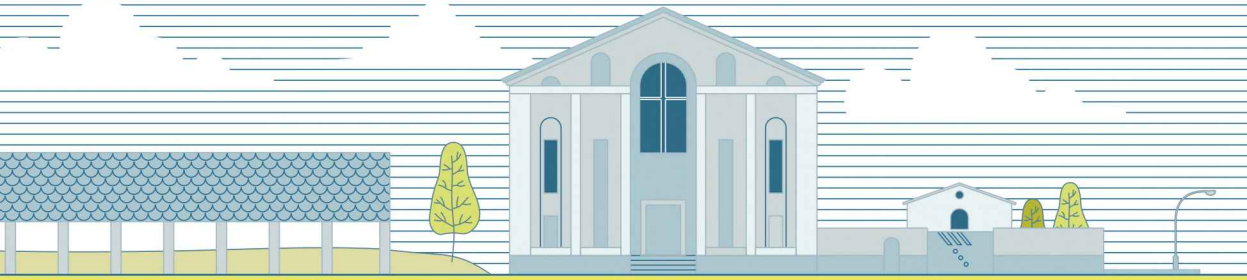
chapter 3



ACTIVITIES AIMED AT UNDERSTANDING AND INTERPRETING

Discovering the City

Travelling through the neighbourhoods

The landscapes of the peripheries, whilst considered "minor" – in part because they are often run-down – are nevertheless, upon closer inspection, filled with a wealth of phenomena, stories and values waiting to be discovered. As we have seen, the European Landscape Convention[1] defines a landscape as «an area, as perceived by people» (Art. 1), but how do we perceive a landscape? The speed of modern travel, especially for our everyday journeys, seems to prevent us from observing and therefore fully getting to know the area in which we live. The ScAR project therefore offered its participants, students and teachers alike, a chance to take part in an exercise in rediscovering their everyday landscape. An activity centred around critical observation that, leading the participants around slow and deliberate routes, gave them the opportunity to read and interpret the area and its phenomena, values and stories.

These learning tours, so named by the research group because they were geared towards learning how to observe and read the urban landscape, involved direct experience of the area through a series of experiential walking tours. Similar activities were carried out in various ways by several of the classes involved, but here we will describe the experience of a small group who worked in direct contact with the experts. Thanks to the preparatory documentation work carried out, in some cases in collaboration with the teachers, the research group established a series of routes, each about five kilometres long, leading from the

1. Council of Europe, *European Landscape Convention, Florence 20 October 2000.*

Students in "*alternanza scuola-lavoro*" pogramme visit the Morivione district during the learning tours. The students report their impressions on the maps and collaborate with the experts to record environmental sounds and perform the 360° photographic survey campaign. In the background are the Fondazione Prada buildings.

schools either out towards other schools or into the city centre, touching upon various locations and phenomena in the area – some well-known, others less so. In order to increase the participants' sense of involvement and collect information about the students' experiences, a treasure hunt of sorts was part of the outing. The research team provided a series of photographs of the landmarks located along the trail, as well as a "blank" map of the area on which they were to trace the route they had taken and indicate the phenomena encountered along the way. The participants were also asked to use the map to note down and mark any impressions, anecdotes and memories they had of the area. The participants for this activity comprised lower secondary school students (age 11 – 14) and students on alternating school and work programme (age 16 – 19), for a total of approximately sixty participants, including teachers.[2] This

2. Students from the lower secondary school Arcadia, lower secondary school F. Filzi and upper secondary school C. Varalli.

Lower secondary school students during the learning tour report observations on the map.

activity proved to be particularly effective because the students did not merely fill in the maps with the name and location of each landmark, but actually supplemented them with new locations that were significant to them because they were part of personal memories, or because members of their families had highlighted them as venues of particular events in their lives, inserting notes and drawings and casting a spotlight on even the "minimal landscapes" that were previously considered banal (Ferlinghetti 2009).

During this experience, the students were encouraged to use drawing as a means of observing and reading the area, thus giving it a fundamental role as a vehicle for comprehension and critical exercise for the interpretation of the cultural landscape with all its phenomena, values and changes. Over the course of the activity, various forms of written and graphic representation of the landscapes were used, within which the informative dimension (recognising the place seen in a photograph, noting down its name, writing down what the teacher or the expert says about it in order to remember it) was

complemented by the subjective and interpretative dimension, linked to the critical exercise and the personal memories overlaid onto the topographical drawing. The students also made use of the potential offered by new technologies – especially Google Maps and its Street View feature – as a way of orienting themselves along the way, as well as social networks as a means of sharing and talking about the experience even outside the classroom. In this respect, it is interesting to note the initiative – which we will discuss in more depth later – of a group of students who, under their own steam, decided to create an Instagram page to share their pictures and feelings during the tours.

The activity proved to be useful in several ways. From an educational point of view, the learning tours offered the students an opportunity to try out a new way of discovering the area and attempting to make critical observations about the everyday places that they may never have paid much attention to before. As such, the participants were offered a method of analysis and understanding that went beyond mere appearances – a superficial glance – to explore the places in greater depth. Walking was proposed as an active practice of learning and discovery (Careri 2006) aimed at understanding and truly seeing the landscape of everyday life – one which provided the students with a means of appreciating the values of the places in question and of bolstering their sense of belonging. The learning tours, as we shall see, also offered them the opportunity to acquire new, widely applicable techniques and skills, relying on the support of the research group and the teachers to help them experiment with the use of innovative technological tools and services. Finally, these experiments laid the foundations for the subsequent development of digital products used to highlight the value of the cultural landscape of the outlying areas.[3]

Interviewing artisans and experts

Data provided by the MIUR in the *Piano nazionale per la scuola digitale* [National Digital School Plan], published in 2015[4], indicates that a majority of schools are already adequately technologically equipped: in addition to the electronic devices made available by the schools themselves, most students and teachers also have personal devices (tablets and smartphones) of their own. These devices play a central role in the Plan and, in particular, in "*Azione 6:*

3. See chapter four.
4. Ministry of Education, University and Research (MiUR), 2015. *Piano nazionale scuola digitale (PNSD).*

Linee Guida per politiche attive BYOD (Bring Your Own Device)" ["Action 6: Guidelines for Active BYOD Policies"], which promotes the integrated use of personal electronic devices during educational activities.

In line with these provisions, the ScAR team – where made possible by the age of the students and the situation (availability of devices, permission from teachers) – made use of smartphones in order to carry out activities with the use of technology. Thanks to the ease of use and the students' confident mastery of the devices, they allowed the participants to document their neighbourhoods, collect accounts and images and effectively process them, all with a certain immediacy and including by means of personal technical devices to supplement those provided by the schools.[5]

One example of the sorts of activities carried out using smartphones is video interviews, which take on different meanings within the project: we moved from collecting the accounts of those who continue to perform the traditional trades of their country of origin, bringing multicultural expertise to the streets of Milan's peripheries, to using video interviews as a tool for discovering the area, recording the tales and experiences offered by its residents, who have been there through the many transformations of the landscape in which they live, before finally interviewing experts in activities that constitute an element of what we define as the city's intangible cultural heritage.

Video interviews as a means of collecting accounts

Collecting accounts with interviews is an essential process of mutual exchange, allowing participants to know the landscape and the local communities. This process offers a meeting point for the different perspectives and provides the opportunity for summarising non-homologous points of view by producing a contact point since the first meeting. In this regard, Milan's peripheries proved to be fertile ground for the project. Take the Stadera neighbourhood in the south of the city, for example: an urban area where many cultures rub shoulders and where the situations of its families and the students in its schools also vary considerably. The classes at the local primary school[6] include children from families who come from Eastern Europe, Africa, Asia and

5. The chapter four deepens the different uses of technology in educational projects. The topic is here anticipated to introduce video as a documentation tool.
6. Primary school C. Battisti part of the Istituto Comprensivo Palmieri (primary and lower secondary school).

South America. With this in mind, the ScAR project was chosen by a number of teachers as the guiding thread for their entire curriculum, making education about cultural heritage the driving force that helps them to address all the topics contained in the many disciplines of the humanities and sciences.

The educational project proposed by a class focuses on the theme of crafts, which is a common element shared by all cultures; this allows the children to explore the many different expressions of crafts, working in a local dimension in the area surrounding the school.[7] This is an area which, as previously mentioned, is a historical neighbourhood on the outskirts of Milan which is undergoing a significant social transformation, where "traditional" artisanal and commercial businesses, passed down through generations of families, coexist with workshops run by artisans from all over the world. Taking this as a springboard for ideas, the teachers started a process of reading and interpreting the neighbourhood through video interviews with the artisans who work near the school. The questions that the interviewees were to be asked were prepared in class with the children according to the question-and-answer method, using a way of interacting that differs from those commonly used in the classroom during lessons (as per the teachers' report). The interviews were conducted in the workshops of the artisans, who told the children about how they learned their trade, the importance it holds in their home country, and how elements of local cultures have been incorporated into it.

In this project, diversity has been translated into an opportunity for exchange and dialogue. The mutual engagement encouraged the transmission of traditions, customs and habits, to the extent that even the children's families became involved; they were invited to the school to talk about the culture of artisanal crafts in their home countries and to offer workshops in which the students were given the opportunity to learn about and experiment with the different materials and techniques specific to each culture. A mother from Santo Domingo, for example, taught the children how to weave natural raffia into baskets, taking care to explain to them the importance of raffia in the Dominican Republic as a material for making furniture and objects of all kinds.

7. The project was developed by a lower secondary class from C. Battisti school in Milan and called "*Dal Mondo allo Stadera, tutti i colori dell'artigianato*" ["From the world to Stadera: all the colours of craftsmanship"]. The project was developed in collaboration with teachers is widely described in the reports and interviews the research team performed with teachers and students. The book deepens this project in the next chapters.

Video interviews with experts

Another traditional use of video interviews adopted in the project was the collection and documentation of the experiences of experts from various sectors. One such interview was carried out with the Atelier Colla, a historical and cultural company closely tied to the long tradition of puppetry, founded in the early 19th century by Carlo Colla and his family. The company is still active, and occasionally puts on performances at various venues in Milan, including the prestigious Piccolo Teatro.[8] What is exceptional about the Atelier Colla – which is still based where it was founded over 200 years ago in the Stadera neighbourhood, one of the nerve centres of the ScAR project – is the fact that it crafts all the material for its performances in-house. Indeed, the building has long been home to the artisanal workshops that support the company's production activities, which have now been moved elsewhere. The company opened its doors to the students, offering them the opportunity to become familiar with the various expressions of this cultural organisation. The topic fit in with the curricula of three different school years – from primary school to upper secondary school – which all conducted and made use of the video interviews in different ways.

The pupils of a year three class from the primary school[9] participated in an educational path entitled "*Colla e Figli Atelier: Il magico mondo dei burattini*" ["Colla e Figli Atelier: the Magical World of Puppets"], which gave them an insight into the inner workings of the company. The interviews carried out by the children with the team from the company, documented through both videos and photos, helped them to discover its history, the techniques used to make the puppets and costumes, and the secrets of bringing them to life. The students' reflection on their experience then segued into an activity involving writing scripts for a show set in the neighbourhood where the school is located. By reworking their experience and the knowledge they had acquired in their time with the company and bringing it to the stage, the children actively engaged with the intangible cultural heritage that they had encountered, incorporating it into their daily lives and transforming it into a tool for reinterpreting their own real-life situation.

Moving on to the secondary schools, some classes had the opportunity to watch rehearsals of the show "The Treasure Island" and meet the cast and crew behind it. On this occasion, a group of students from the linguistic upper

8. See chapter two.
9. Primary school Feraboli part of the Istituto Comprensivo Arcadia (primary and lower secondary school) in Milan.

Primary school students interview the artisans of Carlo Colla e Figli Puppet Company.

secondary school and the technical institute for tourism visited the Atelier and interviewed several professionals, such as the communications manager, the director, the soundtrack composer and the puppeteers themselves.[10] These interviews painted an interesting and comprehensive picture of the specific

10. They are the students of the upper secondary school C. Varalli (technical school for tourism and foreign languages and literature high-school). This alternating school and work programme project, entitled "*Seguitemi, prego…*" "Follow me, please…", configured as a pilot action and focused on the reading and communication of the cultural landscape with the use of advanced technologies, was particularly long and articulated. After a first phase of reflection on the themes of the project and the construction of mental maps of the most familiar places, the students explored the neighbourhoods, first around the school, then gradually further away, meeting with experts, building maps, collecting observations and integrating them with documentary research on the cultural landscape. Working on a long itinerary that crosses the project area connecting the school to a landmark known to the public (represented by the Fondazione Prada headquarters), the students built a cultural landscape communication campaign that included public presentations, construction of multimedia tourist guides, creation of digital collections for the Digital Atlas of the South Milan Ecomuseum and more. We will return to the activities carried out in this articulated educational journey at various times in this and in the next chapters.

skills and expertise involved, a blend of age-old techniques and modern methods. This opened the students' eyes to the complexity of the skills and amount of work that goes into staging a performance of this kind. These video interviews fostered a process of discovery and exploration of their intangible heritage, whilst also serving as material for the students to construct an in-depth account of the Atelier and its work. Following their visit, the group reworked the information collected on this piece of intangible culture in the form of interactive multimedia guides for mobile devices, constructing itineraries that differed from the established mainstream ones and offering them to the public[11]. The appreciation and promotion of little-known areas is also an excellent starting point for stimulating interest and curiosity about our heritage, helping to regulate tourist traffic and, above all, encouraging responsible and sustainable forms of tourism (Primo piano nazionale per l'educazione al patrimonio culturale 2015, p. 14).

Video interviews as a means of recording observations

A class from the lower secondary school[12] used the tool of video interviews in a particularly effective way during their outing to discover the neighbourhood in which their school is located. The purpose of the trips was to take notes on the experience of passing through the outskirts of the city. As the students moved through the landscape, they used video interviews to record

11. See chapter four.

12. It refers to the lower secondary school A. Toscanini part of the Istituto Comprensivo F. Filzi (primary and lower secondary school). The didactic path in which this activity is inserted is among the most substantial of the research and was configured as a pilot action. The project, collected under the title "Vigentour" – from the name of the neighbourhood in which the school is located (Vigentino) – involved an articulated sequence of activities to read the urban landscape, its cultural contents and its transformations, along an itinerary that, crossing the area of action of the research, connects the school to the headquarters of Fondazione Prada. Among the highlights of the work there are mental mapping, exploration and mapping of neighbourhoods, a campaign of consultation of witnesses and citizens through video interviews, landscape reading and drawing workshops at the Fondazione Prada, the development of a serious mobile game based on geolocalised itineraries intended for peers, digital mapping and creation of collections for the "Atlante digitale delle memorie" [Digital Atlas of Memories] of the Ecomuseo Milano Sud and finally a workshop on urban design. The entire school has participated intensely in ScAR, creating many other educational paths across classes and collecting them all in a single project dedicated to the neighbourhood, opening new partnerships and proposing spin-off projects in continuity with research ("Murales Project"), finally organizing a communication campaign for the launch of the geogame and the return of the activities of the institute to the families in the presence of partners and representatives of the institutions.

Elementary school students engaged in a sketching exercise at Parco Cascina Chiesa Rossa during the "*Disegnare insieme, condividere il paesaggio*" ["Drawing together, sharing the landscape"] workshop.

their impressions, initial reflections, feelings and any memories that cropped up along the way, filming and interviewing each other. As they took down these observations, some students realised that they could not even remember the details or appearance of some of the places that they distractedly – automatically, even – walked past every day on their way to school. For example, many of them were surprised to discover buildings and bridges that they had never seen before; they stopped several times along the way to describe the landscape as if they were truly seeing it for the first time. In addition to recording each other and their own points of view, the pupils also carried out video interviews with the local residents they met on the streets – people who, unlike them, know these spaces very well – resulting in them learning about transformations in the neighbourhood of which they had found no mention in the historical documentation used as their research sources. As such, in this case the video interviews offered an extra dimension to the information available to the students, sparking new reflections. In taking a more critical and informed look at the places that populate their everyday lives, the students also

identified several critical issues and points of deterioration and decline. These, as we will explore in greater depth later on, resulted in their developing design proposals for the redevelopment of these urban spaces, imagining different ways of using them and numerous ideas for improving them.

Depicting the heritage and the landscape through drawing

As already mentioned on several occasions, the activities designed and proposed by ScAR for education on the landscape are geared towards equipping students with the basic tools required for reading and understanding the landscape, as well as learning to grasp the dynamics and values contained within it. It is no coincidence, then, that most of the activities make use of different variations of drawing of the landscape or the heritage as part of the various exercises. Drawing is the practice best suited to simultaneously considering the different elements of the environment being observed (both natural and man-made) and the relationships the exist between them, whilst at the same focusing on the emotional aspects, sensations and, consequently, the meanings and values attributed to any given place.

One of the most useful exercises for this purpose is that of drawing the landscape in the field, when you are immersed in it. An interesting experiment conducted by the ScAR team involved proposing this activity to two groups of students of very different ages: a year two class from a primary school and first-year students from the School of Architecture Urban Planning Construction Engineering at the Politecnico di Milano.[13] The Parco Chiesa Rossa – named for the old Cascina Chiesa Rossa within it, a farmstead boasting recently restored 12th-century architecture – proved to be the perfect subject for the exercise. For the older students, the activity was an opportunity to consolidate their graphic skills in reading the formal and perceptual values of space as preparation for a hypothetical project in the urban area. The way in which they framed a view and defined its boundaries are critical dimensions in drawing, representing a unique reconstruction of their individual perceptions of the space: a critical aspect that informs the process of visual research (Lavoie 2005). For the younger ones, meanwhile, the technical and communicative component of drawing constitutes a spontaneous language, free of any shame associated with limitations or gaps in any techniques or knowledge acquired

13. This experiment was mentioned in chapter two, which describes the methodological approaches used for the project.

Drawing of a farmhouse in Chiesa Rossa Park made by an elementary school child during the workshop "Disegnare insieme, condividere il paesaggio" ["Drawing together,sharing the landscape"] workshop.

previously. With their coloured pencils, the children depict their reality – one that is no different to that perceived by their university-aged co-participants, of course, but summarised on the sheet of paper with unintentional symbolism and schematisation, the result of a lack of adequate technique and full manual dexterity. Looking at the children's drawings, an unconscious symbolic dimension emerges clearly – even to an untrained eye – which makes it possible, in this specific case, to identify the primary elements and rework them graphically. Often in the drawings, the buildings which the children have focused on are translated into a two-dimensional representation similar to an elevation, in architectural terms. In some cases, however, attempts have been made to represent depth: a road has been drawn on the roof of the library, for example, in an attempt to provide an indication as to the difference in height between the level of the park and that of the road that runs behind the building.

Another example of landscape drawing through direct observation is the activity carried out at the Torre Fondazione Prada (figs. p. 77, 104 and 105). Peering out of the vast windows on the eighth floor of the building, following a few exercises involving the analysis and identification of the architectural features described in the next section, students from both the upper and lower secondary schools[14] compared their drawings with a sketching of the dense urban landscape itself. In this area, the imposing Porta Romana rail yard is the main

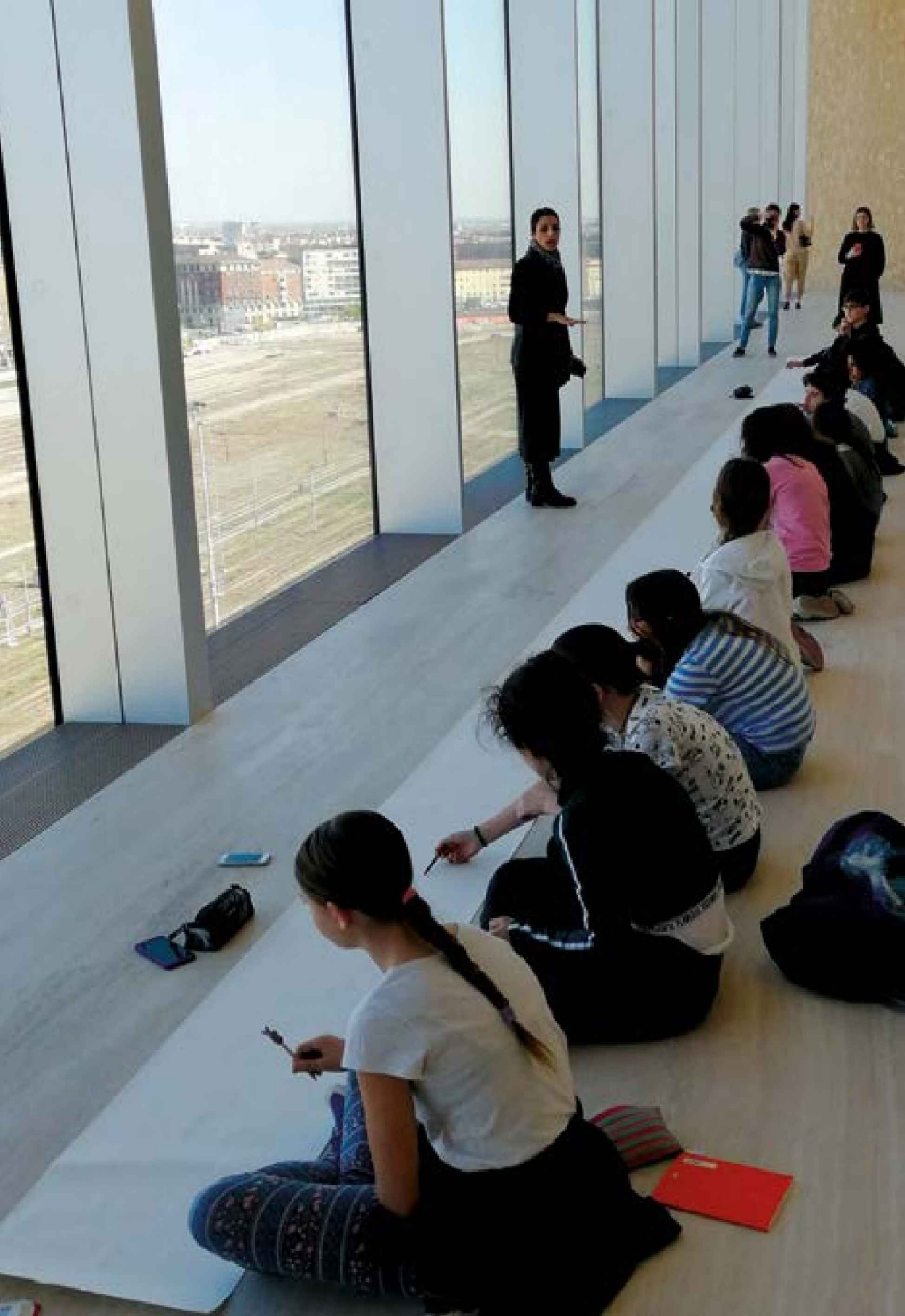
14. A second-year class of the lower secondary school A. Toscanini of the Istituto Comprensivo F. Filzi (primary and lower secondary school) and a second-year class of the upper secondary school Istituto Professionale per i Servizi Commerciali W. Kandinsky [Professional school for Commercial Services].

feature in the foreground of the scene, with a succession of courtyard, linear and tower buildings behind it, as well as patches of half-hidden trees, in a sequence that leads the eye through the city and beyond, all the way to the Alps. To carry out this exercise, the ScAR team used a roll of sketch paper laid out over the window overlooking the landscape. On both occasions, the result was a long drawing created by all the students together combining different perspectives and visions, in part due to comparison, mutual observation and spontaneous collaboration. The choice of this type of medium thus proved to be significant in terms of the unexpected results produced: some students, for example, decided not to draw their own vision of the landscape independently, instead merging theirs with their classmates', ultimately creating a more extensive and complex representation of what they perceived. As Marinelli reminds us: «the landscape is necessarily something abstract and personal that depends upon our faculty of representation, as well as on the external appearance of things» (Marinelli 1917, p. 136); in light of this, each student expressed their own point of view, vision and interpretation of the landscape. Everyone sees through the lens of their own expectations, their own experiences – what they know and what they can recognise. Indeed, the students' drawings – despite the fact that in many cases, they represent the same stretch of the city or have even been explicitly created in continuity, thus running seamlessly into one another – reflect not only the different levels of manual skill shown by the artists, but also the personal filter through which each of them views reality. In some drawings, the urban area is packed with detail, whilst in others, it has been rendered in just a few lines: one girl, for example, depicted what she imagined seeing through the windows of the buildings, drawing curtains, dancing ballerinas, balconies adorned with flowers, and cats on the rooftops; conversely, other sections of the long drawing show an essentiality of the architectural elements geared towards a focus on the volumetric and spatial aspect of the buildings, represented as geometric solids to which a chiaroscuro effect has been applied to convey an idea of three-dimensionality. The relationship between representation and reality, far from being merely imitative, is based on a complex relationship made up of a great deal of back and forth, reading, interpretation and transformation.

All of the experiments described resulted in engaging final products, and the drawings produced are ripe for consideration in countless ways and from multiple perspectives. What is most important in this context, however, is the process that saw a range of young people – both enthusiastic (the younger ones) and wary and reluctant (many of the older ones) – get involved themselves through direct action, working hard on a graphic expression that became meaningful through the process of making it – both the experiment

Above and to the right the collective sketching workshop of the urban landscape from the Tower building of Fondazione Prada.

Details of the collective sketch produced by the lower secondary school students during one of the workshops on reading and interpreting the landscape from the top of Fondazione Prada's Tower building. The drawing, made by the class on a strip of paper several meters long, is a collective representation of the landscape visible beyond Scalo di Porta Romana.



Drawing of the landscape made by a student from the Gratosoglio lower secondary school.

itself and how it has been shared. Drawing the landscape, in the activities involved in this project as well as many others, has thus become a way of stimulating and fostering a propensity for observation, reflection and comparison.

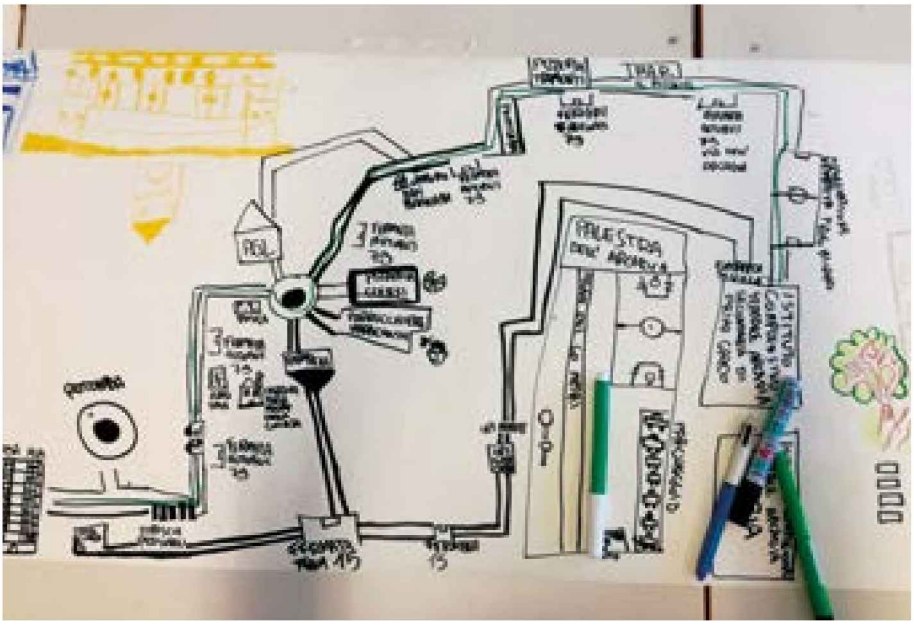
Reading the landscape from the towers of the contemporary city

In the experiment described above, the Torre Fondazione Prada – towering above the city at sixty metres high – represented an opportunity to observe the area from a different and unusual point of view. Thanks to its vast windows, the eighth floor of the tower is well-suited to being used as an extraordinary observatory providing a view of the entire city Northward, offering the opportunity to look at the neighbourhood both in itself, as a whole, and in relation to the rest of the city, and to pick up on the differences and particular features of each. In this context, the working group developed activities to do with the students aimed at helping them to interpret and understand the signs of change, architectural phenomena, and the relationships between spaces. The workshop was offered to different age groups: a second-year class of a lower secondary

school and a second-year class of an upper secondary school.[15] The first exercise put to the students involved identifying the main landmarks that characterise Milan's skyline, finding their location first within two-dimensional panoramic photographs taken by the ScAR team from the same position, and then in the real landscape that they were observing (figg. p. 40, 75 and 84). The first architectural elements that they identified were those belonging to the historical fabric of the city; after the Cathedral and the Velasca Tower, they moved on to the buildings in the new Porta Nuova business centre that many students had already heard of and seen images of. The last to be recognised was the new City Life complex, which is yet to be completed. Engaging in this activity in small groups facilitated discussion and exchange between the students, allowing those who were less informed about the new architectural features of the city to find out more about them thanks to their classmates.

The next step asked the students to locate the identified landmarks on a map of the area of the city visible from the tower. Comparing the real urban space with a topographical representation was unquestionably the most complex task for the students, who had to learn to recognise what they observed within an abstract, symbolic translation of reality. To complete the exercise, the students were split into groups and had to attempt to exchange information on the location of the various elements, trying to deduce where they were based on their proximity to the buildings that they had already identified on the map. This kind of direct comparison between the real-life view of the urban landscape and two-dimensional representations thereof forced the students to make an analytical observation of the landscape, which also proved useful for the purposes of the last stage, in which they collected and translated their reflections into actual drawings of the city. This type of integrated learning – which stimulates visual thinking, data collection, problem solving, cooperative learning and the formulation of critical judgements – lays the groundwork for a rich and complex path of growth, moving towards the development of the awareness offered by a 'reality check' and, in broader terms, the process of building citizenship. Landscape education activities must therefore be interpreted first and foremost as a form of "landscape literacy" (Spirn 2005) geared towards helping students to acquire the basic tools for reading the landscape – "learning to see", as Turri so elegantly put it – recognising the underlying dynamics and values in the landscape (Turri 1998).

15. The institutions involved are the Istituto Comprensivo F. Filzi (primary and lower secondary school) and the Istituto Professionale per i Servizi Commerciali W. Kandinsky (upper secondary school).



Students from the Gratosoglio lower secondary school show their collective mind map of home-school routes.

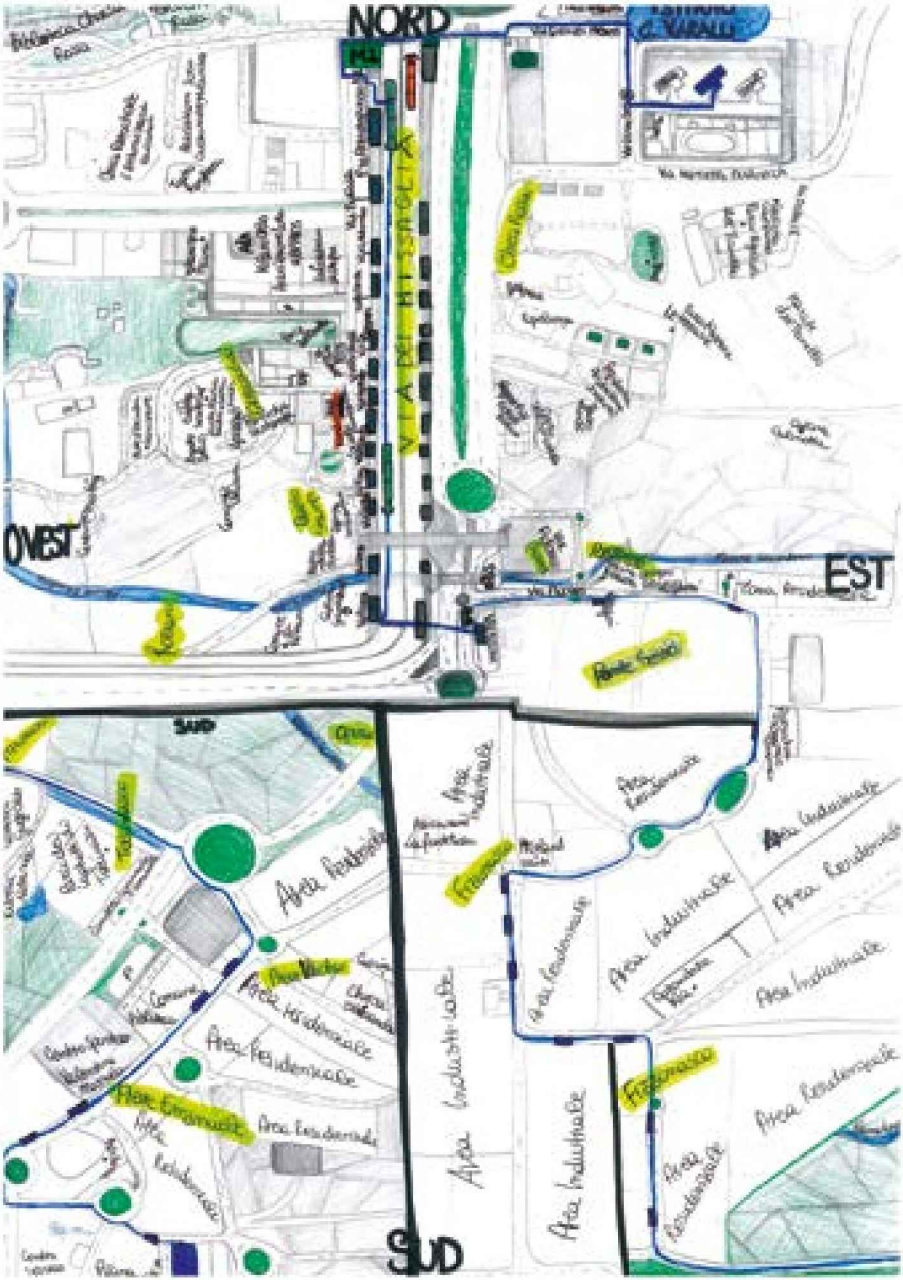
Detail of the collective map of home-school routes drawn by the students of the Gratosoglio lower secondary school.

Drawing mental maps

Young people's experiences in familiar places enable them to construct personal geographies from a very early age, drawing on their observations, explorations and everyday activities. According to Blaut, children are "natural mappers"; as they explore and discover new places, they acquire spatial awareness and use maps to assign meaning to their experience of the environment (Blaut 1991). Of the many route maps produced as part of the ScAR project, perhaps the most important are the mental maps that trace a subjective path, highlighting the young citizens' orientation along their journey; this is understood not only as the subjective ability to be aware of one's own location within an area – both in an absolute sense and in relation to the departure and arrival points – but also as a sensory experience of sorts, in that it involves both cognitive/perceptual aspects and emotional ones. «It is important for children to start making maps in the way that they start drawing; maps and drawings are representations of things that are emotionally important to them [...], they represent their experiences of beauty, secrecy, adventure and comfort» (Sobel 1998, p. 5).

As such, it is a process of collecting and processing information from the environment and from one's own body. The path starts from a sensory and perceptual approach to the "lived space" of the students, who form representations of personal geographies. Students of different ages (12-13 and 16-18 years old) were asked to draw the route that they take every day from home to school, translating it into a freehand-drawn map. The fact that they had to rely on their memory alone to piece together a map made it an entirely new experience for them, but once they had overcome their initial disorientation, they were able to develop representations that were incredibly rich in detail and information, capable of describing a personal vision of the urban landscape and conveying their experiences tied to the various places. The activity was run with students from both upper and lower secondary schools[16], involving them in both more subjective paths – through the individual mapping of their personal route to school – and in collective representations, in which multiple students' experiences of travelling through the neighbourhood converged. The students started to draw the map with a view to making it a useful guide for those who did not know the places involved as well as they did. In terms of representation, in an attempt to overcome this obstacle and

16. Students from the following schools took part: Istituto Comprensivo Arcadia (primary and lower secondary school), Istituto Comprensivo F. Filzi (primary and lower secondary school), Istituto di Istruzione Superiore C. Varalli (upper secondary school).



Map of the area around the school made during mind mapping activities in an upper secondary school. The map depicts the border between the Stadera and Chiesa Rossa neighbourhoods.

Map of the home-school route created during the mind mapping activity conducted with a lower secondary school in the Vigentino neighbourhood. The author spontaneously portrayed herself inside the drawing with a small popup figure. By introducing a three-dimensional component into the two-dimensional representation, the student reinforced the subjective character of the map and the expression of her belonging to the neighbourhood.

help to provide a better understanding of the reader's position in space, the maps started to be populated with landmarks «which are particularly useful to children as a way of locating themselves or hidden objects on a map» (Blades, Spencer 1990, p. 151). Road signs, tram lines, the church, shop signs and indications of their preferred crossing points were then added in. As it is often useful to know where not to go in order to understand where to go, in these types of maps, students wishing to represent the route that they take to school draw both the streets that they take and those that they do not. Junctions or roundabouts serve as indicators of the direction they follow. In order to make the places even easier to recognise and identify, some maps have been labelled with the names of squares or roads, or even brief descriptions; this is notable in that it marks the use of the written word integrated into the drawing, together with the incorporation of iconic and symbolic codes either taken from cartographic representation or invented from scratch. This tool proved to be

particularly useful when the older students had to collaborate on a group drawing of their routes to school.

The maps had to be reduced in scale in order to fit in the routes taken by multiple students on the same sheet of paper, and in this context, the textual support of the names of the tram stops, the most significant architectural elements and the main roads became merged with their graphical representation. What can be seen in all the maps is a selective representation and a simplified or schematic depiction of the local and architectural elements; some of them opted for planimetric drawings or frontal projections laid on the ground, whilst others integrate two-dimensional "views" which intuitively apply orthogonal projections to representations which simultaneously render all three dimensions, such as axonometric and perspectival projections. In the case of a lower secondary school class, one student inserted her own silhouette in relief into her mental map, as if it were a playing piece from a board game, essentially including a three-dimensional component in the representation within the two dimensions of the sheet of paper, thus further reinforcing her expression of her intimate and personal sense of belonging to the neighbourhood. As these representations passed through the filter of memory, the drawings show significant variations in scale between the various elements of the landscape and distortions in the dimensional relationships, partly due to the instinct to convey the most significant elements as more important, and partly due to the absence of any kind of metric or topographical foundation.

These types of workshops provided us with a valuable insight into younger citizens' perceptions of the area, but also an opportunity to trigger a shared reflection on the city, all whilst carrying out an exercise in cultural landscape education at the same time.

Rewriting spaces

"Constructing" the city: from map to maquette

The various processes of reading neighbourhoods that form part of the ScAR project began with a research stage, specifically involving direct observation of the area; the activities described thus far are examples of this. In the subsequent phases, however, each class chose to organise its activities in a different

way, in line with its own curriculum and with the direction it had taken within the project, often going in the direction of more extensive technological experimentation, as we shall see shortly.[17] In some cases, the analytical reading phase described in the previous sections gave rise to reflections on the quality of the urban landscape, the emergence of a desire for transformation and, consequently, the start of a line of thinking geared towards design.

This is the case, for example, of the class mentioned previously, which decided to pursue a path investigating the culture of craftsmanship in the Stadera neighbourhood.[18] The aim was to help the primary school children to become familiar the multicultural nature of the neighbourhood and to find ways for them to relate to it. The project not only worked on promoting the intangible culture of the small artisanal businesses operating in the area – a goal pursued through interviews with the craftsmen – but also combined this with efforts to introduce the children to the codified languages of cartography and architecture, with a particular focus on the route they take to school. The first step was to walk through the neighbourhood, paying careful attention to the landscape that they passed through and memorising the locations of the workshops. This phase of orientation and direct exploration of the places in question was fundamental to both the children's production, from scratch, of different representations of the places visited and their subsequent development of a comprehension of existing maps. Following this initial exploratory phase, the children reconstructed their route in a very simple way, making a concerted effort to draw up a map and then recall the sequence of the shops and a handful of other urban landmarks (starting with the school building), marking these down on a modular grid (fig. p. 39). In order to check that the information was represented correctly on the map, the children were assisted in using Google Earth, retracing their route from another perspective.

What emerged based on this reconstruction was the need to create a three-dimensional model of the area in order to better understand the relationships between the different elements that make up the landscape of the neighbourhood. The result was an interesting model which, despite being out of scale, juxtaposed the school and the various elements of the tangible and intangible heritage identified in a spatial relationship on a modular basis founded upon topological notions of continuity and contiguity (figs. p. 46 and 116).

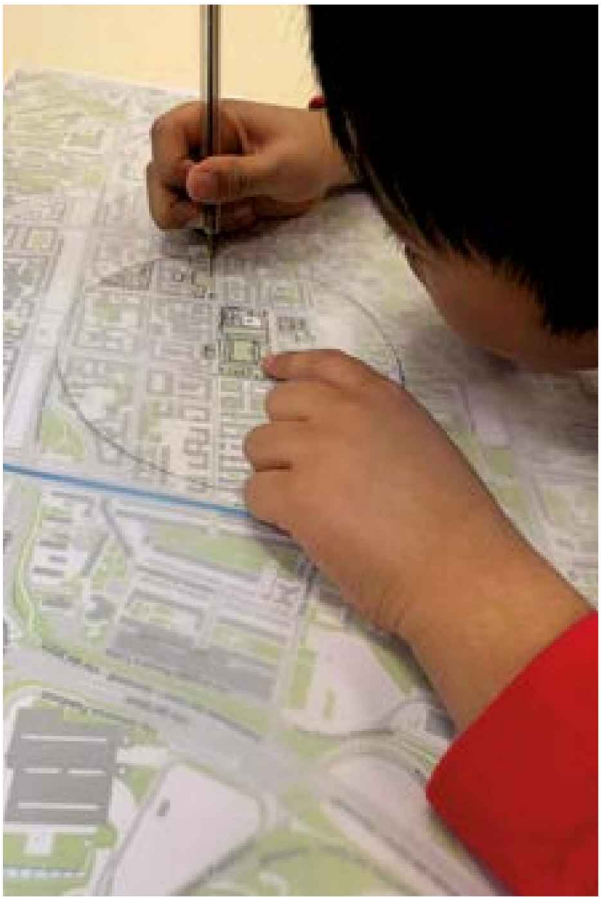
17. See chapter four.
18. See note 7.

Drawing of the school façade made by a child from the Stadera neighbourhood primary school.

Drawing of the school plan made by a child of the primary school of the Stadera neighbourhood.

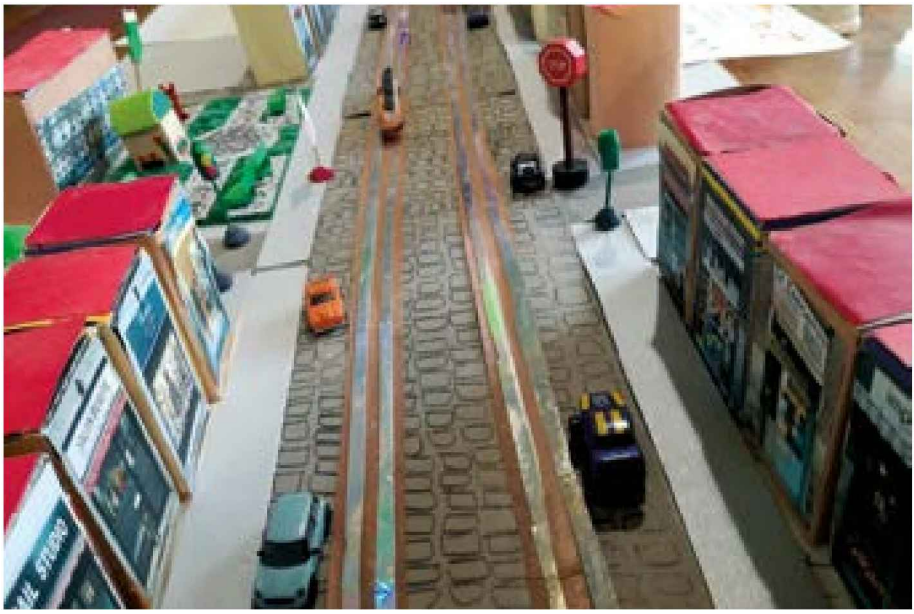
At the same time, the children were called upon to represent familiar objects and spaces – such as their school – from different perspectives (plan and elevation). The children then transposed these elements, which were familiar to them by this point, onto topographical maps, thus bringing them closer to being able to read and understand the codes of conventional cartographic representation. This series of operations laid the groundwork for the students to be introduced to the concepts of zenithal and frontal projections and, progressively, to the notion of scale, introducing the idea that in order to understand, represent and manipulate a space, one must be able to use certain signs and conventions.

The model was made using different materials corresponding to the various elements that make up the landscape of the street, with a preference for reclaimed and recycled materials as a means of introducing the young students to the ideas of sustainability and reuse. As such, old lightbulb boxes were used



A child from primary school becomes familiar with the topographic drawing of the area around his school. This activity marks the last step of a long path of experiential knowledge of the site, which was accompanied by the construction of increasingly abstract representations close to codified languages, from plastic, to topological, to intuitive zenithal, until the encounter with the standard topographic map.

for the buildings and shops, placed together according to the modular logic of the basic layout. Drawings of the building façades and photos of the shop windows were then glued onto the boxes, and the children's representation of the streets distinguished all the elements involved – such as the pavements, the lanes of the roads, and the tram lines – with the use of different colours of card. Mouldable materials such as modelling clay and putty were chosen for the trees and bushes, and the children decided to complete the scene with small toy cars. The teachers reported that the model did a great deal to foster the development of the children's critical thinking skills. Indeed, constructing the model allowed them to test out, in a hands-on way, whether or not what they were building actually worked, giving them the opportunity to correct any issues that arose and come up with new solutions, adapting their thinking to the situation. The model also served as a communication tool, helping the



The model of via Montegani in the Stadera district made by the primary school students. The model, made with recycled materials, is the result of the direct experience of the children who have surveyed the sequence of buildings and stores on the street. The model represents this sequence on a modular grid with topological logic; it returns the contiguity of the elements in real space and their relative position to the school building.

students to effectively recount and convey their experience, as also evidenced by the video recordings made by the research team.

In light of the children's incredible aptitude for manual activities in general and the enthusiasm for building the model shown by this group in particular, the project team came up with the idea of further stimulating their curiosity by setting up a collaboration with the Architectural Modelling Laboratory at the Politecnico di Milano (LaborA) to allow them to design play areas for the square near their school. The projects were brought to life directly in three dimensions in the form of models constructed with a wide range of repurposed and recycled materials provided by the laboratory. This allowed the children to freely apply the skills they had acquired in their previous experience of building models, also initiating an activity involving the redesign of open spaces in a way that reflected their desires in the use of the public space. This was done through the integration of volumes and shapes filled with their emotions, ultimately making for a personal and collective reflection on urban space and how it is transformed.

Primary school children participate in an activity at the Modelling Laboratory of the Politecnico di Milano (LaborA). Manipulating recycled materials, the children design three-dimensional play areas for the garden in front of their school.

Redesigning neighbourhoods: micro urban regeneration projects

As the case under examination here shows, and much as anticipated, the processes of discovery and promotion of the landscape also paved the way for reflection on the possible transformations of the public space, including by involving the students in urban design practices.

"*Progettiamo nuovi spazi urbani*" ["Let's design new urban spaces"] is the title of the participatory design initiation course developed by the research team for a lower secondary school class which had already taken part in several activities focused on interpreting and communicating the landscape and cultural heritage as part of the overarching project.[19]

19. This is a second-year class from the lower secondary school A. Toscanini of the Istituto Comprensivo F. Filzi (primary and lower secondary school). The workshop was coordinated by Micaela Bordin, Professor of Architectural Composition at the Politecnico di Milano. The results of the work are documented in the final reports and the interviews with the teachers who were most closely involved with it.

The students immediately showed themselves to be active and interested in the activities, transforming the classroom into a fully-fledged creative workshop in which, through careful observation of the resources provided and identification of the critical issues in the area, they were able to formulate a design proposal for the revitalisation of the urban spaces in question. The first step was to collect written, oral and photographic documentation of information about the Vigentino neighbourhood, where the school is located. The children's curiosity and enthusiasm resulted in them involving their families, talking to their parents and grandparents, who contributed their accounts and memories of the places and events of the past that occurred in the neighbourhood. As such, by drawing upon different sources, the students garnered an in-depth knowledge of the history of their neighbourhood, something which – as noted by the teachers involved – altered their perception of the places that they once passed through absent-mindedly – unthinkingly, even – on a daily basis, making them more attentive and observant of their surroundings. The degree of interest and passion shown by the students in investigating the underlying reasons behind the changes and evolutions of the spaces familiar to them came as a pleasant surprise to both the ScAR team and the teachers themselves. Based on this, the decision was made to propose a task involving reconstructing the various transformations of the area over the centuries by means of a comparative reading of historical maps from regular intervals in time. On the basis of four topographical maps representing different periods in history, the students were able to observe the changes in the urban fabric from the end of the 19th century to the present day, ultimately producing a map that tells the story of a rural settlement established long ago and its subsequent incorporation into the city of Milan.

Armed with this new and interesting knowledge about their neighbourhood, the students went back out into the area, embarking on outings aimed at interpreting the elements of the open space and analysing the factors of discomfort, critical issues, deterioration or neglect which showed potential for the use of each and every urban space, large and small, with particular attention to open spaces such as parks and areas for small sporting facilities. All these observations were collected in a journal of sorts kept by each individual student and used as a tool for personal reflection and discussion with their classmates. The workshop activity then took the form of a process of dialogue and in-depth consideration of the meaning of living in and using spaces, leading to the formalisation of a project focused on fixing up and making use of certain urban voids and open-air public spaces in the neighbourhood.

The students split into groups to identify the areas on which they wished to work. One student, for example, opted to work on an area near the school

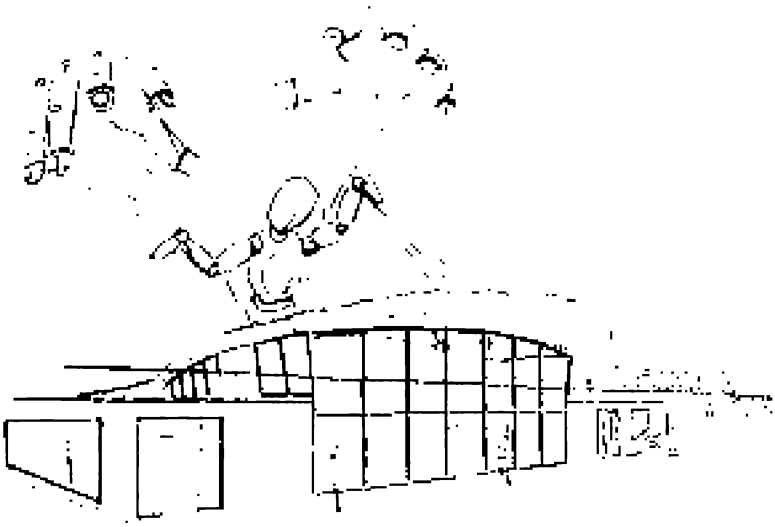
Students' logbooks developed during the "*Progettiamo nuovi spazi urbani*" ["Let's desing new urban spaces"] in the Vigentino neighbourhood.

which they passed by every day, whilst others preferred to propose several micro-projects in the small interstitial spaces scattered around the neighbourhood. The resulting project proposals, designed by the students to improve the places that they frequent on a daily basis, offer simple solutions such as new urban furniture, establishing paths through green spaces, and inserting equipment to give disused spaces new functions and keep them cleaner. When it came to representing their ideas, after having studied the historical maps of the neighbourhood, it came naturally to the students to design a plan, drawing it up on tracing paper overlaid onto a topographical map of the area. They started by identifying and designating the areas to be worked on and then marked out the access points, connections and new paths. However, it was clear from the outset that a plan representation was not sufficient to properly show and describe all the details and functions that they intended to add to the existing services and street furniture. At this point, the detailed drawings of colourful fountains, ornamental hedges, park barbecues and musical benches became crucial additions, requiring full-colour axonometric representations to better describe the children's intention to make a place that had previously fallen into disuse more welcoming and pleasant.

One frame of the digital storytelling dedicated to the theme of street art in Gratosoglio created by students during the "*alternanza scuola-lavoro*" programme and winner of the PoliCultura 2019 Award. In the frame visionary graphic elaborations realized by the students starting with photographic images of local buildings.

Focusing their attention on their local area – in part thanks to the participation of the landscape drawing workshop at the Fondazione Prada described earlier – the students then brought up a particularly critical point that caught their attention: the perimeter wall of the now-disused Porta Romana rail yard, located opposite the entrance to the museum space. This consideration in turn sparked a new activity, designed by the teachers and involving multiple classes[20], based on the principle that "every place is a landscape", and therefore even run-down places are included; indeed, these spaces in particular should represent opportunities for reflection, stimulating the observer to adopt an interpretative attitude and to come up with creative solutions for urban regeneration. In light of this, the students designed a series of murals depicting their own fantastical vision of the urban environment and to push for the improvement and promotion of a place in a state of neglect that is familiar to

20. Third grade students of the lower secondary school A. Toscanini. This activity triggered the micro urban regeneration project described in the chapter five.



Presentation poster of the project for a research centre for puppetry in the Stadera district realized by a student from the "Architectural Design Studio 1" of the Bachelor's Degree in Architectural Design. During the course, carried out remotely during the COVID-19 emergency, Atelier Carlo Colla e Figli simulated the client. (Drawing by Daniel Donola).

them. The landscape is also, as Eugenio Turri argued, a theatre in which man is at once actor and spectator – the place of the actions of individuals, «the interface between doing and seeing what is done, between watching-representing and acting, between acting and re-watching» (Turri 2006, p. 16). In this sense, an experience such as the one described is capable of stimulating young citizens to relate to the landscape, observing it and modifying it, but always with careful attention to the «measure of their work, of their acting, of their being an actor who transforms and activates new scenarios: in other words, the conscience of their own action» (*ibidem*).

chapter 4


MAR TIRRENO
MAR DI SARDEGNA
MARE MEDITERRANEO
MAR IONIO
ALGERIA
TUNISIA

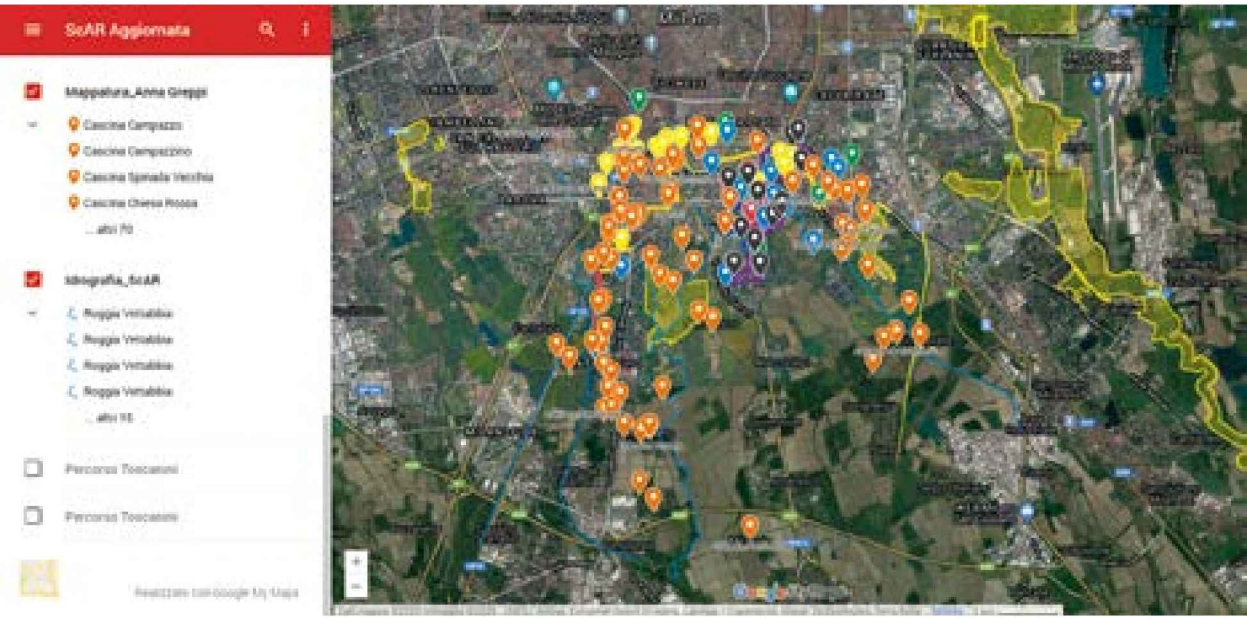
TECHNOLOGIES TO INTERPRET AND COMMUNICATE

Supporting processes

Digital tools as a means of starting down a path

The use and development of digital tools for the promotion and enhancement of the cultural landscape played an important part in the project, not only in terms of the activities offered to the schools, but also in the preparatory phases of documentation and planning. Indeed, the planning of the activities with the schools was supported by a preliminary phase of learning about the tangible and intangible cultural heritage of the area. Through bibliographical and documentary research, and subsequently through on-site surveys and interviews, the research team produced a series of open and free-to-use digital tools for teachers with the aim of offering support for the development of activities with classes and mapping out the less obvious elements of the cultural landscape. The documentation process was initially the work of the members and collaborators of the research project, who were later assisted by the interns for the on-site survey activities. Some teachers also gave their contributions by submitting phenomena and distinctive features that had escaped the notice of the project team.

This first stage allowed the team to put together an initial dossier of the tangible and intangible cultural heritage of the area, which was later offered to the teachers involved in the educational projects as a jumping-off point, providing ideas. All the material collected, such as historical images, documents, videos and maps, was then organised in an online database so that each element could have its own dedicated entry with a detailed documentation sheet. Each element was also catalogued (rural landscape, neighbourhoods expanded in the twentieth century, and parks) and labelled with keywords so that spatial and semantic relationships between the elements identified could be recognised and established.



Interactive map of the tangible and intangible cultural heritage of the project area.

In addition to the dossier, the research team also developed an interactive map, a cultural heritage GIS based on Google Maps which, in combination with the database, provides more in-depth information on the phenomena of the area. The map summarising the cultural landscape of the area was also incorporated into the official web portal for the project with a view to displaying the richness and complexity of the area and the elements that characterise it.

As further activities continued to be planned for schools – especially for the learning tours organised for the pilot classes – the research team also continued to add detail to the map and database, thanks to the collaboration of the teachers and interns who took part in the ScAR project.[1] The contribution provided by the teachers proved to be particularly important for bringing places and traditions not identified in the documentary research to the team's attention, but also for the identification of the most interesting routes and points for contemplating the landscape. Meanwhile, the involvement of the interns made it possible to organise widespread, detailed on-site surveys of the

1. See chapter three.

area which unearthed elements of the urban landscape that were previously undiscovered and only identifiable through direct experience. One example of this is the campaign to map instances of street art – a difficult task to achieve using online exploration tools alone – which demonstrated a significant presence of this form of art in the area; another is the mapping of local artisans and historical shops, and the inclusion in the map of areas undergoing urban redevelopment and regeneration as part of the Municipality of Milan's project "*Riformare le Periferie*" ["Reforming the Peripheries"]. With all of these features, the map played a central role in the definition and planning of the activities proposed by the team over the course of the project, whilst at the same time being the result of a participatory process aimed at helping those involved to discover and promote the cultural landscape of the area.

ICTs for bottom-up pathways of learning

In recent years, information and communication technologies (ICTs), as applied to cultural heritage, are becoming increasingly important in museum, archaeological and even naturalistic contexts. Digital tools such as interactive panels, mobile applications, online maps, virtual and augmented reality environments, and social networks are all offering people new opportunities to enjoy and promote cultural heritage in new and innovative ways (Ippoliti 2011; Settis 2012, pp. 282-304). At present, there are numerous examples of edutainment applications mainly targeted at younger people which aim to offer them an educational yet engaging experience of the elements of cultural heritage that they are visiting (Ott, Pozzi 2011; Sylaiou et al. 2017). Interactive games and applications, as well as virtual and augmented reality experiences, offer an immersive approach to cultural heritage which is capable of not only involving the users in a journey of discovery of a given place's history and culture, but also promoting the value that these assets represent for communities. In much the same vein, social networks – such as Facebook, Instagram and YouTube, in particular – are offering people the opportunity to expand the effective range of communication for the promotion of these assets and activities related to them, whilst at the same time proposing a subjective narrative of these places via the multimedia content and personal impressions being shared.

Heritage associations and institutions seem to consider ICTs as a means to support the promotion of their charge; however, the logic of use of these tools remains by and large tied to top-down dynamics (Gombault et al. 2016). Applications tend to be designed from a "product-user" perspective in

which administrations call upon the support of specialist professionals (educators, communications experts, historians and IT technicians) to propose an edutainment experience to the end user. Similarly, initiatives for the promotion and enhancement of the cultural landscape promoted by local non-profit organisations, such as ecomuseums, landscape observatories, and even spontaneous initiatives that have sprung up on social networks in recent years, all make use of ICTs as a means of popularising the heritage they protect, along with the associated activities. These organisations seem to operate with a view to promoting the area in an effort to encourage cultural tourism. However, the use of technology as a way of building and strengthening local communities, as well as for the promotion of the more hidden elements of both tangible and intangible cultural heritage, seems to still be in its infancy, perhaps precisely because of the top-down approach that is generally taken to the use of ICTs. Changing people's perspective on technology – i.e. from a medium as an end in itself to part of a process for fostering knowledge – can offer an opportunity for both the creation of innovative educational processes and the development of public awareness about the area and its values.

The schools on the outskirts of the city (from primary to university level) can provide a hotbed of ideas for this process and promote a more comprehensive use of ICTs, one capable of fully exploiting the opportunities that new technology has to offer. With this in mind, the ScAR project wanted to experiment with cultural landscape education activities in which the role of ICTs would not remain confined to its dimension as a mere medium for popularisation, but instead represented a powerful tool for education and the active improvement of the area. To kickstart this process, the research group proposed the use of a series of free-to-use web and desktop applications for the construction of interactive narratives of the cultural landscape. The pieces of software that will be presented were selected according to a criterion of inclusiveness based on their ease of use for even those with basic technological skills, thus allowing the participants as much autonomy as possible in the development of their narratives. The activities that will be presented involved the students working side by side with the research team on the technical development of the digital products, whilst the content creation aspect was entrusted to the students themselves, with the supervision of the teachers. In some cases, the activities presented here involved the research team working side by side with the students on the technical development of the digital products, whilst the content creation aspect was entrusted to the students themselves, with the supervision of the teachers. The students thus engaged as both protagonists and producers in the storytelling, tourist guide, online map

and virtual reality environment creation activities, taking full responsibility for developing and editing the content, as well as subsequently promoting the products.

Sharing representations

Building narratives: digital storytelling and map storytelling

In participatory knowledge communication processes, it is essential to seek out the strategies, tools and methodologies best suited to constructing a shared account of the places in question. This is why the construction of narratives – in all its various forms and facilitated by different tools on each occasion – constituted a central activity within the ScAR project, as emerges from the overall description of the process. Here, specifically, reference is made to the activities explicitly aimed at developing narratives, the process of which is supported to this end by the use of specific technologies.

As anticipated[2], since 2006, the HOC-LAB (Hypermedia Open Center Laboratory) at the Politecnico di Milano has been organising the PoliCultura[3] contest, a competition based on sharing multimedia narratives that is open to classes from every year group, from kindergartens to primary schools, all the way up to upper and lower secondary schools. Since its first edition, the programme has seen the involvement of about 36,000 students and 3000 teachers, and aims to promote the use of digital tools in teaching that are capable of contributing to the innovation of teaching itself and offering its participants – students and teachers alike – a chance to acquire both digital and authorial skills. For the development of the narratives, the laboratory provides free use of "*1001Storia*", an intuitive and easy-to-use online tool that allows teachers and students to create complex interactive stories, enriched with text, images, video and audio. In addition, Policultura also offers participating teachers access to a MOOC (Massive Open Online Course) dedicated to the use of the tool and methods for actively involving students in the activity. The contest

2. See chapter two.
3. See the web page www.policultura.it.

is structured according to school levels, and each class can decide whether to submit a story on a theme of their choice or participate in one of the special tracks, in which they must develop narratives relating to a specific theme defined by the HOC-LAB in collaboration with university departments, research projects or private actors.

Since the 2019 edition, ScAR has been a contributing organisation for one of these tracks, prompting the participants to develop narratives inspired by the landscape of everyday life in peripheral contexts. The aim of this track is to propose the lens of the notion of the cultural landscape which, beyond merely describing the natural and cultural heritage of a place, is also capable of conveying the area's identity, which is made up of stories, knowledge and values. Of the narratives submitted in the first edition, two of the most interesting examples were produced by a lower secondary school in Piedmont and a specialised secondary-level institution in the Gratosoglio neighbourhood of Milan.[4] The two submissions offer two very different visions of the term "periphery", each telling the story of the area from the students' perspectives and conveying the relationship that they have with what they recognise as the "centre", namely the centre of Milan and the city of Turin.

The Piedmontese school presented a narrative entitled "*ScARamagna, la periferia dei talenti*" ["SCaRamagna, the Periphery of Talents"], in which the students, along with their teachers, question the very meaning of the term "periphery" itself, exploring the idea of whether their area is indeed peripheral and what sort of influence this context – which is at once rural and located within the social and economic fabric of Turin – can have on their lifestyle. Describing the history, cultural heritage and activities that define the area, the students expound on their relationship with the landscape of everyday life and the values that distinguish the identity of the area. The Milanese institute, meanwhile, submitted a narrative entitled "*Questa città che non finisce mai… La street art racconta la zona 5.0*" ["This City that Never Ends… Street art illustrates zone 5.0"].[5] This piece describes the students' point of view on the city through a series of video clips made by them, telling the story of everyday life in the neighbourhood, reading its landscape through sounds, music,

4. The schools involved were: the lower secondary school of Caramagna in Piedmon, Italy, and the upper secondary school Istituto Professionale per I Servizi Commerciali W. Kandinsky in Milan.
5. This didactic project is an example of an open activity. It was conducted by the school starting from the stimuli provided by the research and with the tools made available to the teachers, without direct intervention of the experts. The activity, full of interesting ideas, is documented by concluding reports and by a video interview with the coordinating teacher, to whom reference will be made in these pages and then again in chapter five in a reflection on the impact of the project.

Two frames of the digital storytelling created by upper secondary students during the "*alternanza scuola-lavoro*" programme developed on the theme of street art in the Gratosoglio. The product won the first prize in PoliCultura 2019 Award.

images and interviews with local residents and business owners. A particular focus is given to the local street art and the Zona Autonoma Milano (ZAM) [Autonomous Zone Milan] social centre, located in an interesting example of 1930s industrial architecture which is a highly distinctive element of the urban fabric of the southern outskirts of Milan. The story concludes with a description of the mural painted inside the school itself and the visions proposed by the students for the future of the neighbourhood. Using collage and photomontage techniques, the students then created representations of their imagined transformations of some of their everyday places as well as new urban scenarios. From this perspective, it is interesting to note how digital storytelling, in addition to being adopted as a simple narrative tool, has also been adapted to the users' needs, becoming a tool for imagining and envisaging new landscapes. The two examples do an impressive job of sensitively exploring two different meanings of "periphery", sparking reflections on how, upon closer inspection, the physical and semantic boundary of this and other "peripheries" actually has blurred edges that are difficult to identify and define in a prescriptive way.

In addition to those involved in the Policultura contest, the ScAR project also offered the competing students and teachers other activities centred around developing digital narratives. More specifically, they were asked to develop interactive narratives about the everyday landscape through the use of the Knightlab educational software suite which, aside from providing innovative and easy-to-use applications, offers the option of sharing the results produced on a range of web platforms and social networks. Knightlab is an open-source project that offers digital storytelling tools especially for schools,

culture and journalism.[6] The suite comprises a range of applications that can be used by students and teachers to create innovative educational paths that can even incorporate multiple subjects, such as geography, history, literature and art. Of this selection, the ScAR research team specifically recommended the JuxtaposeJS and StoryMapJS applications to the participants as, in addition to offering an easy-to-use interface, they also provide the option of creating interactive narratives of the everyday landscape through stories, images, videos and maps. To facilitate the use of these applications as part of landscape education activities, teacher training courses were organised, providing them with demonstrations of the potential of these tools and their possible uses, even outside the scope of ScAR activities.

Taking a closer look at the tools themselves, JuxtaposeJS is a service that allows the user to create an application that compares images by way of a slider. The tool gave the participants the opportunity to construct interactive narratives of the territory incorporating maps and photographs, allowing them to demonstrate the ways in which the urban landscape has evolved and transformed over time. StoryMapJS, meanwhile, is a storytelling tool that principally makes use of interactive maps. Users can create narratives in geo-localised stages, enriched with text and multimedia content such as photos, images, videos and audio. The software allowed the students and teachers to produce narratives of the everyday landscape that talk about the projects and stories of their neighbourhood in stages. One example of its use in this way is the teaching project submitted by two classes from a lower secondary school in the Chiesa Rossa neighbourhood.[7] The teachers, with the involvement of the students, illustrated the features of the everyday landscape by presenting the historical phenomena and meeting places that define the neighbourhood. The participants interpreted and talked about the area and its history from their perspective, peppering the presentation with their own impressions and even linking it with topical cultural references. One group of students, for example, used the image comparison application to showcase the changes that had taken place in their neighbourhood following the creation of a vast mural by comparing photos from before and after it was painted (fig. p. 133). Meanwhile, a second group produced a narrative based on a map entitled "*Lo sbaglio della Conca*" ["The Mistake of the Lock"]: a journey through the

6. The project is promoted and developed by the U.S. Northwestern University in San Francisco and Chicago. For more information see the web page https://knightlab.northwestern.edu.
7. Lower secondary school S. Pertini part of Istituto Comprensivo Palmieri (primary and lower secondary school), in Milan.

Frame comparison application realized with JuxtaposeJS and developed by lower secondary school students. The interactive tool showed the evolution of the local landscape marked by the appearance of a mural and was shared by students through the "Atlante digitale delle memorie" ["Digital Atlas of Memories] created in collaboration with Ecomuseo Sud Milano (MUMI).

Stadera neighbourhood presenting the history of the most significant places and elements of its cultural heritage, with a particular focus on one of the most distinctive and memorable episodes to occur in the area, namely that of the "Conca Fallata" [Mistaken Lock]. There is an interesting backstory to this historical hydraulic system of Milan's waterways, the unusual name of which prompted the students to research its origins and etymology, reconstructing the history of the structure through documents and interviews all the way through to the present day. Other groups of students, also using the same tools, opted to concentrate on the route between home and school, presenting an interactive narrative of the everyday landscape including places significant to them, such as the sports centre, the park, their friend's house and even the supermarket.

Frame of a map-based interactive narration (map storytelling) created with StoryMapJS by lower secondary school students. The narration was shared on the “Atlante digitale delle memorie” [“Digital tlas of Memories] developed in collaboration with Ecomuseo Sud Milano (MUMI).

Constructing virtual tours of the neighbourhoods

Over the last ten years, the ever-growing range of free software dedicated to the construction of geo-localised narratives has offered a valuable contribution to education for schools at every level. There is both free proprietary software and FOSS (Free and Open-Source Software) available online, allowing users to experiment with and develop stories about an area, including through interactive maps and both virtual and augmented reality environments. The involvement of schools in the development of these narratives offers an innovative teaching approach with two main goals: on the one hand, to involve and train students and teachers in how to produce and share a digital application, and on the other, to offer end users a tool that can tell the story of the urban landscape from the perspective of the young residents of the neighbourhood.

During the learning tours mentioned earlier[8], ScAR experimented with the use of spherical digital cameras with a view to documenting the experience and demonstrating the possibilities offered by such images to the participants. When connected to a smartphone, the camera made it possible to produce a sequence of geo-localised spherical photos taken at regular intervals, which were later uploaded to Mapillary, a platform for sharing street-level imagery.[9] By reading the metadata of the images, which includes their geographical location and capture time, Mapillary was able to piece together the route taken on an open web map. The participants were then offered the opportunity to take part in a global Volunteered Geographical Information (VGI) project in which people around the world share the geographical information they have collected for the purpose of constructing digital maps that are more accurate and, above all, free for all to use.

The spherical photographs and materials collected and processed for other additional activities – such as the development of interactive tourist guides, which we shall come to shortly – gave the research team an opportunity to experiment with creating stories in virtual reality. These experiments were then translated into a prototype for a virtual tour which could then be followed autonomously by schools, using free online services specifically suited to the learning contexts of upper and lower secondary schools. Indeed, the tool is suitable for users with technical setups and IT skills comparable to those found in schools, aside from some small implementations.

8. See chapter three
9. See the platform of the application: www.mapillary.com.

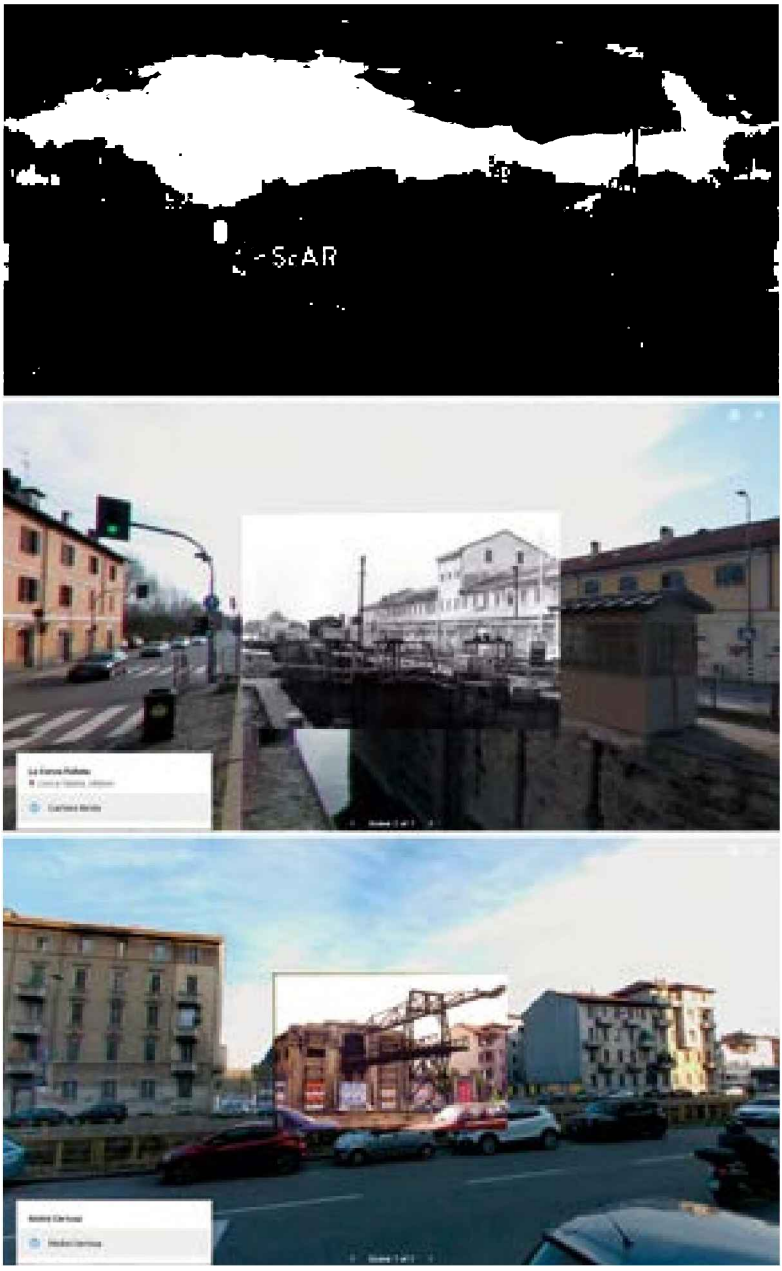
After having analysed several software for the development and sharing of virtual tours, all freely available online, the research group finally opted for the Google Tour Creator application, which appeared to be the most functional for the teaching activities in question. The web application has an intuitive back end which is suitable for even those with fairly basic IT skills, allowing them to create a sequence of immersive scenes using self-produced spherical images – such as those collected over the course of the learning tours – but there is also the option of using the images available on Google Street View. The software suite also offers another application, Cardboard Camera, which allows the user to capture spherical images complemented by ambient sounds, all with their smartphone. In addition, Google Tour Creator allows the user to customise the scene with interactive frames in order to incorporate multimedia content, such as images and audio files of ambient sounds or narrations, thus making for a more engaging experience tour overall.

The resulting prototype, entitled "*Experience tour del quartiere Stadera*" ["Experience tour of the Stadera Neighbourhood"], consists of six interactive scenes – as well as an initial one to guide the user on how to use the application – and passes through the various points of interest contributed by the students.[10] By following the virtual route, the user can virtually visit the most significant places in the neighbourhood.[11] Within each scene, the user is guided by a narrator and can listen to the ambient sounds recorded during the on-site visits carried out with the students. Users can even interact with the scene: for example, they can activate the in-depth story behind the elements of cultural heritage being observed, or even superimpose historical photos over the modern-day images in view as a way of seeing and learning about the evolution of the landscape over time.

The prototype was then made available on Google Expedition, a sharing platform which allows users to view the tour in both desktop mode and through Cardboard virtual and augmented reality goggles. The option of freely sharing the final product offers a further educational tool for students and teachers, as it both allows a cultural landscape usually hidden from most people to be discovered and makes the platform a potential virtual meeting

10. In this case, the students from the upper secondary school C. Varalli.

11. Starting from the Conca Fallata and the historical building of the Cartiere Binda paper mill to the Park of the Cascina Chiesa Rossa, all the way to the historical social housing buildings. The tour then continues, entering the Church of Santa Maria Annunciata in Chiesa Rossa, designed by Giovanni Muzio in 1936, and showcasing the light installation by artist Dan Flavin, created in 1996. Finally the tour ends at the Molini Certosa flour mill, an important example of industrial architecture from the early 20th century.



Frame of the virtual reality tour "*Experience tour del quartiere Stadera*" ["Experience tour of Stadera neighbourhood"] developed by the academic team starting from the contents produced by the students. The tool was a prototype for a possible activity for schools. The application allows the user to explore the area by displaying information, listening to sounds and overlapping historical images over the current panorama.

A child tests the prototype of the virtual reality tour during the exhibition of the ScAR project during the event "*Festa delle scuole del Municipio 5*" ["Festival of Municipio 5 schools"] at Parco Cascina Chiesa Rossa.

place to be used by different schools. Indeed, it enables students and teachers from different places to share their cultural landscape education experiences and promote their everyday landscapes to a wider audience. The virtual tour was finally offered to students and teachers during meetings for the purpose of collecting their views on the potential of the tools, before being presented at the dissemination events for the ScAR project, where it was tested by a public composed of different age groups – including some very young people – through the use of low-cost virtual reality viewers which make it possible for users to try out the experience with just their own smartphones.

Sharing via social networks

Social networks, with their ever-growing ubiquity, have changed the way in which daily life, social interactions and even places are communicated and represented to the wider world (Van Dijck, Poell 2013). Beyond their implications in the commercial and advertising worlds, these platforms also allow for the construction of interesting narratives which deserve to be explored in greater depth. Facebook, Instagram and YouTube – the three social networks par excellence at the moment – not only offer a platform for sharing images, videos and other multimedia items, but also serve as a tool for creating first-person narratives with content enriched by a wealth of personal impressions, reflections and stories. Furthermore, if integrated into educational processes with students, social networks can become a virtual place for sharing and interaction between peers which allows for discussion and the subsequent formation of groups of people linked by common issues. As such, social networks can represent an ally in efforts to promote elements of both tangible and intangible cultural heritage, especially for the assets and places that are generally left out of the most popular tourist and cultural circuits. Telling the story of an everyday landscape through social networks thus becomes a way of conveying the distinctive features and values of the places in question, whilst at the same time bolstering the local inhabitants' sense of belonging to them, as well as having a positive influence on visitors' perceptions. From this point of view, social networks can play an important role in landscape education processes and be offered to young people as tools which allow them to talk about their daily lives and promote the places closest to their hearts. In this context, the sharing and interaction tools made available by Facebook and Instagram – such as creating pages, using hashtags and promoting posts, amongst others – give the participants an opportunity to develop brand-new stories about the everyday landscape that truly convey the user's personal point of view, values, perceptions and stories.[12]

In addition to using social media to broadcast its activities and events in the area, ScAR also promoted the use of the #scarpolimi hashtag in the schools involved in the project for all communications regarding project-related

12. The introduction and circulation of the hashtag for this project allowed the team to view and analyse all activities and events related to ScAR. In order to monitor the activity on the social media channels, the research team finally integrated a social wall into the project website (http://www.scar.polimi.it/#socialwall), an application which made it possible to view all posts tagged with the #scarpolimi hashtag in real time.

activities. The spread of the hashtag was useful for broadcasting the activities of the project through crossposting, i.e. referencing and directing users to the social media pages of other private and administrative bodies. The students were also asked to use the hashtag on any photos, images, videos and text to flag up elements of the everyday landscape with a certain significant to them, thus employing a new context and various dynamics to enrich and develop one of the most extensive bottom-up processes of collecting information and interpretations on places currently in existence. This proved to be useful not only for gauging the students' level of involvement in the project outside of the teaching activities themselves, but also as a way of promoting a more conscious use of social networks and their potential. In light of this, one example of particular interest is the initiative of a group of students on alternating school and work programme who created a shared Instagram account of their own volition as a place to document the project activities from their point of view. The students used the account to use both images and text to describe and share their impressions of the various outings, project activities, visits to cultural institutions and interviews with professionals, such as the interview with the project manager of a theatre company or their meeting with the director of an architectural modelling laboratory at a higher education institution.

Offering tools to the community

Playing and engaging others: landscape gamification

Gaming, especially as a medium for educational actions aimed at an audience of young people and families, is increasingly becoming a tool for spreading awareness of cultural heritage, with all the promotive effects this engagement tends to bring about. Gaming experiences allow users a way of being directly involved in the experience of the landscape and are an integral part of the development of an edutainment process capable of conveying the values of the area (Ippoliti 2011). Indeed, the educational entertainment scene has many examples of landscape gamification, both digital and otherwise, which give users the ability to interact with an area and its background through apps which communicate the local history or discovery paths which allow them to visit brand-new places or

find out more about interesting elements or features of cultural heritage. These devices are presented with an innovative educational approach which proves effectively engaging for not only the younger age groups – from six to fourteen – but also families. In most cases, these products are developed in institutional or professional contexts with a top-down logic, and as such, involving younger uses in the design stages represents an innovative element in this scenario.

ScAR approached classes in a lower secondary school with an activity involving the development of an urban game for mobile devices. Directly involving students and teachers as early as the development and organisation phases of the game gave them the opportunity to truly play an active role in designing the technological tool and developing its content. With this, the participants became the creators of the game rather than merely the end users of the application. This activity encouraged the students to observe the everyday landscape in greater depth than ever before, seeking out new perspectives and recognising the values and hidden treasures of the area that they live in. They deemed the cultural landscape – the values and stories that make up the identity of the place – to be relevant and worthy of being communicated and represented, even to those who are not local to the neighbourhood. In this activity, the development of the narrative, the route and the stops along the way aims not only to present the elements of cultural heritage recognised as such by all, but also – perhaps more importantly – to paint a picture of the cultural landscape from the perspective of the community that lives in it. This translates to the end user being involved in an authentic and engaging experience of the area which offers both an innovative lens through which to view the neighbourhood and a peer-to-peer learning process which allows these young citizens to express their perceptions of their everyday landscape to other young people.

Specifically, the activity resulted in the development of two urban games based on GAIASmart, a mobile application (Carli 2017). The application allows even amateur developers to create a geo-referenced narrative, a journey consisting of multiple stages in which the users are required to perform tasks and solve quizzes in order to proceed to the next step and complete the story. The two areas selected within the wider area covered by the project were Vigentino and Gratosoglio, two districts on the outskirts of Milan which, whilst apparently close together – at least geographically and historically speaking – have some marked differences in terms of the composition of the social fabric of their residents. Indeed, Vigentino has a great deal of private housing and, on average, a high percentage of university graduates and employed people, whereas Gratosoglio has a high percentage of public housing built in the 1960s and 1970s, along with a low employment rate (PGT Milano 2019).

The choice of age group of the students (12 to 13 years old) was largely informed by their level of familiarity with IT tools and the fact that, still being relatively young, they would be more inclined to get involved in the game-oriented approach of the activity. Furthermore, lower secondary schools – unlike upper secondary schools – mostly gather students who have grown up and live in the neighbourhood, meaning that they are likely to have a sharper, more attentive eye for the ins and outs of the area.

The classes worked on developing a stage-based narrative for the area, starting from their school and travelling through their respective outlying neighbourhoods before each ending up at a place of widely-recognised cultural significance. The phases of creating both the route and the narrative involved an initial field visit led by the project team, which provided tools to stimulate the collection of the students' impressions and prompted them to carefully observe the neighbourhood and flag up its key locations.[13] An initial route, drawn up by the experts, was then gradually added to, incorporating stops and landmarks suggested by both teachers and students who provided their expertise and knowledge of the area. This preparatory phase offered the students an important opportunity to discuss and reflect upon their everyday landscape. The participants were encouraged to exchange their opinions, stories and memories of the places they passed through and note them down so that they could later share them in class. For the next part of the activity, the students and teachers worked independently, collecting material to help them develop both the narrative and the stages of the game, using both documentary research in the local libraries and field research in the form of interviews with residents, business owners and significant figures from the neighbourhood community. This greatly encouraged the young citizens to interact with the residents – both new and old – of the neighbourhoods and to ask about their lives, their businesses, their memories, how and why they settled there and how their everyday landscape had changed over the years. This meant that the participants were taken through a process of intercultural and intergenerational dialogue.[14] The narrative and the individual stages were developed following guided templates drawn up with a view to simplifying the subsequent creation of the final product. For each stage, the students and teachers provided the developers with the geographical location, the content and the task that the user would have to perform in order to move on to the

13. See chapter three.
14. Interviews as an educational mean is explained in the chapter three.

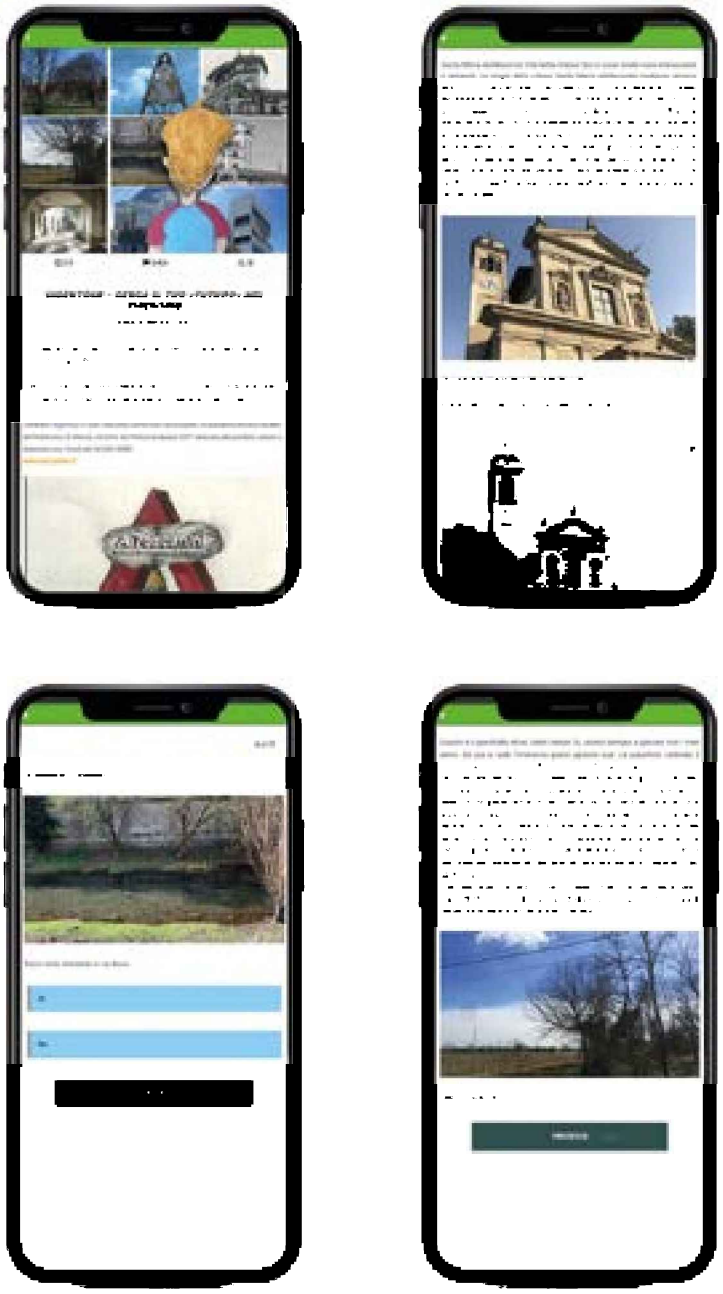
next one; these included questions on local history, exercises in recognising significant elements (e.g. identifying an architectural detail in a square or on a façade), or even collecting photographs of specific views that had to be recognised and identified in the field according to a given image. Finally, the development team adapted the narrative and the details of each stage – in some cases with the assistance of a professional storyteller – before developing the IT architecture and then publishing the game on the application platform.[15]

It is interesting to follow the narrative paths chosen by the individual classes to observe how communicating the experience of the area can translate into a collective process of building and sharing knowledge.

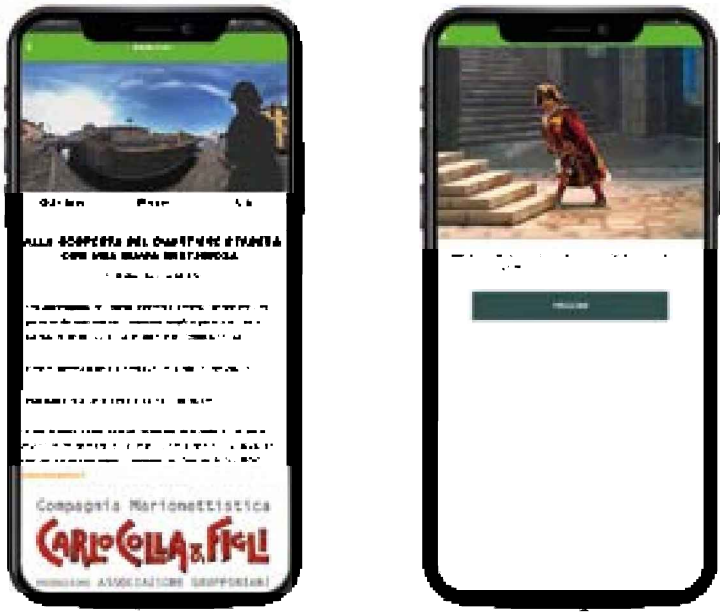
The first urban game, entitled "*Vigentour – Scopri il tuo futuro nel Vigentino*" ["Vigentour – Find Your Future in Vigentino"][16], tells the story of an imaginary young protagonist, Ambrogio, who has just finished his final exams at the end of lower secondary school and is trying to figure out what sort of future he would like to pursue. Ambrogio guides the user along the entire route, which starts from the school, passes through Vigentino, and ends at the Fondazione Prada headquarters, a landmark of the neighbourhood. Throughout each of the twelve stages, the user comes across historic buildings and locations in the neighbourhood, with Ambrogio explaining the stories behind them and their value for the local community, all whilst mulling over the possible career paths he could take in the future. This young "virtual guide" also prompts the user to answer questions on local history, to go to a certain location so as to take a closer look at it, or to take a photograph of a specific detail in order to move on to the next stage. The route finally ends in front of the entrance to the Fondazione Prada's exhibition spaces, where Ambrogio discovers his passion for art. The young man envisages an urban redevelopment project for the surrounding area, imagining what it would look like to "improve" the perimeter wall of the Porta Romana rail yard with a series of murals designed by the students (fig. p. 144).

The second urban game to be created[17] is entitled "*Alla scoperta del quartiere Stadera con una guida misteriosa*" ["Discovering the Stadera Neighbourhood with a Mysterious Guide"] and invites the user to discover the distinctive elements and stories of the urban landscape along the course of a river, the Lambro Meridionale, as well as the Gratosoglio and Stadera neighbourhoods.

15. See the GaiaSmart platform, accessible at http://www.gaiasmart.com/
16. Developed in collaboration with a second-year class of the lower secondary school A. Toscanini in Milan.
17. Developed in collaboration with a third-year class of the lower secondary school Arcadia in Milan.



Screenshots of the geogame "*Vigentour – Cerca il tuo futuro nel Vigentino*" ["Vigentour – Find your future in Vigentino]. The game drives participants to discover the neighbourhood and was developed by the students of the local lower secondary school in collaboration with the ScAR and GaiaSmart teams.



Screenschots of the geogame *"Dal Gratosoglio allo Stadera con una guida misteriosa"* ["Discovering the Stadera Neighbourhood with a Mysterious Guide"]. The game drives participants to discover the neighbourhood and was developed by the students of the Gratosoglio lower secondary school in collaboration with the ScAR and GaiaSmart teams.

The stated aim of the game is to find out the identity of the protagonist, who guides the player through the eleven stages with a variety of quizzes and activities. Along the way, the mysterious guide tells their story and that of the places visited over the course of the route. The game finally ends at the workshop of the Compagnia Carlo Colla & Figli, where the protagonist reveals himself to be Girolamo, one of the theatre's historic puppets. The aforementioned puppet company – explored in more detail earlier on – supported and assisted ScAR and the students involved in the project by offering not only photographic and documentary material for the game, but also a prize for those who complete the entire route, namely a discount on a ticket for one of their shows.

In both the cases in question, the ultimate purpose of the gamified tours is to build and share the story of the neighbourhood as seen from the perspective of its younger citizens. The games intend to encourage people to explore the area, with all its stories and landmarks, whilst also teaching them the skills needed to critically observe the everyday landscape, even in cases where it

may appear, at first glance, to be devoid of any cultural significance. Both the routes start at a school – an "ordinary" place in the neighbourhood – moving through significant points in the local urban landscape along the way, and finally ending at a location that is widely recognised as culturally significant, in some cases even at an international level, such as Fondazione Prada.

Creating interactive guides for curious tourists

A collaboration with the students and teachers of a secondary school that includes both a technical institute for tourism and a linguistic school presented an opportunity to build a project for the promotion of the cultural landscape by developing interactive tourist guides which can be used on mobile devices. The project, entitled "*Seguitemi, prego...*" ["Follow me, please..."], was designed to fit within the framework of the alternating school and work programme.[18]

Developing the tourist guides involved a preparatory phase in which the students discovered the area through learning tours in the neighbourhood, engaging in a series of activities aimed at reading and interpreting the urban landscape. The participants were asked to trace the route they had taken on a map provided to them and to visually recognise and locate on the topographical outline certain landmarks in the area, as indicated by the research team. As part of the activity, the participants were also asked to keep a sort of travel diary, noting down their opinions as well as any points or locations that they found interesting.

In this case, as is often the case in secondary schools, most of the students did not actually live in the neighbourhood where the school is located, and thus had only a cursory knowledge and experience of the area, mostly relating to the journey between home and school and any school-related activities. As such, the initial learning tour represented, for many of the participants, a genuine journey of discovery of the urban landscape, highlighting the existence of interesting elements and unexpected stories in a landscape that they passed through on a daily basis but largely had no real knowledge of. The activity also offered the participants an opportunity for discussion and reflection on the area and the fact that even urban landscapes apparently devoid of any cultural significance whatsoever can be filled with hidden gems and a strong local identity.

18. Upper secondary school C. Varalli. The project involved twenty-four students, aged between fifteen and eighteen, from third and fourth-year classes of the technical school for tourism and the foreign languages and literature high-school (Liceo Linguistico).

The students then proceeded to collect documents and accounts about the locations involved and, in collaboration with the working group, carefully selected the stops to include in the guides for the tourist trails. It was at this stage that some rather interesting stories woven into the very fabric of the local landscape emerged, changing and enriching the routes that were initially proposed. This was the case, for example, of an urban farmstead that became the symbol of the local citizens in the neighbourhood who were active against the property speculation of the 1990s, with their story emerging from the accounts given by the residents and some teachers.[19]

The students then reworked and translated the materials collected to serve as the source for the texts of the interactive guides into two languages, finally developing a compelling narrative centred on the area and its history available for the use of Italian and foreign tourists alike. For the development of the guides themselves, the research group suggested that the participants use izi. TRAVEL: a free online service dedicated specifically to developing professional tourist guides for mobile devices such as smartphones and tablets. This tool allows the creator to put together themed trails enriched with hypertext content and audio narration tracks to guide the user as they follow the tours. For each point of interest, the tool allows the creator to indicate its location and establish a "trigger area" to send a push notification informing them of the presence of a point of interest for which they can then read (or listen to) the history and view historical images and videos. The application has a desktop-based back end which allows the creator to mark these points of interest and insert content, before linking them together to establish the final tourist trails. The use of the platform was proposed in *ad hoc* training meetings during which the students and teachers learned about how to insert text and multimedia content, establish the routes and "trigger areas", and finally publish the guides and promote them on the service's sharing platform. The guides are now available for free to the public in both Italian and English (figs. p. 150 and 151) and, departing from landmarks of international fame such as the Fondazione Prada headquarters, they take tourists on an exploratory journey through areas that are rarely – if ever – frequented by mainstream tourist

19. The farmstead referenced here is the historic Cascina Campazzo, now home to the Parco del Ticinello. The residents interviewed – some of whom were teachers – shed light on its history as a symbol against housing speculation in the neighbourhood. In the late 1980s, a real estate group intended to parcel out the agricultural area of the farmstead and build a series of residential buildings. However, the local residents formed an association and, over the years, they managed to block the expansion project, instead promoting the formation of the current agricultural park and the renovation of the historical farmhouse at its heart.

groups, venturing into long-established neighbourhoods and up-and-coming new locations to discover a wealth of historical buildings, contemporary art installations, ancient waterways and new urban configurations.[20]

Upon completion of the project, the students and teachers organised an event to present their work to their fellow students from other classes, their families, and the general public, also offering visits of the local area as a means of testing out the applications.

Thanks to the usage statistics provided by the izi.TRAVEL platform, it was possible to verify that the tours did indeed reach a sizeable international audience, achieving a significant goal in terms of "authentic learning", including as regards the vocational training scheme activities and the objectives of connecting school, society and the professional world that are central to this type of educational experience.[21]

The experience also shows how, within the processes of conveying the true value of the everyday landscape, schools can also play a role as bastions of local culture and promotion, even seeking out unlikely audiences such as, in this case, meandering tourists in search of unusual trails to discover the identity of places that may be off the beaten track.

20. The routes – which follow two sequential yet independent routes – connect the site of the school with the Fondazione Prada headquarters, which was chosen as a tourist attraction. The first of them, entitled "Exploratory Tour from the Chiesa Rossa Neighbourhood to Morivione", is around six kilometres long and connects the upper secondary school C. Varalli to the historical Ricevitrice Elettrica AEM (an electrical substation), passing through twelve points of interest connected to local history along the way, such as the Conca Fallata, the historical Stadera neighbourhood, and Giovanni Muzio's Chiesa Rossa, with a light installation by Dan Flavin inside. The second trail, entitled "Exploratory Tour from Morivione to the Fondazione Prada", is around seven kilometres long, starting from the Ricevitrice Elettrica AEM and ending at the Fondazione Prada building. This route focuses on the urban transformations that the Morivione neighbourhood has undergone over the last two centuries. As such, the tour tells the story of the Morivione and Vigentino neighbourhoods' agricultural past, the transformation of the former into one of the most industrialised areas in the city at the turn of the 20th century, the process of deindustrialisation that began in the 1980s, and the "Symbiosis Project", which is currently engaged in redeveloping the Morivione neighbourhood; indeed, the area is afflicted by many disused industrial spaces, within which the new Piazza A. Olivetti has been established, along with the Fondazione Prada headquarters, designed by renowned architectural firm OMA. Both trails are available on the izi.TRAVEL platform, accessible at https://izi.travel/it.

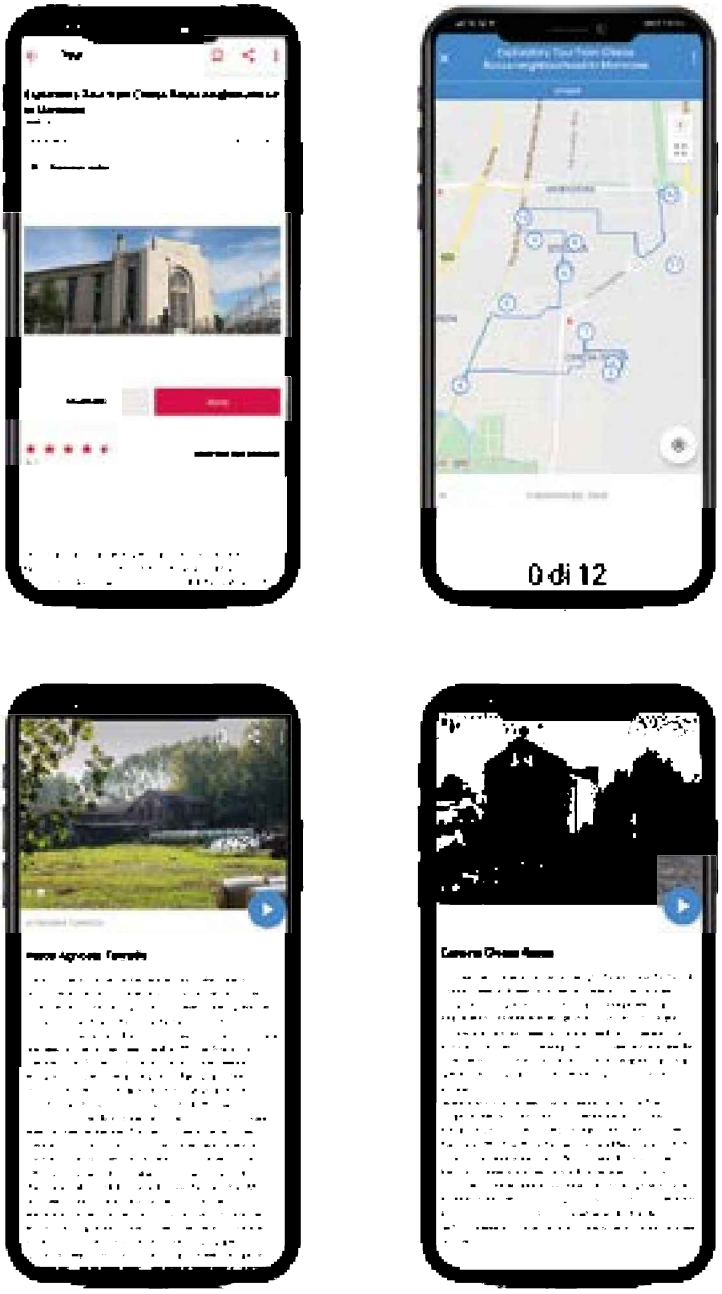
21. In the first seven months from publication (May 2019-February 2021), the two tours were viewed by approximately 2000 people and completed by 178, half of whom were not native speakers of Italian. This is an encouraging figure in light of the audience of the application which, based on the number of downloads, could reasonably be described as a 'niche' product.

A student during the *"alternanza scuola-lavoro"* programme works on the backend of the Content Management System Izi.Travel to develop the interactive tourist guide.

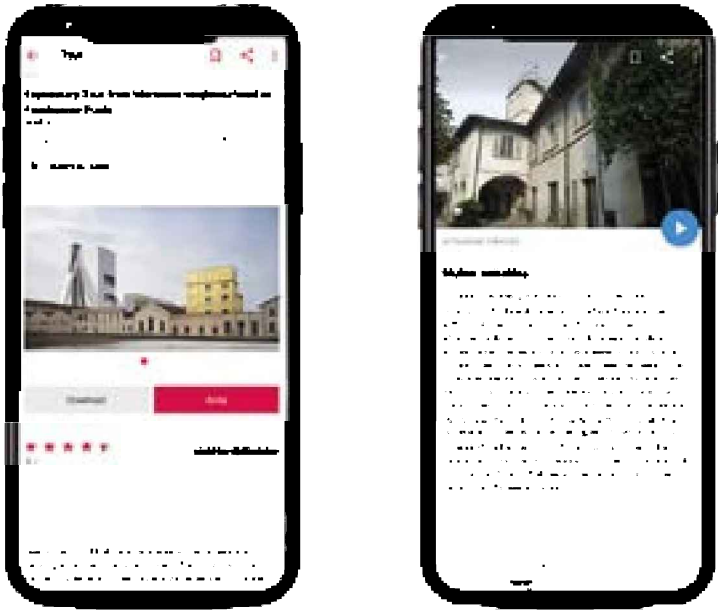
Sharing reflections, products, methodologies: the digital atlas of memories

As previously mentioned, one particularly important local actor involved is Ecomuseo Milano Sud (MUMI).[22] A well-established practice throughout Europe, community museums or ecomuseums are set up by a community of citizens who work closely with institutions with a view to promoting the places where they live (Riva 2017). MUMI and its partners – including Municipalities 5 and 6 of Milan, the Fondazione Rete Civica Milano and other private and non-profit organisations – aim to promote and enhance the area not only by cataloguing its tangible and intangible cultural heritage, but also – perhaps most importantly – through actions which directly involve its citizens. To pursue its goals, the ecomuseum organises various initiatives in the area aimed at making the local community more aware and mindful of the values of the everyday landscape, especially in collaboration with schools. The MUMI

22. See chapter two.



Frame of the interactive tourist guide “Exploratory Tour from Chiesa Rossa to Morivione” developed by students with Izi.Travel during the “*alternanza scuola-lavoro*” programme.



Frame of the tourist guide for smartphones "Exploratory Tour from Morivione to Fondazione Prada" developed by students with Izi.Travel during the "*alternanza scuola-lavoro*" programme.

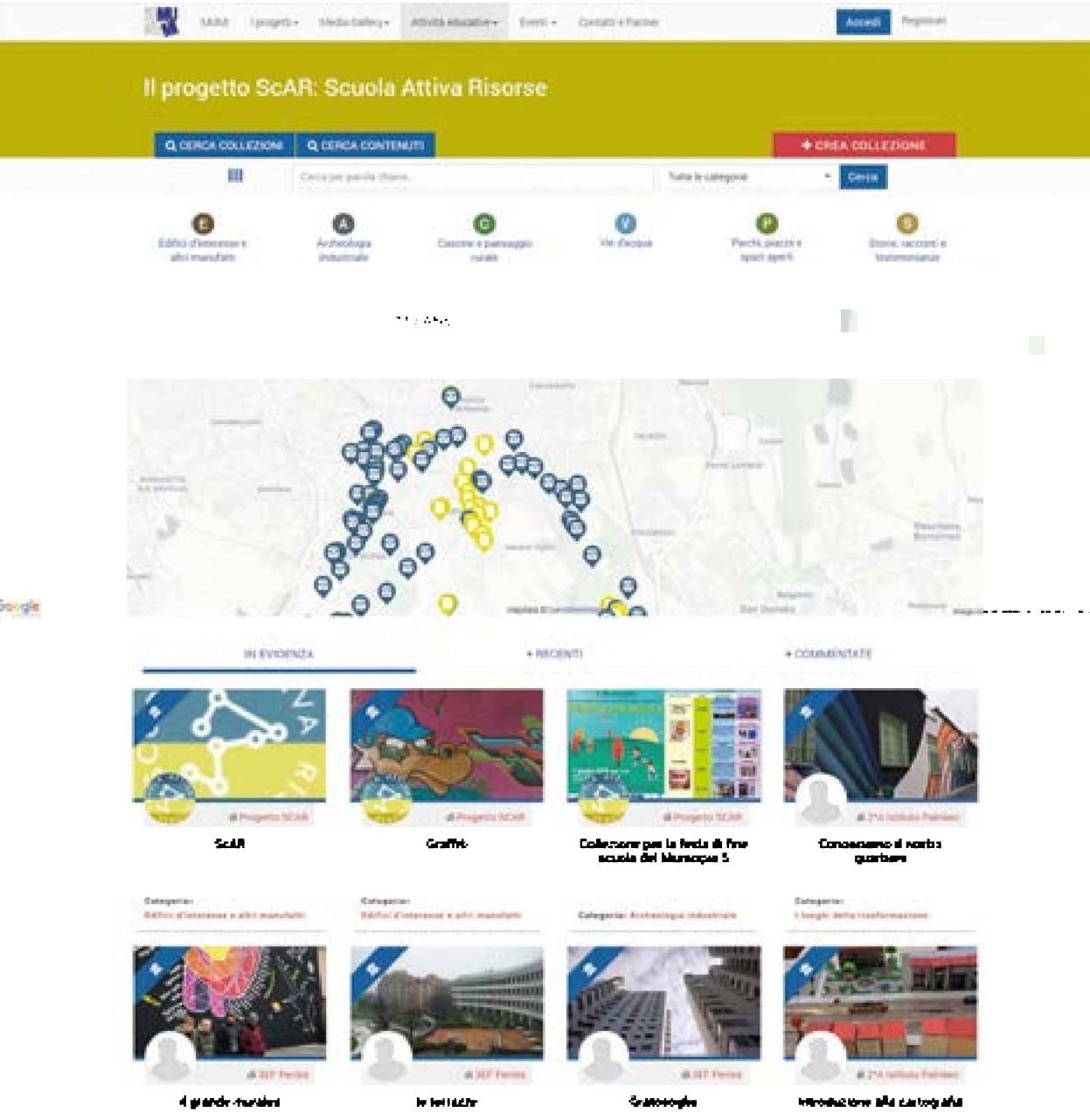
ecomuseum also boasts a significant digital component, with the website offering the implementation of ICTs tools specifically for the promotion and discovery of the local landscape, such as a geoblog and a web map. As such, the field activities that take place in the area are complemented by an array of open-access digital tools for communication and use of the museum's content.

The collaboration between ScAR and the ecomuseum MUMI led to the development of the "*Atlante digitale delle memorie*" ["Digital Atlas of Memories"], a web application which provides somewhere for schools to share their impressions, thoughts and fragments of local history. The Atlas – developed by the technical team at MUMI – is in essence a geoblog which allows users to insert geo-localised multimedia content which tells the story of the local area. As well as being organised by type, the content submitted is also divided up into categories according to the characteristics of the local landscape that it pertains to: waterways, industrial archaeology, farmsteads and rural landscapes, parks, squares and open spaces, historical buildings, etc., whilst an additional category provides a dedicated place for stories, tales and accounts.

The main aim of the tool is to create a sort of virtual museum of the everyday landscape within the project area, drawing on the direct participation of those schools that are currently involved with the project, but also of any others that may wish to contribute in future. The implementation of the Atlas involved a preparatory training phase for the teachers and students in which they were shown how the tool itself works and, more broadly, its potential uses as part of the teaching programme. However, the tool also lends itself to independent use by schools, thanks to its ease of use and the support provided by the ecomuseum. The Atlas has been highly successful thus far, garnering participation from schools across the educational system, from primary to lower secondary schools, as well as groups in vocational training schemes.

The tool – which was primarily presented as an aggregator for the various pieces of documentation on the everyday landscape and the phenomena of the local area – also revealed many other important potential uses over the course of the project. Perhaps most notably, it was adopted by teachers as a tool for mapping out the many and varied landscape education projects developed within the framework of ScAR as a whole. Teachers worked with their students to upload the work they had done during the project – all dedicated to specific areas, objects and locations – to the web map. They also mapped out the digital products of the work they had done with the students, such as the applications developed with the KnightLab suite, the video interviews conducted with the local residents and business owners of the neighbourhood, the videos of the educational theatre workshops, the sketches of the landscape, and even the various narratives and presentations that the students had created. As of the end of the project, the Digital Atlas of Memories contains around 150 entries and is ripe for further use; indeed, it is an incredibly useful tool, not only in its capacity as a digital map of the tangible and intangible cultural heritage of the area, but also as a platform for sharing methodologies and disseminating the landscape education projects and experiments carried out by the students and teachers involved.[23]

23. See chapter five.



The user interface of “Atlante digitale delle memorie” [“Digital Atlas of Memories”] developed by ScAR in collaboration with the Ecomuseo Milano Sud (MUMI). The page shows some of the contents uploaded by the schools and organized into digital collections.