participatory process through the involvement of the local community and the public administration gave a useful contribution to the recognition of the multiple values of the heritage analysed and to the design of interventions capable of ensuring an appropriate balance between conservation, sustainability, and development [40].

The experiences conducted so far testify to the university's ability to fulfil its training, research, and "Third Mission" tasks both by responding to the needs of the territory and by transmitting up-to-date work methodologies, disciplinary skills, attention to context, and dialogue with local communities. The results of the work carried out, presented to the citizens and the municipal administration, were published and made available in the form of an e-book on the institutional website of the municipalities so that they could provide hints and stimuli for new opportunities and actions to be undertaken, foreshadowing possible development trajectories of the contexts investigated. It is therefore considered important and useful to continue the experimentation activity begun by offering students the opportunity to gain professional experience and encouraging the recovery of buildings and sites that, today underused or abandoned, constitute the distinctive features of an area.

## 5. Conclusions

The activities carried out fostered the acknowledgment and acquirement of a greater awareness of cultural heritage values in both the local community and students. The "keying, framing and modelling" method adopted contributed to highlighting the importance of the role of students as social agents and mediators to translate the complexity of the different instances into a redevelopment and reuse project, starting from a shared recognition of the territory's values. The proposed teaching model promoted the active involvement of the community and public administrations in a complex enhancement process where the university, accomplishing its "Third Mission", helped to read the context and its history, to identify and recognise its tangible and intangible cultural heritage, to intercept the needs of citizens and administrations, and to design reuse proposals, giving a future to the past.

The experience has highlighted the importance of dialogue with the community in identifying values and the complexity of combining conservation needs with instances of change. Therefore, the pedagogical approach of "keying, framing, modelling" was the fundamental means of identifying the shared values at the base of the students' reuse project proposals. The system of resources identified, both at a territorial and architectural level, must be shared and communicated through the elaboration of valorisation and recovery projects, useful for communicating the values underlying and the purposes of the interventions. Dialogue between students and citizens generated interest in the issues raised by the exercise, as well as aspirations and willingness to take action to safeguard and redevelop the territory.

Implementing the interventions planned at both territorial and architectural levels could indeed actively promote the conservation and enhancement of the cultural resources of the territories selected as case studies and favour the recovery of that sense of belonging that local communities sometimes seem to have lost. Willing to become the promoters of a participatory enhancement process, the outcomes of the synergistic collaboration of citizens, public administrations, and research bodies were donated to the community of

Magnano and Romano Canavese to stimulate the redevelopment of the sites through the enhancement of their cultural heritage.

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