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Polimi TIS

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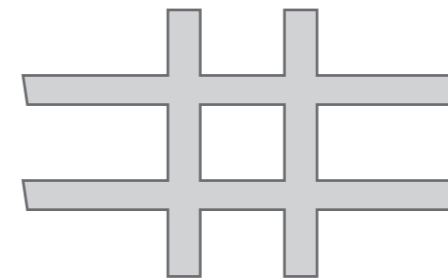
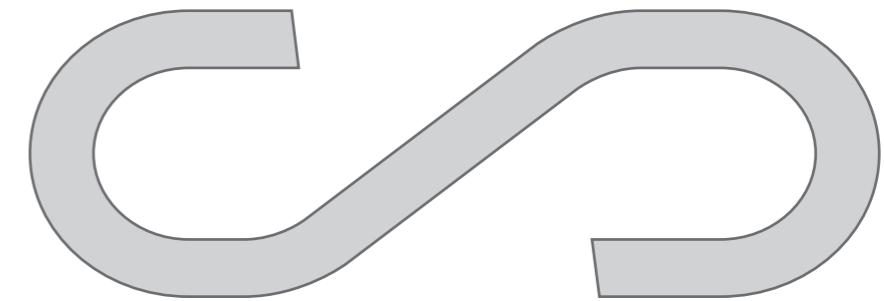
THESIS INCUBATOR STUDIO

EARS OF CORVETTO



Anisiya Shelevaya

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THESIS INCUBATOR STUDIO

Project developed within the Thesis Incubator Studio - Politecnico di Milano in partnership with Comune di Milano

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#TIS_CLUSTER 2020 | 21
Bizzotto Italia
CremonaFiere
Door-Front City_Comune di Milano
Marchesini Group

EARS OF CORVETTO

index

- 006 Abstract
- 008 Methodology

Exploration

- 012 What, where, who?
- 028 Urban activities & sounds
- 034 Sensory response
- 040 Noise that matters
- 042 Personal stereos
- 044 How sounds Corvetto?
- 050 **Main Question**

Reflection

- 066 Sound Compass
- 068 Project prefiguration
- 070 Sound scenarios
- 072 Project concept

Implementation

- 078 Spacial narration
- 082 Sound Forest
- 084 Ears & Dandellion Field
- 086 Waterfall Square & Sound Forest
- 108 Model photos

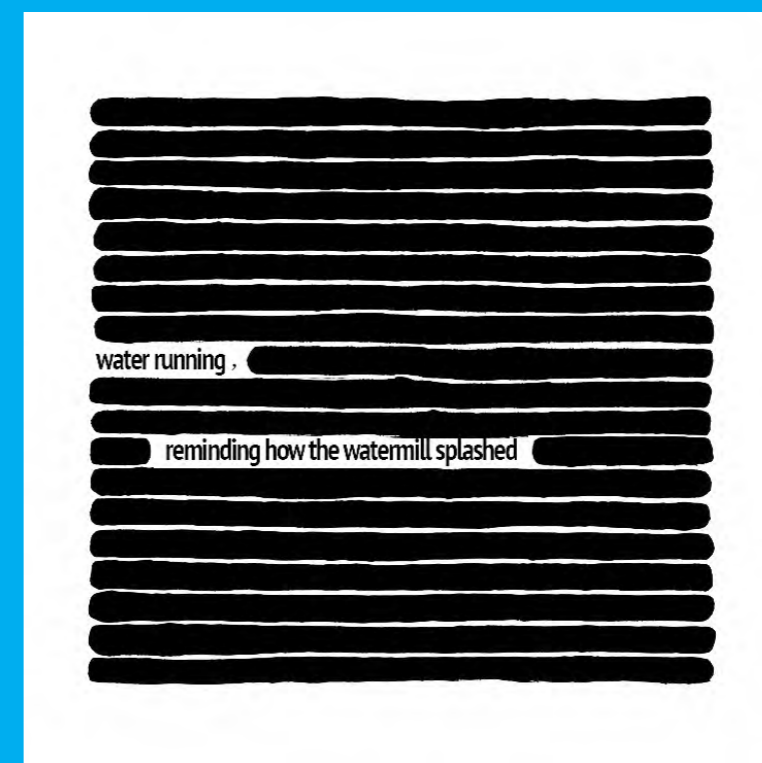
Creation

- 054 Defining the approach
- 058 **Ears of Corvetto**
- 060 Instruments
- 062 References

Synthesis

- 114 Acknowledgements
- 116 Bibliography

Introduction





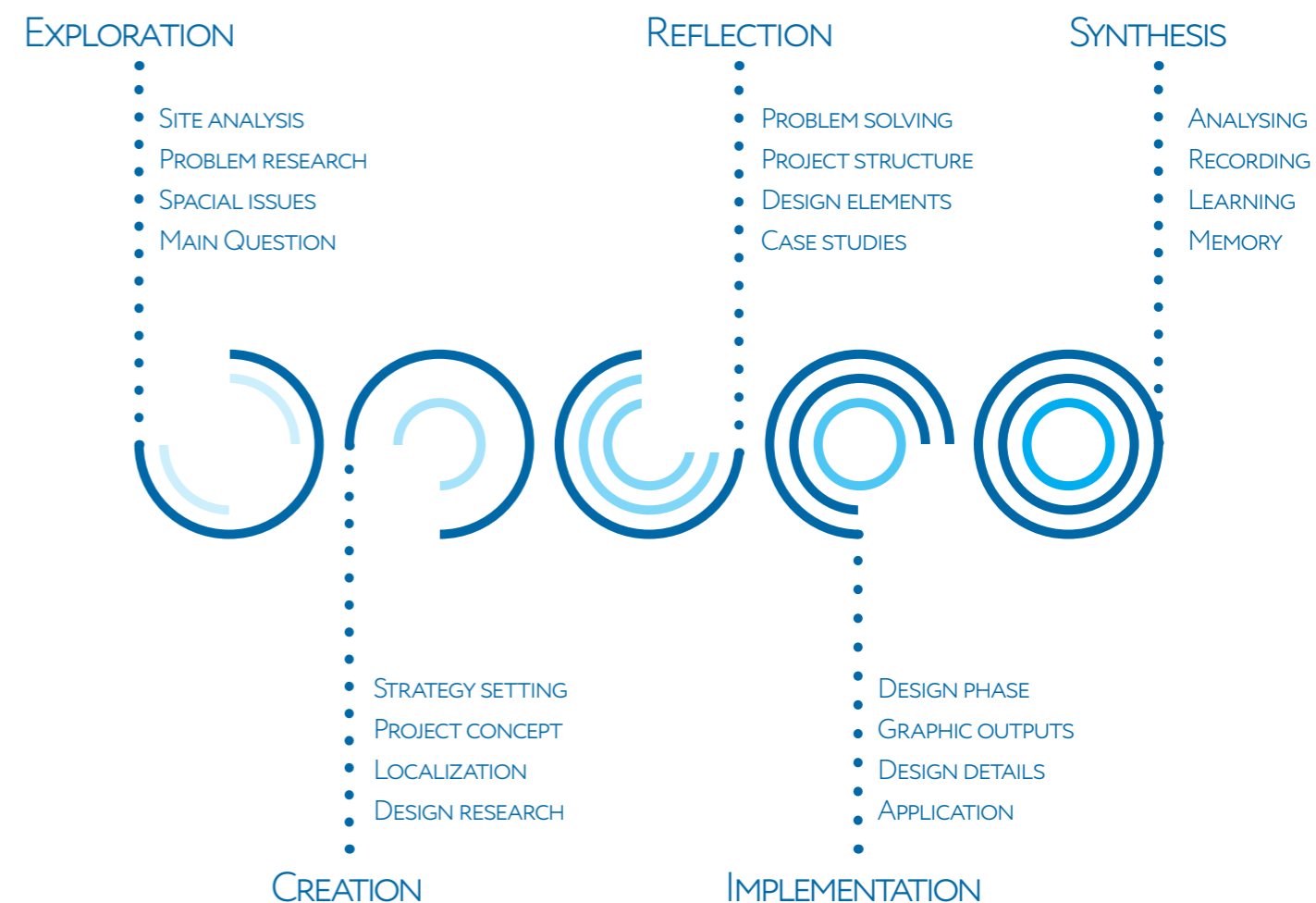
↑ Second World War
Hearing Loss Warfare
Acoustic Mirror

What if the opportunity of listening to what is happening at a distance can be not only a military task, but a way to understand and feel the city in its deepest sense?

Abstract

Today the Lodi-Corvetto mile appears as a densely populated area of the city, where everything is organized to meet the basic living needs of citizens. This urban environment was recently part of a completely different landscape - wide fields and agricultural lands were surrounding the transport artery of the city. With the advent of urban development, the sound background of this area has completely changed: we observe a polluted sound environment that oppresses local residents. Many studies are made to see how various types of noise affect our behavior and sensation of being in the city. Emotional response to some specific sounds correlates to people's health and activities. In addition to this effect, the historical and natural essence of the place has completely disappeared behind the new inevitable city noises. The work explores the intersection between landscape architecture and sound. Knowing that the heritage of the village landscape is still preserved just around the corner from Lodi-Corvetto, the goal of the project is to recreate hidden or forgotten areas, using sound as the main explorer between locations and as a design tool for new types of urban spaces. The biggest effort is taken to evoke new patterns of behaviours and build closer emotional connection between the area and its locals focusing on the most sound-polluted or significant places in Corvetto.

Methodology



TIS Design Thinking

Politecnico di Milano Thesis Incubator Studio (TIS) presents the innovative process of Design Thinking, which comprises of several stages: 0. Listen & Recognize the Question and needs of the Client 1. Define a brief 2. Research 3. Ideate 4. Prototype 5. Select 6. Implement 7. Learn & memorize the results. **Design Process is nonlinear** and imply to various techniques or mechanisms that encourage participants to think “outside the box” The diagram shows the five main phases of the methodology applied to this project elaboration and used for making social development and transformation in terms of possible innovation.

Exploration

012	What, where, who?
028	Urban activities & sounds
034	Sensory response
040	Noise that matters
042	Personal stereos
044	How sounds Corvette?
050	Main Question

What, where, who?



Our concepts of design must be informed by an understanding of the past... the process of restructuring can benefit from a knowledge of how the soundscape functioned prior to industrialization electrification, even if we cannot restore those conditions [1]

12

Corvetto

Since we are dealing with urban space, formed not so long ago [2], at the initial stage it is necessary to understand what the current state came from and how the city was born from the natural context. Today it would be difficult to imagine Corvetto of the past if we could not meet fields and villages at the end of the street. This community and opposition of two entities in a single urban space is a unique property of the place, which we will try to enhance and develop in further project detalization. Special scenarios and location properties, so as the answer to the question "What?" it is impossible to find in isolation from the understanding of "Where?" and "Who?"

Communities and request of today, the answer to which is the subject of the main research. The most interesting thing today would be to imagine the streets of the past and hear the sounds, feel the smells, light distribution and what shape the space took before it turned into a current being. The nineteenth-century Allotment rural Gambolòita took its name from an ancient farmhouse of the same denomination. A document of the Municipality of Milan is the law about the now-destroyed farmhouse Gambaloita: "In the town at one time called Gambalavita, and then become Gamboloita, there was an eighteenth century patrician villa, reduced to a farmhouse, which has lost its track in the documents. In fact, although it was demolished only a few years ago, you remember only the deleted baroque style with large pillars, as reported by the Fog in a sketch." [3] In the diction of the end of the Sixteenth century, it is still in the twenties of the '900 occupied the city block on the south side of the street. Aside from the usual fanciful assumptions, research, and Alessandro Colombo (1928), it seems that the farm and the large area of contiguous fields and bush took its name from the family in the middle ages "de Gambaloyta" or "de Gambaloyti"; could not but have occurred to the contrary, that it was the people that have taken the name from the lands they had owned. In fact, according to another hypothesis, not less than reasonable care, the first part of the name derives from a corruption of the medieval Latin campus; the second part, being among the possible meanings agricultural, could be the corruption of lolii, that is, the fields of ryegrass (also known as the darnel), consistent with the lombard tradition, according to which many of the old farmhouses had name from the type of the present crop. But to complicate things comes out also the existence of a governor of Gaul in the time of Augustus, of the family Lollia (a Lollia was a lover of Caesar); nothing strange, then, by way of hypothesis, that in the surroundings of Milan existed of the land "lolliani", that is, of the family of the former governor. It is also reported that in this strategic position in the south-east of the city is claimed Attila the hun during his incursions in Lombardy: and some varieties of ryegrass are used as fodder.

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

HOW SOUNDS CORVETTO?

MAIN QUESTION

13

[1] Barry Truax. Electroacoustic Music and the Soundscape: The Inner and Outer World [2] Urban development started from late 1920-s [3] <https://www.comune.milano.it/web/municipio-4>



Roughly in the central part of today's piazzale Corvetto, the channel Redefossi mistook the side of journey, and a small bridge allowed people to bypass the “elbow” was created by Redefossi, known as Ponte Vecchio or Ponte di Nosedo, because a few meters before it started the road that led to the small village in the South-East.

EXPLORATION

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← Piazzale Corvetto is named by Luigi Emanuele Corvetto, born in Genoa in 1756



↑ Piazza Lodi

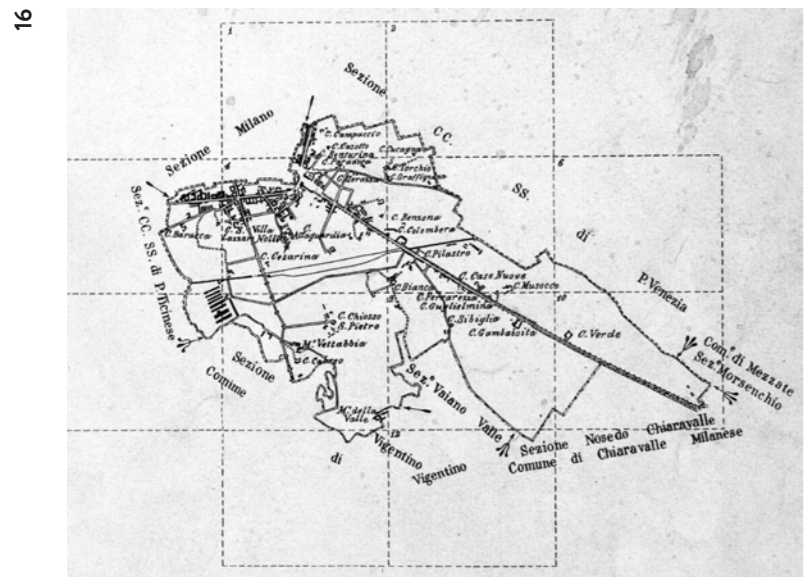
- **WHAT, WHERE, WHO?**
- URBAN ACTIVITIES & SOUNDS
- SENSORY RESPONSE
- NOISE THAT MATTERS
- PERSONAL STEREOS
- HOW SOUNDS CORVETTO?
- MAIN QUESTION

The road

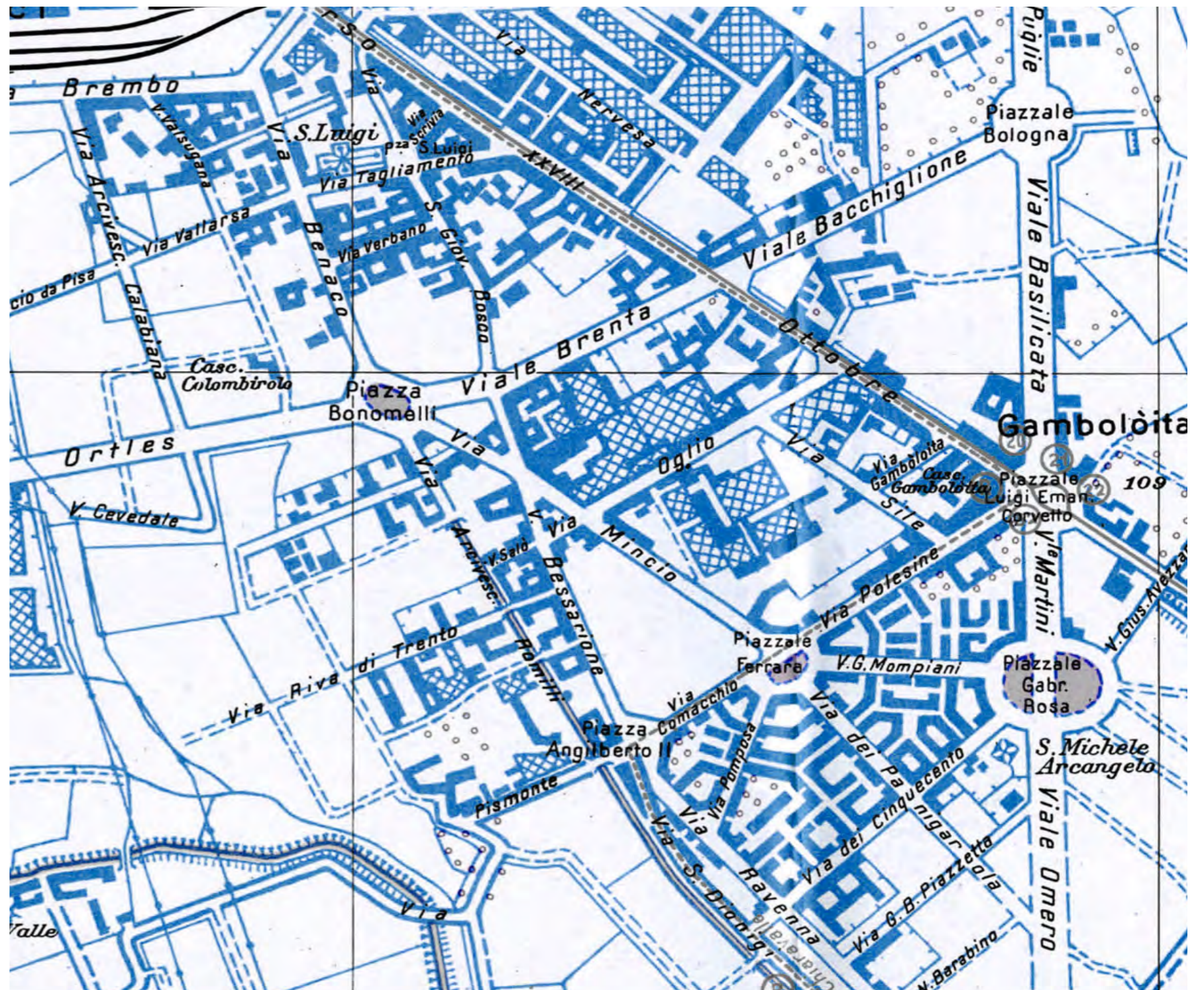
Corso Corvetto-Lodi is one of the the most ancient and important access roads to the city, starting from 187 a.c. when the consul Marco Emilio Lepido made to build a direct road between Rimini (Ariminum) and Piacenza (Placentia), a road named after him – the “via Emilia” – and that by extension it was later also awarded to the region. From Piacenza to get to Milan has been a matter of a few years, although not if you know the exact number. The reason why initially the via Emilia ended at Piacenza is to be found in the strategy of the romans to defend this city, which was still besieged by the Gauls Boi, although defeated, but that they had camped in the vicinity, and then you need to have a way of communication, easy to work with the right timing in case of need. Of course, the road to get to Milan – as always-plain – was also the rectilinear and “touched”so even Lodi. For the urban stretch in Milan take the name of corso Lodi had to wait the 7 June 1878, when the resolution assigned to the first section, as seen from the Milan) the Road of Piacenza, who for a period was also the Road to Lodi; this first section began outside the Porta Romana, and ended approximately at the height of the railway station (which in that year does not exist at the time). And just to complete the “topic name”, it should be recalled that during the fascist period in corso Lodi, which took the name of the course XXVIII October to commemorate the march on Rome that took place on October 28, 1922, the official date of the beginning of the Fascist Era.

Always in the same period – also the toponym via della Marcia su Roma assigned to the terminal stretch of via San Marco Still on the subject of “curiosities” related to the names, the Autonomous Institute of Public Housing (IACP) had baptized a neighborhood with the name ottobre VIII October, but that with the course ottobre VIII October had no relevance, in fact it is located (still) between the Via Lodovico Montegani and via Anton Giulio Barrili: it is the complex that then took the name “stadera”.

Cadastral map Bodies Saints of the Roman Port 1900
↓



Map of 1937 with the marked Gambolòita naming →





↑ Reconstruction of a view of the 1900's



↑ The view in 1950's from piazzale Vincenzo Cuoco (writer and politician, 1770 - 1823) to piazzale Bologna viale Puglie



↑ Current situation

WHAT, WHERE, WHO?

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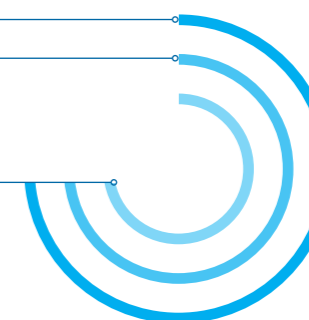
MAIN QUESTION

Corso Lodi was for many decades covered by the "exposed" Redefossi canal, before at the end of the century it was decided to run it under the road surface. The canal in its current configuration was built between 1783 and 1786, as a response to the frequent flooding of rivers and canals to the North, such as the Seveso, especially after the final stretch of the Martesana to the Ponte delle Gabelle was built. The covering of the Redefossi was a work performed at different times, started already at the turn of the SECOLOX century, continued at the time of the closure of the inner circle of the Navigli, to end (within the municipality of Milan) in the recent 60s when the tombinatura of the martesana in via Melchiorre Gioia was also performed.

Fast spreading of the area causes specific typology of the buildings

Lack of green areas in new environment

Main function as an artery of Milan city affects the fluxes





↑ The biggest effort is to give to the locals new abilities to integrate

Community

The void, with it's being a missed opportunity of development and socialization, emphasizes traditionally, the condition of remoteness also in the perception of the inhabitants; on the other hand, these vacuums are also great opportunities to rethink the area: new functions and spaces to give life to the aspirations, ideas, and dreams of the local community and to attract new energies from the outside. This territory, more than others, expresses deep diversity. Corvetto-Chiaravalle presents some interesting ideas for the strengthening of infra-community ties and active citizenship: the integration of migrants, the care of small urban elements, the enhancement of some street systems (the “social street”) and the historical - cultural account of the farm system. At the same time, the sense of belonging to the area can be stimulated starting from the enhancement of local skills and excellence through a brand, for example “Made in Corvetto”, which acts as a participatory stimulus inside and as a pole of attractiveness towards the outside. The main tool of **Lacittaintorno** [1] is represented by Community points (PuntoCom), multifunctional places where citizens benefit from services but above all meet in the context of participatory initiatives of cultural exchange and debate. **Abbracciami** [2] is the project that provides a cycle path that touches all the neighborhoods located between the historic city and the city border; in each district the path it is enriched by branches traced by young residents with the aim of promoting their knowledge, strengthening the sense of belonging and spreading a culture linked to healthy and sustainable lifestyles. Two initiatives were carried out specifically, which focused on the Corvetto area: Theal K shop took the form of an itinerant territorial narrative: the twenty participants (local subjects, staff of the Lacittaintorno Program, other relevant stakeholders and researchers) **walked through the neighborhood co-producing a story of the territory in direct contact and acquiring new knowledge** aimed at change.



↑ Some inhabitants are very closed in their social groups

Through the places in which they are said to live or to which they are said to belong, people know to convey, often in spite of themselves, crucial information for their social recognition. Among the most recent initiatives, it is interesting to mention the Openagri project, funded by the European initiative program Urban Innovative Actions. On the entrepreneurial dimension, this Hub will promote development projects involving SMEs and startups, and will experiment innovative tools for increasing and transferring capacities. In particular the project will look at accelerating new food enterprises based in the city, to promote green transport for food companies and to foster skills and competences to lower the environmental impacts of farming. On the social dimension, community-led initiatives for inclusion, urban regeneration, social and territorial cohesion projects will be implemented. The main purpose is to strengthen and implement services, initiatives and skills, strongly related with the Hub at Cascina Nosedo. “Porto di Mare Area” can be changed from a problematic suburbs to a great experience of collaboration and sharing of new knowledges and opportunities especially for young people, disadvantaged groups and foreigners. As per the sustainable and technological dimensions, the project will prototype disruptive and innovative solutions for peri-urban agriculture through new ways for food production, new tools such as a “kitchen fab-lab”, the aquaponics system and new prototypes technologies will be tested. There is the Technical Institute Albe Steiner known in the city for the quality of his teachings related to the arts. In fact, a complex territory emerges, characterized by the coexistence of five well-defined areas: the Corvetto quadrilateral, the crown of the Grisons district, the edge of Porto Di Mare; the Vettabbia Park and, finally, the historic village of Chiaravalle. **Through the places in which they are said to live or to which they are said to belong, people know to convey – often in spite of themselves – crucial information for their social recognition.** The first nucleus of public housing dates back to 1930. “At the time they were at the forefront: they were the first public housing in Milan with services in each apartment, instead of on the railing. They were designed to house municipal employees of all levels, not just to house the lower end of the population. But then they were left to themselves. Most of the houses were lately restored in 1960. The percentage of housing occupied or inhabited by defaulting tenants is very high – according to ALER [3], one in three tenants is abusive. However, the phenomenon is mainly caused by the even higher percentage of empty housing, closed in some cases for decades: ALER continues to not assign them despite the approximately 23000 applications currently under consideration by the municipality.

[1] <https://lacittaintorno.fondazionecripiro.it/> [2] <https://www.facebook.com/groups/abbracciami/> [3] ALER - Azienda Lombarda per l'Edilizia Residenziale

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

HOW SOUNDS CORVETTO?

MAIN QUESTION

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↑ Many of the buildings are in a state of deep decay, and the situation seems not to want to unlock ever



↑ The accommodations empty is also locked with heavy plates of iron, which, however, are often torn.



↑ Abandoned building in the most visited square of the area

To the South of Piazzale Corvetto, there is an entire neighborhood of houses that no-one knows how to call. Some are convinced that the correct name for both Houses Mazzini. For the most part, however, speaks of the area simply as "The Corvetto." For the one who is from the centre of the city, it is easy to descend from the M3 and take the big short, tree-lined avenue that stretches out towards the South. At the bottom, Pink Square. At the bottom of Pink Square, the Corvetto. The Corvetto, in recent years, has often been at the centre of the town chronicle. In November 2014, the police began to clear the systematic occupied housing, in addition to the social centre of the Black Rose, the main autonomous reality of the neighborhood. The resistance of the occupants and of the antagonists resulted in clashes, rubbish bins set on fire, riot. Today the Houses Mazzini remain an open wound in the city. Many of the buildings are in a state of deep decay, and the situation needs a strong effort to be developed.

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

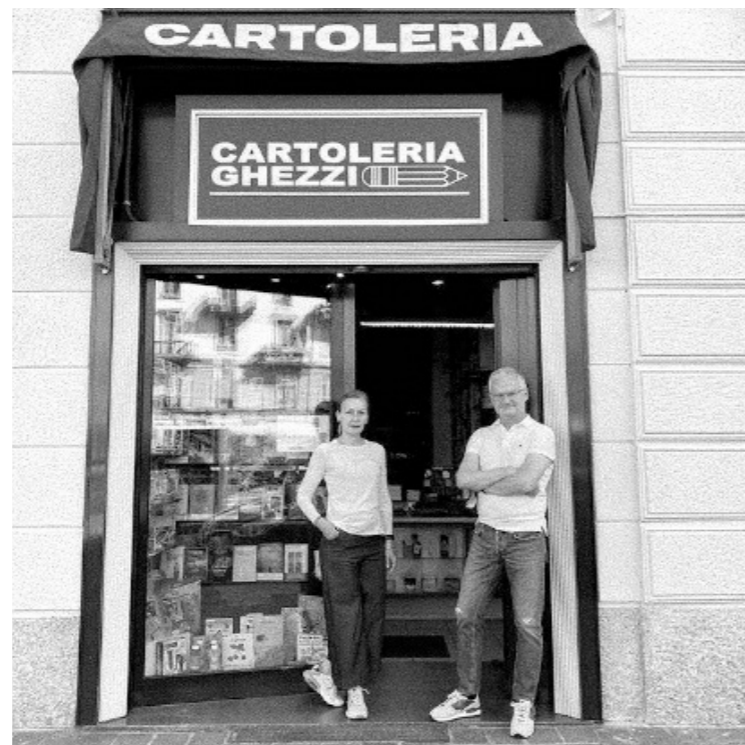
HOW SOUNDS CORVETTO?

MAIN QUESTION

The reasons for local's discomfort: no longer the distance from the center and the consequent lack of services, but much **more complex problems that cross economic poverty, social exclusion, migratory pressure, sense of insecurity.** If we look at the courtyard of their buildings, we'll see not concrete or asphalt, but the material colored in large patches of green due to moss, mold, and dampness.



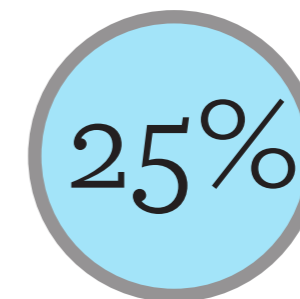
↑ Inclusivity by making activities among the locals



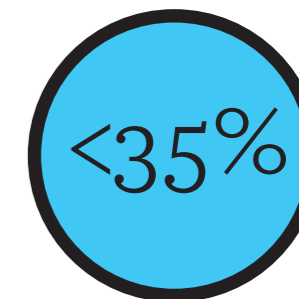
↑ Corso Lodi is present as a sequence of family businesses, more often presented in one-window



↑ Youtube interview with the locals, who explain the style of their living in the urban context and social problems that they are facing. General impression of being a criminal area is juxtaposed to the real situation



approximate number of foreigners



less than 35% of educated people



It is like an open-air sitting room, the special corner that Giacomo [1] has created in the heart of the Corvetto, in Milan, considered one of the historically most difficult neighborhoods for the complicated management, in several waves in recent decades, of immigration, pockets of poverty and the presence of delinquency and drug dealing village in the South-East [2]

EXPLORATION

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

HOW SOUNDS CORVETTO?

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[1] La casa di Giacomo - a kiosk in piazzale Corvetto [2] www.lapauranonfa90.it

Urban activities & sounds



Soundscape

The earth forms the body of an instrument, across which strings are stretched and are tuned by a divine hand. We must try once again to find the secret of that tuning.[1]

Luigi Russolo, Italian futurist, studies the nature of sound. He concentrates on the study of noises and sounds, as a result of which he discovers **Intonarumori** (noise sounds), from which the "music of noises", coming from the manifesto "The Art of Noises" [2], ambient, which became a magnificent contribution of futurism to the development of music of the XX century. Sound and environment were first systematically addressed by the Canadian composer **R. Murray Schafer**, who coined the concept of soundscape. The soundscape is the set of sounds that characterize an environment, both inside and outside, and is composed of different elements: keynote sounds, sound signals, and soundmarks. According to Schafer, every environment can be conceived as a concert hall or, metaphorically, as a musical composition and therefore controlled, designed, articulated. This innovative vision has opened new scenarios for the design of the soundscape, considered for long time simply as noise pollution and therefore left to the competence of technicians and specialized engineers. The main character of a city soundscape depends on the prevalence and reliability of indicators of safety. Highly complex or chaotic environments are difficult to interpret which causes insecurity. A boring environment is low on useful audible affordances and is also not indicative of safety. In contrast, a lively environment represents many affordances that provide ample interest-

ing opportunities to attract attention and is not indicative of insecurity. The fourth environment is a calm or relaxing one because it provides enough indications of safety and allows as such full freedom to relax and recuperate (Van den Bosch, Andringa and Vlaskamp, submitted). The idea of soundscape refers to both the natural acoustic environment, consisting of natural sounds, including animal vocalizations, the collective habitat expression of which is now referred to as the biophony, and, for instance, the sounds of weather and other natural elements, now referred to as the geophony; and environmental sounds created by humans, the anthropophony through a sub-set called controlled sound, such as musical composition, sound design, and language, work, and sounds of mechanical origin resulting from use of industrial technology. Emily Thompson in her book, *The Soundscape of Modernity* [3], quotes the Buddhist scriptures which listed the 'ten great noises in a great city' in 500 BC as 'elephants, horses, chariots, drums, tabors, lutes, song, cymbals, gongs and people crying "Eat ye, and drink"!'. We only have to read accounts of the noise in ancient Rome or on the streets of medieval Europe to understand the problems it presented. But the type of noise was different to that so common in the modern world - Thompson called it 'Dr J H Girdner itemized these sounds in *The Plague of City Noises* (1896): 'horse-drawn vehicles, peddlers, musicians, animals and bells.' Actually, not very different from the 'ten great noises' listed in the Buddhist scriptures.

Six families of noise by Luigi Russolo:

- 1) Roars, Thunderings, Explosions, Hissing roars, Bangs, Booms
- 2) Whistling, Hissing, Puffing
- 3) Whispers, Murmurs, Mumbling, Muttering, Gurgling
- 4) Screeching, Creaking, Rustling, Buzzing, Crackling, Scraping
- 5) Noises obtained by beating on metals, woods, skins, stones, etc.
- 6) Voices of animals and people, Shouts, Screams, Shrieks, Wails, Hoots, Howls, Death rattles, Sobs

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

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PERSONAL STEREOS

HOW SOUNDS CORVETTO?

MAIN QUESTION

[1] Murray Schafer. *Our Sonic Environment and the Tuning of the World*, 1977 [2] L. Russolo. *L'arte dei Rumori*, 1913 [3] E. Thompson. *The soundscape of modernity. Architectural Acoustics and the Culture of Listening in America, 1900-1933*, 2004

WHAT, WHERE,
WHO?URBAN
ACTIVITIES &
SOUNDSSENSORY
RESPONSENOISE THAT
MATTERSPERSONAL
STEREOSHOW SOUNDS
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QUESTION

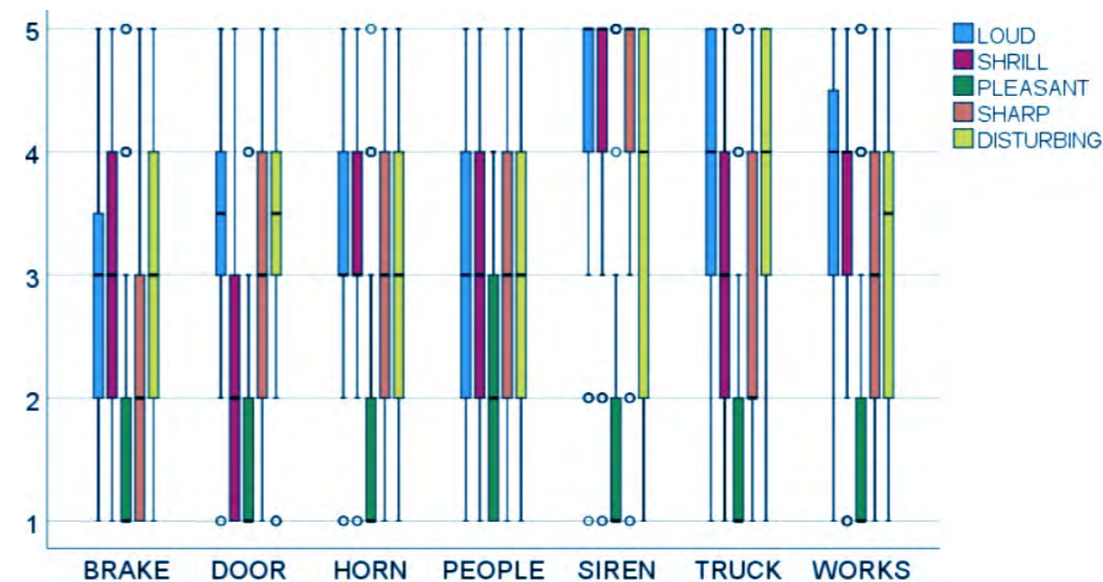
Sounds in the city and around

In accordance with the Chinese standards of Measurement Method of Environmental Noise in Urban Area, each measuring point was measured once in the daytime between 8:00 and 11:30 am or 1:00 and 5:00 pm and once at night between 10:00 pm and 4:00 am. Duration of 10-15 minutes each time was selected in this study. Values that were measured for evaluation include the equivalent sound level Leq , the maximum sound level L_{max} , and the minimum sound level L_{min} . The equipment used for the measurements is AS804. It is Class 1. In accordance with the control map of the measuring points in the quiet zone and the noise-exposed zone, the points were evenly distributed, and typical dates (weekdays and weekends) were selected for measurement. The calculation grid with a height of 4m was recommended by EC Directive 2002/49. And the calculation grid with a height of 1.2 m was recommended by Measurement Method of Environmental Noise in Urban Area in China. Meanwhile, ear height is generally 1.5 m. Therefore, the calculation grid was at a height of 1.5 m away from the building façade (4 m away). To more accurately determine the campus acoustic environment, 119 points were set on campus, eight on the road, and six in the off-campus gymnasium, with a total of 133 points; each point was measured to obtain its equivalent A sound level. The grid size can be designed as 10×10 m since these areas are more densely populated areas. Therefore, the size of the grid used to calculate the acoustic maps was 10×10 m in this study. The speed of vehicles traveling on and off campus was not measured. The reason is that the simulation model does not need to set original vehicle speed, and the vehicle speed is obtained by inputting noise variables and vehicle flow measured by vehicles traveling on and off campus. Then the speed of vehicles can be assessed by the simulation model. **Road noise is one of the main sources of noise.** The roads in the east, west, and north are the main roads with large traffic. There are about 750 small cars, 250 medium cars, and 120 large cars per hour on these roads. There are about 700 small cars, 200 medium cars, and 100 large cars per hour on the road in the south area.



↑ M. Shafer. The book of noise

In Hong Kong, trials to use low-noise road surfaces started in 1987 and a programme for resurfacing high-speed roads with such material has been in force since the early 1990's. In 2002 a new programme started aiming at trying such surfaces also on medium- and low-speed roads and streets in urban areas. In 2006, the Environmental Protection Department (EPD) of Hong Kong published a "Comprehensive Plan to Tackle Road Traffic Noise in Hong Kong". An important part of this plan is an increased and widened use of low-noise road surfaces on low-speed roads and streets. Issues related to space syntax and urban acoustics such as noise pollution have been researched previously, but no studies so far have been conducted on the influence of urban configurations on the daily activity of street music performance. **Dr Llorca-Bofi** [1] and colleagues conducted a general analysis of natural pedestrian movement in Barcelona and of four public spaces in Ciutat Vella. The analysis looked at the potential for the forming of groups and interactions as people flow through the area. The acoustic features were measured for each site and were then combined with spatial analyses to understand the correlations and frictions between the spatial and acoustic values. In car-oriented areas of the city, pedestrians are forced onto narrow sidewalks, while other areas have the potential to provide suitable spots for performers. Generally, street performers favour sites where they can set up stage close to the main flow of people while avoiding conflicts due to narrow passages and streets. The findings can help in planning for a successful street performance culture through identifying how to provide residents with a high quality of life.



← Sound diagram

[1] Dr. Llorca-Bofi, architect and researcher at the Institute of Technical Acoustics, RWTH Aachen University

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

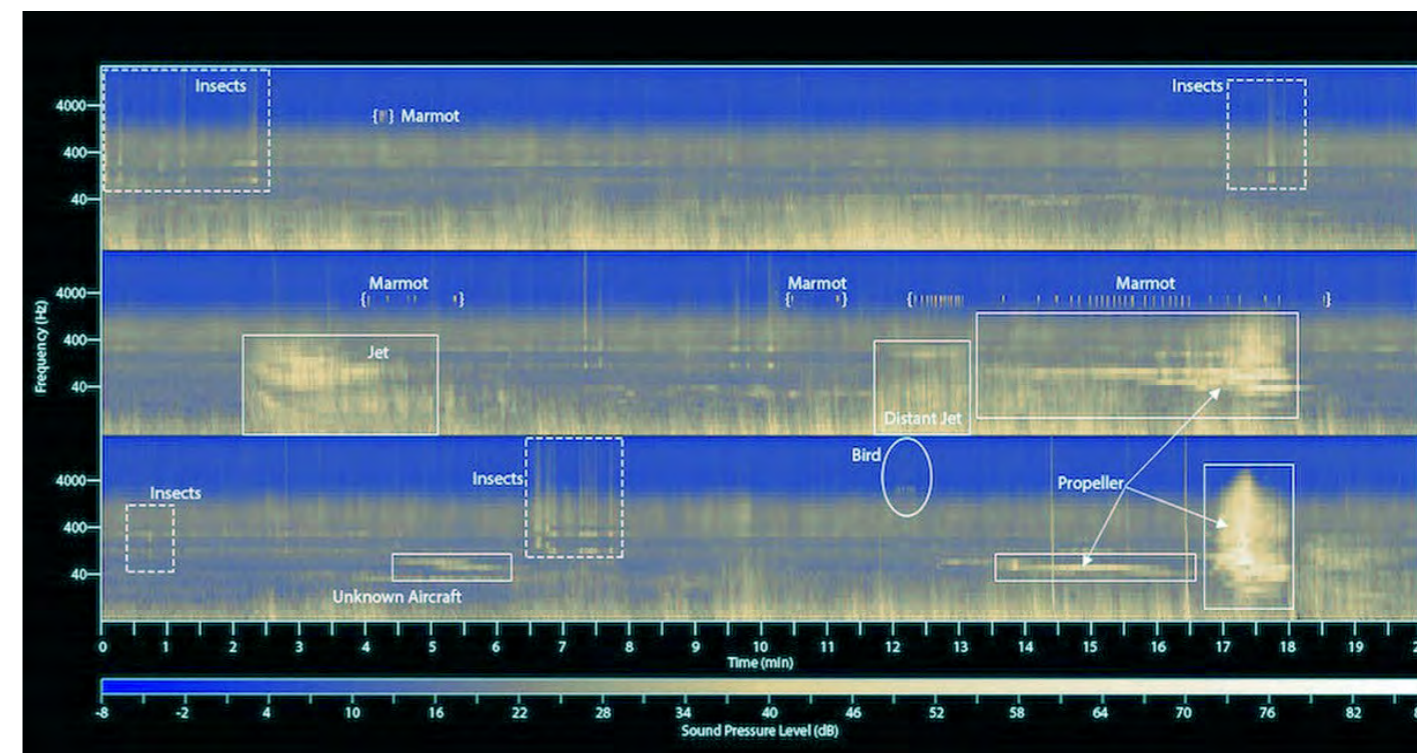
PERSONAL STEREOS

HOW SOUNDS CORVETTO?

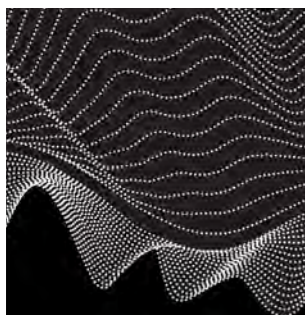
MAIN QUESTION

Hi-Fi vs Lo-Fi

Since the 1970s, the discipline of acoustic ecology has been trying to document this process. Field records were used in environmental campaigns to compare ecological diversity between virgin forests and deforested forests. Similarly, field recordings have demonstrated the difference between the hoarse crackling and popping of marine parks and the ghostly silence of areas open to fishing. Listening to these recordings, we hear how the environment is under stress. It has been shown in some detail that the emotional language of some birds is related to the forms of human vocal and musical expression. For example, chickens' distress signals consist only of descending frequencies, while ascending ones. Since we have already thoroughly studied the possibilities of the sound environment in the city, with its traffic and basic parameters, and also looked at how the natural environment differs in terms of the level and composition of sounds, it becomes obvious how great the contrast is between the space where most of us live. Researchers called this phenomenon Lo-Fi and Hi-Fi. Sound is important in honey bee communication. Honey bees use a range of piping and buzzing sounds in the nest that are picked up by other bees, and are used to communicate and affect behaviour of the colony. By diminishing our natural systems in favour of monolithic urban and industrial sprawls we silence the sounds that distinguish one place from another. We lose the uniqueness of the local voice and instead hear a compressed wall of motorised sound. Our hi-fi soundscapes are being replaced by generic lo-fi soundscapes.



↑ A spectrogram of the soundscape of Mount Rainier National Park in the United States. Highlighted areas show marmot, bird, insect and aircraft noises



↑ The sounds of insects form rhythms, both circadian and seasonal

R. Murray Schaffer:

"The hi-fi soundscape is one in which discrete sounds can be heard clearly because of the low ambient noise level ... In the hi-fi soundscape, sounds overlap less frequently; there is perspective – foreground and background ... In a low-fi soundscape individual acoustic signals are obscured in an overdense population of sounds ... Perspective is lost ... there is no distance; only presence. There is cross-talk on all the channels, and in order for the most ordinary sounds to be heard they have to be increasingly amplified." [1]

[1] Tuning of the World. p.43. Destiny Books, 193

Sensory response

EXPLORATION

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

HOW SOUNDS CORVETTO?

MAIN QUESTION

The physical environment of cities comes to shape human feeling and its associated behaviours, from personal attachments to buildings and neighbourhoods that underpin a sense of 'home' or local identity, to the road rage experienced in the over-crowded town planned before the introduction of cars. Cities, as Henri Lefebvre suggested, can come to have their own emotional repertoires, reflecting their environments and physical makeup. Some cities are fast-paced, anxious, moving; others more sedate or orderly. Environment comes to shape the emotions and behaviours of users, often unthinkingly, such as in an uptake of faster pace of step." Urban planners and architects increasingly consider the emotions of the users of their outputs, recognizing that whether they are experienced as fit for purpose, useful, attractive is often underpinned by subtle emotional encounters with building materials, lighting, space, the movements of other people and so forth." Similarly, changes to urban environments produced by the influx of new groups: migrants or social classes, or by new technologies, from electricity to cars to concrete, can change both affective engagements with space and how such environments are interpreted. Gentrification opens up space to some groups, even as it closes it down for others such processes are often marked by feeling, whether the anger of original populations at their displacement or an increasing sense of belonging for those whose space now feels more 'of home.'



22 millions of adults suffer from noise impact in Europe



↑ Beekeepers in Italy's northern Lombardy region have registered a dramatic loss of bees, reports Greenpeace Italia.

Sensory ecology

It has also been found that noise pollution affects insect behavior. Studies have shown that some insect species are sensitive to noise, especially low-frequency vibrations. An American study of insects near loud gas compressors found that there were 95% fewer crickets, 52% fewer frogs and 24% fewer grasshoppers in areas near the compressors compared to nearby areas where there were no compressors. A 2016 study conducted by researchers at Vassar College in New York found that traffic noise interferes with the mating calls of tree crickets. This can distort the call to such an extent that it can trigger a different behavioral response. The cries of male crickets (made with the help of wings) are aimed at attracting females. The study showed that the duration of marriage calls was significantly reduced in areas with intense traffic noise. Scientists have suggested that when the crickets felt that their own songs were unlikely to be heard, they reduced the energy spent on mating cries, shortening the duration of the song and adding more pauses, which made the cries less likely to attract a female. Professor Jesse Barber, senior author of the study "Anthropogenic noise alters the number of arthropods," described the noise as "sensory pollution." He said insects are vital to the ecosystem, so it is "extremely important" to understand how the noise created by humans changes their behavior and distribution. Research is ongoing to determine the impact of noise pollution on our wildlife and ecosystem. They describe how the expansion of human infrastructure creates "sensory pollution" that seriously affects other species.

Noise pollution has an unusual effect on natural behaviour of bees. When encountering noises of around 300Hz and 1kHz, at an intensity of between 107 and 120 dB, honeybees will stop moving altogether for around 20 minutes – as if the noise has put them into shock. They then appear to “recover” and resume their normal behaviour.

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

HOW SOUNDS CORVETTO?

MAIN QUESTION

50

Awakenings per year are experienced by an average of 60-65 year-olders due to traffic reasons

L.Russolo
"Intonarumori"
↓

The function and importance of sound in the environment may not be fully appreciated if an organizational view of sound perception is not taken, and thus the ecology of the soundscape also depends on sensory ecology. Sensory ecology focuses on understanding the sensory systems of organisms and the biological function of the information received from these systems. In many cases, people must recognize that sensory modalities and information used by other organisms may not be obvious from an anthropocentric point of view. This perspective has already revealed many cases where organisms rely heavily on sound signals generated in their natural habitat to perform important biological functions. **Perception of loudness** can differ. Simulations play an important role when reproducing sound in laboratory settings. In those situations, there can be a mismatch between the perception of sound coming from speakers and the sound received through headphones.

Loudness is encoded based on the distance from a source and what materials are in the space. 'Wrong loudness' in virtual settings can distract the user from full immersion in a scene. Continuous traffic flow, such as a highway in an urban setting, are discussed. Finally, considering the interaction between sound and vision is important, that is, auditory perception can be improved by visual cues, and similarly, sound helps focus attention on related visual elements. Besides, the prioritization process also should be considered in noise action plans. Epidemiological studies have shown that exposure to traffic noise is associated with cardiovascular diseases such as hypertension, myocardial infarction and stroke. Noise is a non-specific stressor that activates the autonomic nervous system and endocrine signaling. According to the noise response model proposed by Babish [1] and his colleagues, chronic low noise levels can cause so-called non-auditory effects, such as disturbances in activity, sleep and communication, which can cause a number of emotional reactions, including irritation and subsequent stress. Chronic stress, in turn, is associated with cardiovascular risk factors, including high blood pressure and dyslipidemia, increased blood viscosity and blood glucose levels, as well as activation of blood clotting factors in animal models and in humans. Constant chronic exposure to noise increases the risk of cardiometabolic diseases, including hypertension, coronary heart disease, type 2 diabetes mellitus and stroke. We have recently learned that exposure to aircraft noise at night can cause endothelial dysfunction in healthy people and is even more pronounced in patients with coronary heart disease. It is important to note that endothelial dysfunction was improved with acute oral therapy with the antioxidant vitamin C, which suggests that excessive production of reactive oxygen species contributes to this phenomenon. More recently, we have presented a new animal model of the effects of aircraft noise, characterizing the underlying molecular mechanisms that lead to noise-dependent adverse effects associated with oxidative stress on the vascular network. In this review, we want to present an overview of epidemiological, translational clinical and preclinical studies of noise on the non-auditory adverse effects of noise exposure with an emphasis on oxidative stress.

[1] 3 Noise effects reaction scheme Source: Babisch, 2002.

WHAT, WHERE,
WHO?

URBAN
ACTIVITIES &
SOUNDS

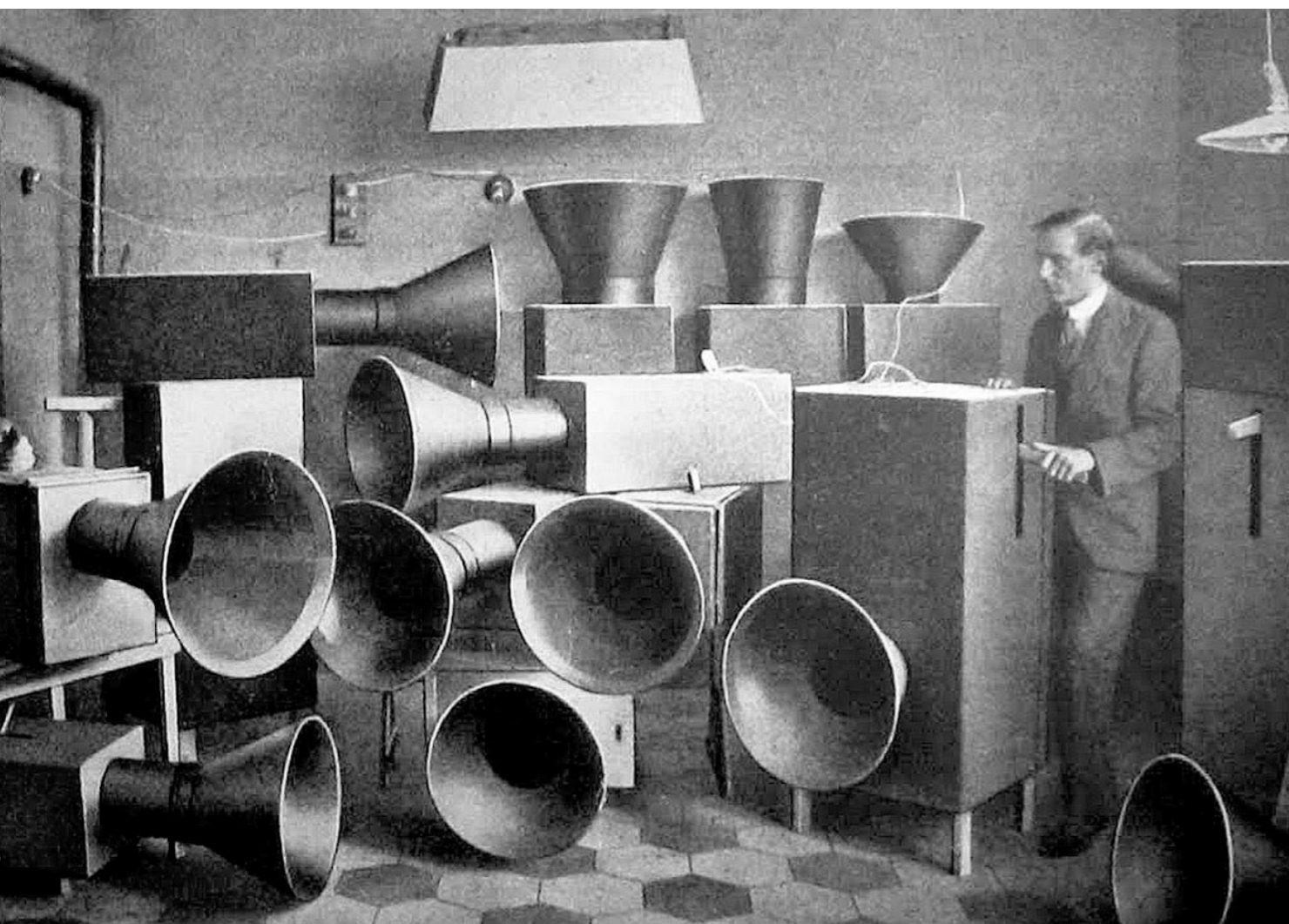
**SENSORY
RESPONSE**

NOISE THAT
MATTERS

PERSONAL
STEREOS

HOW SOUNDS
CORVETTO?

MAIN
QUESTION



Noise that matters

Fear of silence

It seems that the attitude to noise is being formed and changed by the consumer society. Many of the devices we purchase as consumers produce noise: refrigerators, washing machines, central heating, vacuum cleaners, dishwashers, sound systems, televisions, radios, iPods, computers and mobile phones. At the most obvious level, this means that we can grow up amid constant mechanical noise. Several recordings of the soundscape of the quarantined city. It also means that many people do not know life without noise; if it were not there, a void would form in their lives. They would have noticed the silence. They stopped paying attention to the noise. But what is the emotion of feeling to hear a city deprived of life? The context of this quiet city is the COVID-19 pandemic, so will it affect how we feel about the silence we hear? Will it remind us of our struggle to come to terms with the closure and the scale of the global crisis, that our lives are suspended and our loved ones are kept at a distance? Or could it provide much-needed relief in these difficult times? Will this allow us to pay attention and reveal the subtlety and richness of sounds that underlie our ordinary urban experience? To dream of a city that does not require us to “keep up with the times” does not mean to bring silence to the city. We are talking about making our urban lifestyle more focused on life itself, and not on technology and speed. For those of us who grew up outside the big cities, we leave the countryside when we come of age in search of thrills to make life happen.

Even after a while, the city noise can still seem unbearable. For those of us who grew up in the city, city noise can sometimes be soothing, and the absence of noise is deafening. Our upbringing and experience will shape our individual attitude to sound, in much the same way that listening to a certain song can evoke memories of home. So how does the current quarantine soundscape affect us? Does the unfamiliar soundscape make us feel insecure, or does the calmness we all experience become increasingly important for our mental health as we come to terms with this crisis? In these anxious times, safety and comfort are becoming increasingly important, and finding quiet places can help provide that relief. An architect who worked as a screenwriter, **Rem Koolhaas** [1] said about architecture and cinema that “there are surprisingly few differences between one type of activity and another.... I think the art of a screenwriter is to come up with sequences of episodes that create tension and a chain of events....Most of my work is editing... spatial installation". Indeed, the landscape consists of many emotional layers. Geographically speaking, these include homescape, bodyscape, deathscape and smellscape, as well as soundscape. As a component of the urban landscape, the soundscape of Naples interacts closely with its pronounced deathscape. The sound track is an important part of this urban construction. As **Wim Wenders** [2] shows in his History of Lisbon, soundscapes define cities: they create urban spaces and turn them into concrete places and places of memory. As residents-viewers of a tactile architectural journey, we are deeply impressed by the sounds of the city. If sound creates an urban landscape in motion, then this is especially true for Naples: it is not only a musical city, as we have seen, but also noisy. City tours filmed in films such as “Journey through Italy” Rossellini and Martone's “Love of Molesto” interestingly “captured” the Neapolitan cityscape through its sound. In this latest film, the soundscape of the city stands out for its loudness and maddening quality – the effect of muffling noise.

[1] R. Koolhaas. Dutch architect, architectural theorist, urbanist and Professor in Practice of Architecture and Urban Design at the Graduate School of Design at Harvard University. [2] Wim Wenders. German filmmaker, playwright, author, and photographer

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

HOW SOUNDS CORVETTO?

MAIN QUESTION

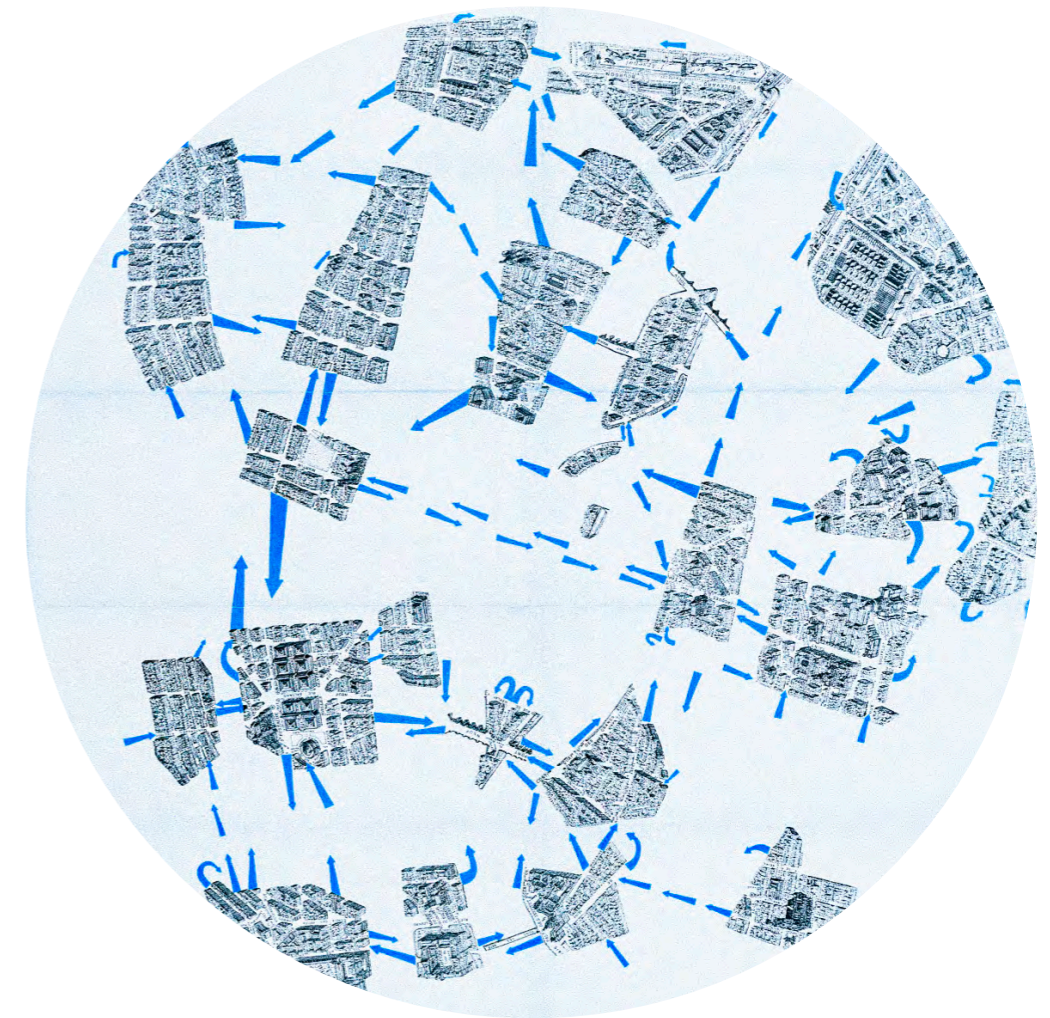
Personal stereos



I'm going to ask three main questions: What is the nature and influence of the auditory in everyday life? What role does technology play in the construction of auditory experience In doing so I ask three main questions: what is the nature and influence of the auditory in everyday life?[1]

On buses, trains and on the streets over the past decade and more, young people in particular, but increasingly older people are also tuning into their personal stereos and disconnecting from city sounds. Why? What does a personal stereo system mean for these people and for urban culture in general? Does this reinforce reality? Give people the opportunity to cope with the situation? Isolate? Create a space? Combat boredom? The personal stereo system, too banal and durable to be considered a fashion accessory, has become a powerful artifact symbolizing modern urban life. This door opens a new area of urban studies - auditory perception of oneself and place. At the same time, it will improve your understanding of the role of mass media and technology in everyday life. Urban, cultural, and anthropological studies have been dominated by explanations of experiences based on concepts of visibility. But in culture there is always an auditory component that shapes attitudes and behavior - perhaps nowhere as much as in a city where the sound is amplified. **Guy Debord** [2] was approaching this question in his own modality: Situationist maps of Paris has been cut up in different areas that are experienced by some people as distinct unties (neighbourhoods). The mentally felt distance between these areas are visualized by spreading out the pieces of the cut up map. some tools for sensory, and also sound deprivation. Like this isolation tank, in which you float in the dark and silence and you absolutely dissolve in the space. Is it good or bad depends on personality, and we could say that **personal silence has almost the same sence as personal stereos**. Walkmann case is important, as it was first time when technology allowed people to take music and move ot through landscapes and architecture, and could completely change the perception. And the last, and positive point for the silence, is that avoiding urban noise can bring back our ability to listen. Which was explored in Dubai Expo 2020 by italian company Caimi [3].

How could the city be perceived trough the personal sound walk-by [2] ↓



EXPLORATION

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

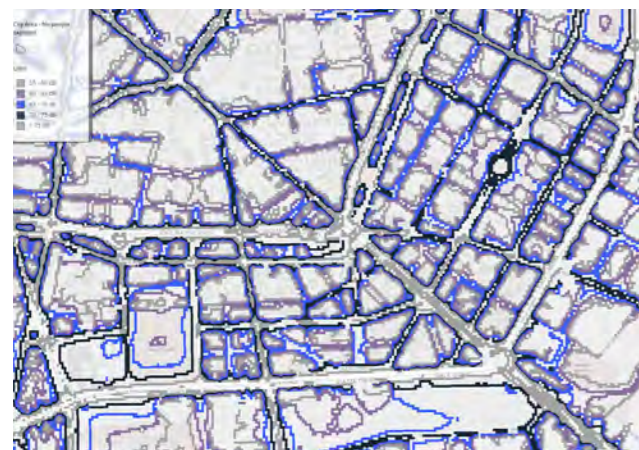
PERSONAL STEREOS

HOW SOUNDS CORVETTO?

MAIN QUESTION

How sounds Corvetto?

Corso Lodi is the main historical transport artery of Milan, the Roman road. Which means a high traffic load, including cars, subways, buses, motorcycles, etc. According to the Milan Comune, this zone has class IV: according to the acoustic classification, a zone of high human activity. Since we know that more than 550,000 citizens of Milan are exposed to noise thresholds above 65 decibels, measured according to criteria dictated by the European Union, in the Corvetto area this figure can be even higher (see the map) effects of noise. According to the data on the Comune di Milano website [2], we can find the sound measurement inside the Corvette zone. It is well obvious how the sound

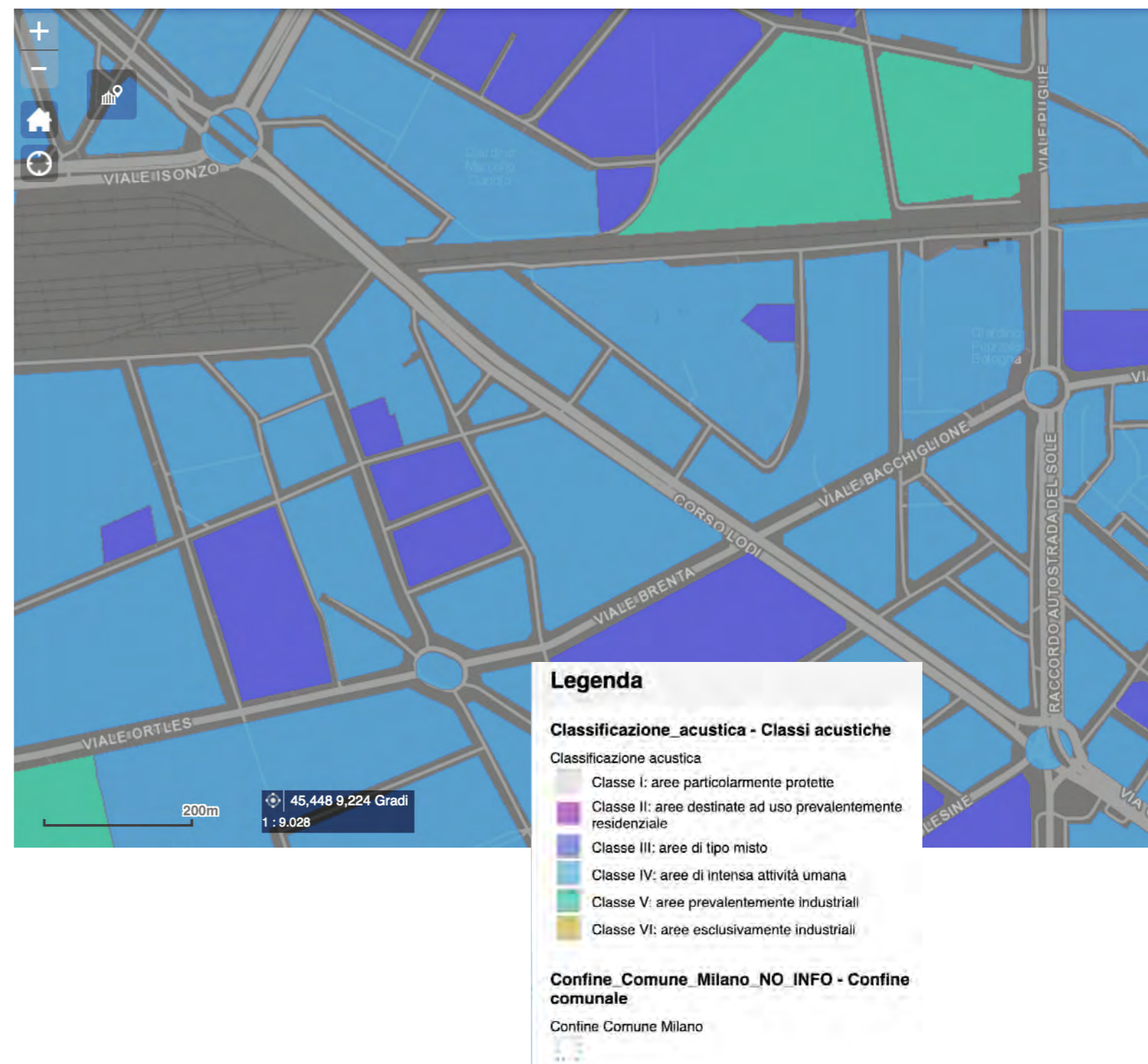


We cannot close our ears; we have no ear lids! [1]

intensity changes near and far from the main track. The Central Boulevard, which is the interest of our observations, is located in the very center of the intensity of sound propagation. The main character of a city soundscape depends on the prevalence and reliability of indicators of safety. Highly complex or chaotic environments are difficult to interpret which causes insecurity. A boring environment is low on useful audible affordances and is also not indicative of safety. In contrast, a lively environment represents many affordances that provide ample interesting opportunities to attract attention and is not indicative of insecurity. The fourth environment is a calm or relaxing one because it provides enough indications of safety and allows as such full freedom to relax and recuperate. To find out, how the soundscape of our explored area is built, we could decide to simplify it for a moment to silence and noise. Starting from urban noise, it's necessary to say which noises are most relevant in the context of Milan, and according to Dynamap's sensors in Milan and explor-

ing people's reactions, the most disturbing are: siren, truck, works, people, horn. When Milanese complain about garbage trucks making a monstrous noise of breaking glass twice a week in the early morning, they do not even think about how much they are used to the sound pressure of cars, motorcycles and other vehicles. The effect of continuous movement of people is strongly supported by the traditional Italian sidewalk, sometimes uneven and sometimes rocky. Silence, on the contrary, supports the city blocks only from the back, sometimes breaking through the endless hum of roads.

Area sound measures by Comune di Milano ↓



EXPLORATION

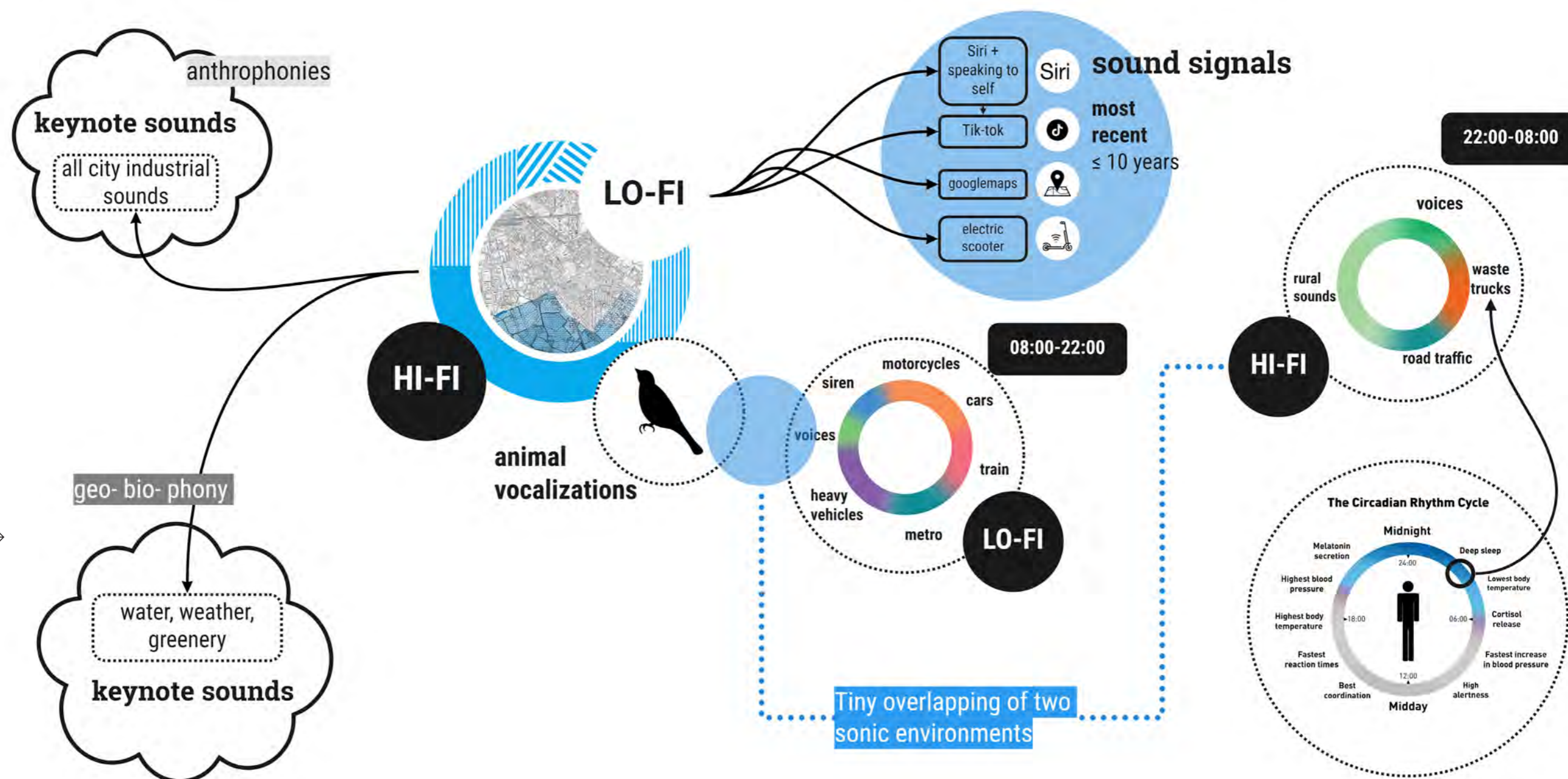
- WHAT, WHERE, WHO?
- URBAN ACTIVITIES & SOUNDS
- SENSORY RESPONSE
- NOISE THAT MATTERS
- PERSONAL STEREOS
- How sounds Corvetto?**
- MAIN QUESTION

[1] R.Murray Shuffer [2] www.geoportale.comune.milano.it

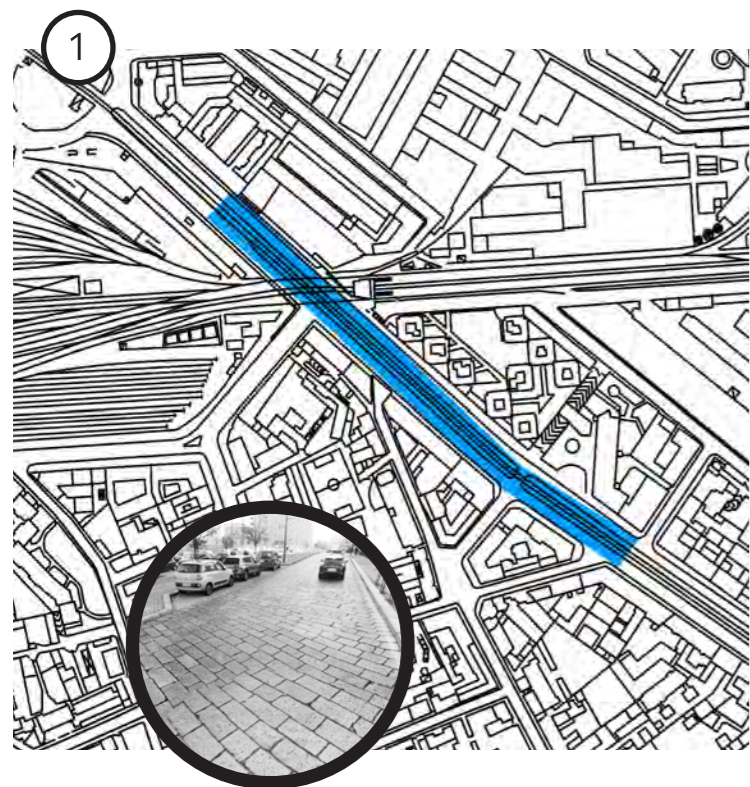
- WHAT, WHERE, WHO?
- URBAN ACTIVITIES & SOUNDS
- SENSORY RESPONSE
- NOISE THAT MATTERS
- PERSONAL STEREOS
- How SOUNDS CORVETTO?**
- MAIN QUESTION

Depending on what time of day we explore, activity in Corso Lodi area of the city can be very different. This area, as mentioned above, does not have the property of belonging only to quiet family residents. A large number of young and foreign people, as well as neighbors whose personal life schedule differs from the usual one for every Milanese, as well as constant car traffic from different directions inside and outside Milan fill the urban environment with sounds with special intensity.

Corvetto is a perfect example of an urban area in which two Schaffer sound scenarios are acutely encountered: Hi-Fi and Lo-Fi. Hi-fi is right around the corner, moreover - at some points within the area there are sound pits in which the silence of the suburb becomes accentuated and ringing. In the last 10 years, many new sounding elements, such as electric scooters, fulfilling our daily needs have appeared and today have already become quite ordinary phenomenon in the urban space.



46 Space-time diagram based on Schaffers approach and soundscape concept →



↑ 416 meters of thundering road, made of stone pavement



Soudmarks or noises?

Humming bridge

A car driving over this surface produces an **oscillating tone**, the exact frequency of which is determined by the speed of the car.

The pervasive droning quality of this sound makes it **musical**.

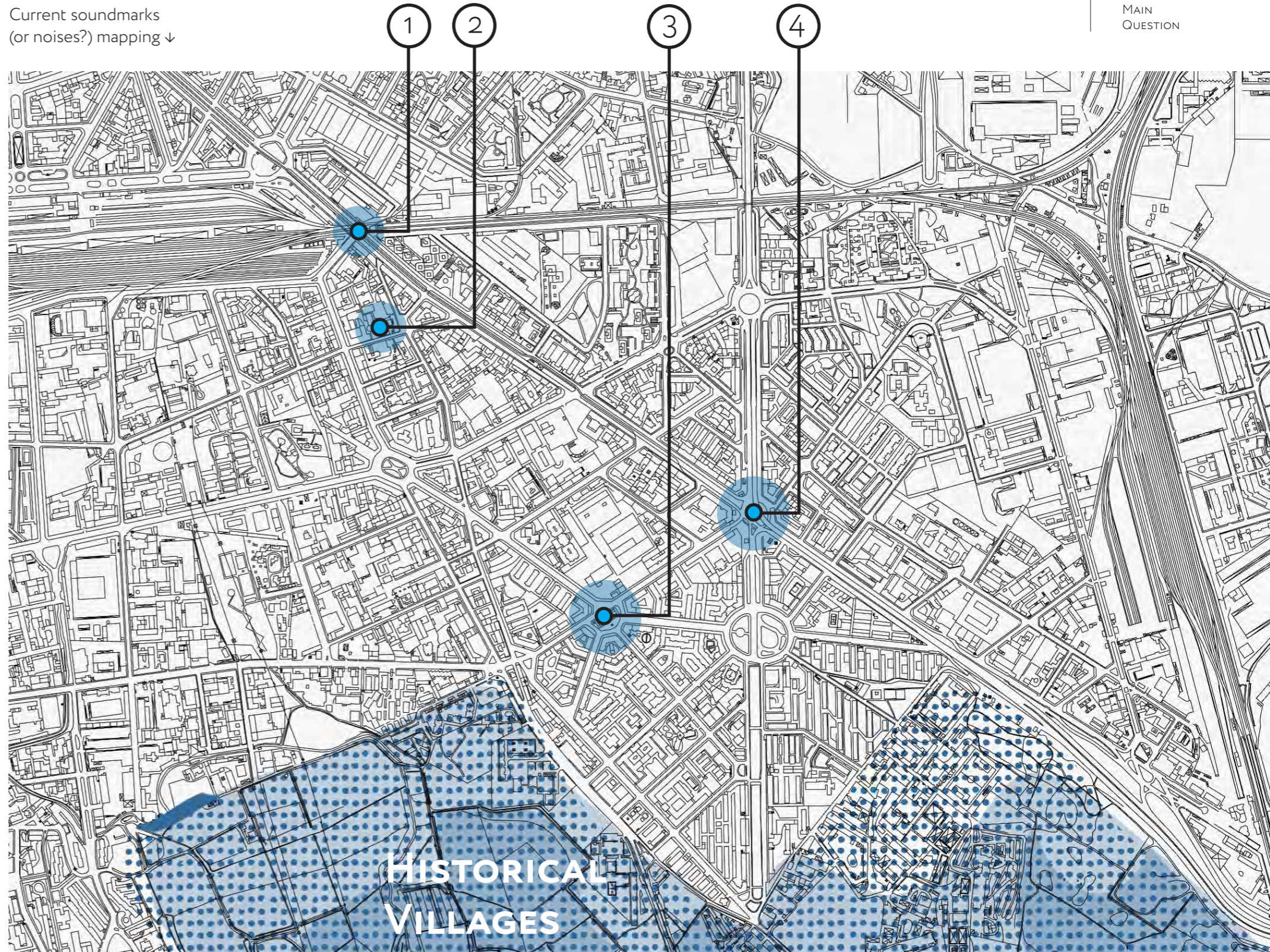
↑ Viale Luciana at Piazzale Luigi Emmanuele Corvetto runs along the bridge



Church of Saint Louis Gonzaga →



Current soundmarks (or noises?) mapping ↓



EXPLORATION

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

How sounds CORVETTO?

MAIN QUESTION

Main Question

What happens if the soundscape of Corvetto would change?

The main goal of the project is to investigate how to make Lodi-Corvetto mile more inclusive by creating collective urban experience through the sound, replace personal stereotypes with an activity, that could involve neighbourhood, link and connect people by sound.

EXPLORATION

WHAT, WHERE, WHO?

URBAN ACTIVITIES & SOUNDS

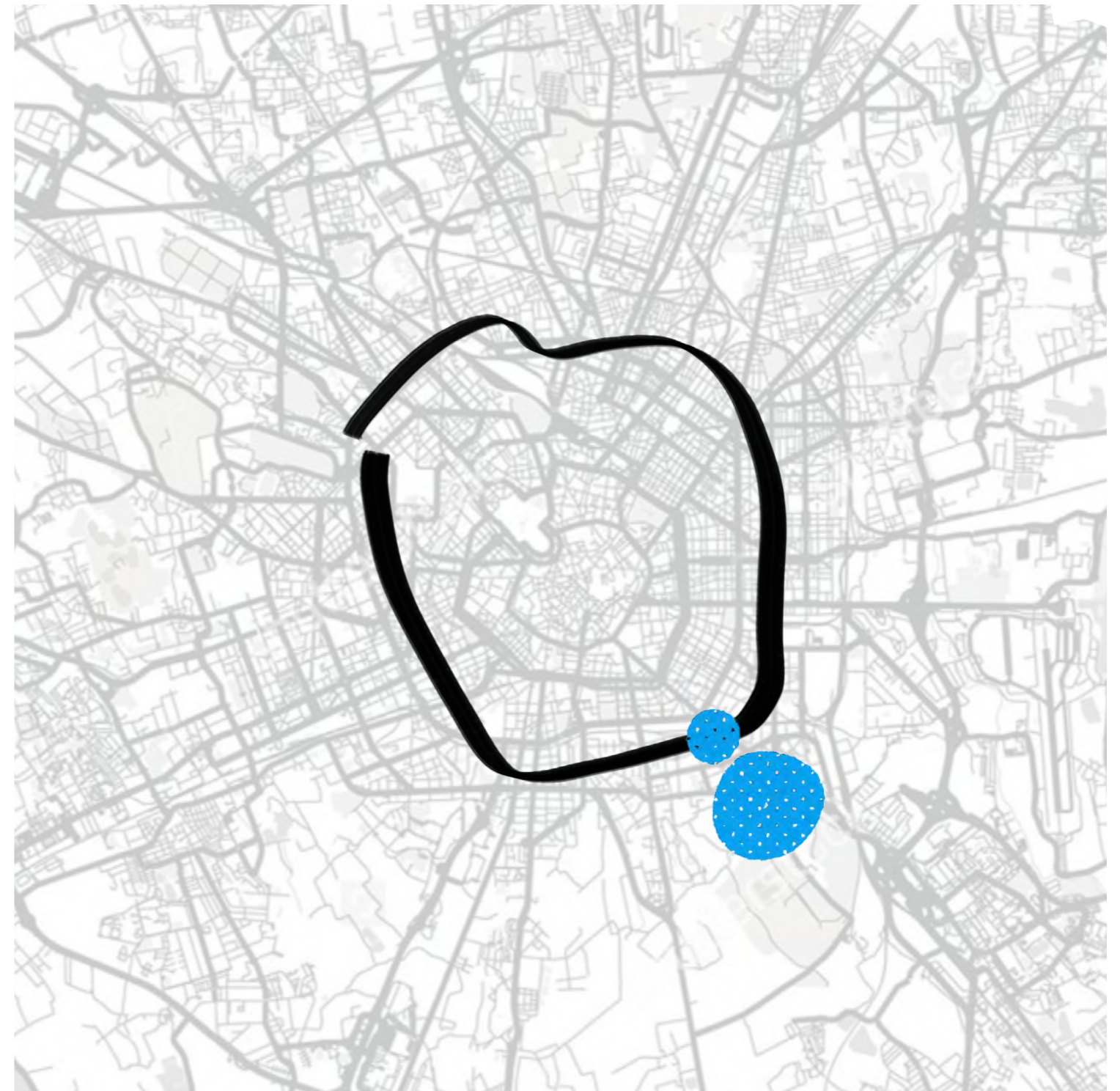
SENSORY RESPONSE

NOISE THAT MATTERS

PERSONAL STEREOS

HOW SOUNDS CORVETTO?

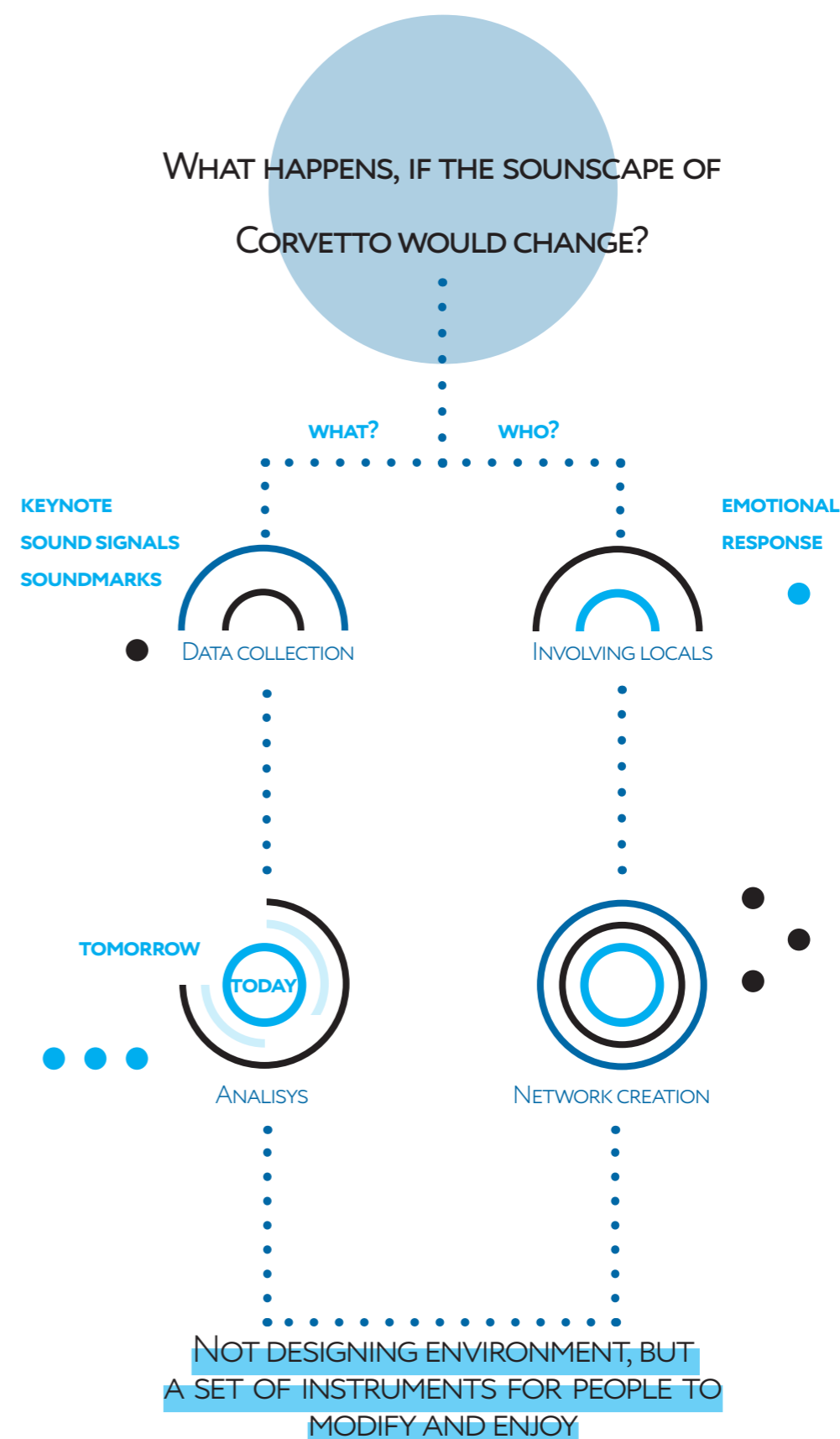
MAIN QUESTION



Creation

- 054 Defining the approach
- 058 **Ears of Corvette**
- 060 Instruments
- 062 References

Defining the approach

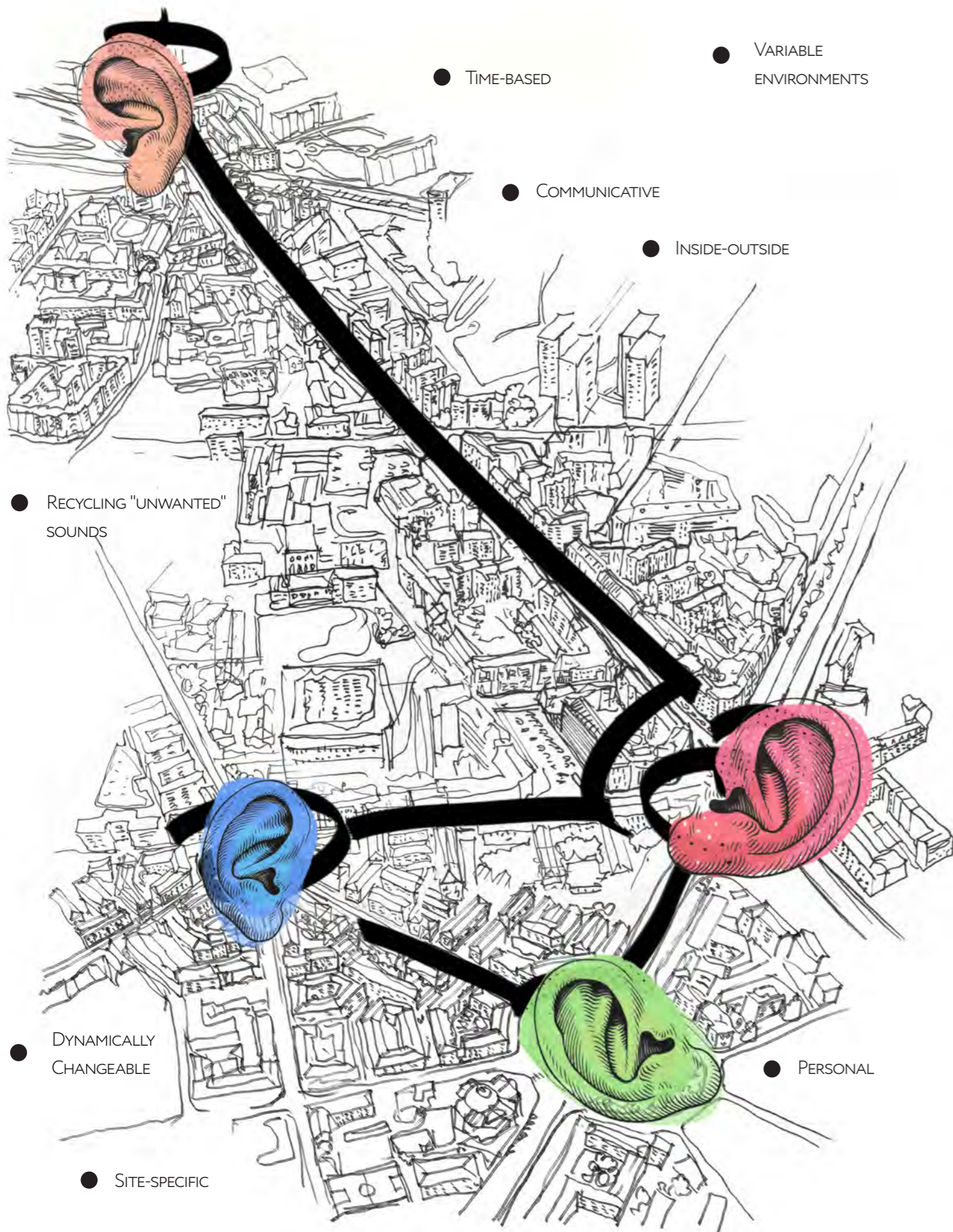


The general approach to creating a new, designed, sound background for Corvetto residents should begin with studying and measuring all sound sources. The analysis of these data in today's state is clearly not enough to get a complete picture. Therefore, intelligent data collection technologies and neuroanalysis should be used to predict how the situation will develop in the future. On the other hand, we need to see and evaluate the emotional response to the current situation in order to work with future reactions, for this it is necessary to form a new local social network for residents. Thus, already at this stage it is absolutely obvious: we need not to design the urban environment in detail, but to create conditions in which local residents could form this space themselves, becoming the main actors and consumers of their choice.

The emotion aspect of planning is a fairly new approach, even if the planners and thinkers of the 20th century have always considered it, only using different formulations. However, this was more closely related to perception in planning, mental maps, psychogeography, or even anthropocentric ideas about planning. Studies of mental maps, mainly known for Kevin Lynch and the study of the "Image of the City", analyze "the quality of a physical object that gives it a high probability of evoking a strong image in a given observer". Lynch moves the observer to the center of reflection, and this gives his research an anthropological view of the city. Thus, Lynch believes that people moving in urban space are just as important as structural and physical elements. "We are not just observers of this spectacle, but we are part of it ourselves, being on stage with other participants... Almost all the senses are involved, and the image is the totality of them all". The exploration of the city had a very visual perspective and did not consider – or sometimes only as a side issue – other sensory aspects.

Psychogeography, which emerged during the urban transformation of Paris in the 50s, is closely related to mental maps. Psychogeography includes almost everything that leads pedestrians away from their predictable paths and pushes them to a new understanding of the urban landscape. The ideas of mental maps and the methods of situationists have influenced many studies at the present time, using modern, innovative tools (mobile devices, social networks, etc.) to study urban space. Topics such as sensor data collection and human sensitivity assessment are closely related to spatial monitoring approaches from a planning perspective. A distinction is made between inductive and deductive monitoring. Deductive monitoring is described as the observation of phenomena over a period of time, integrated into planning process: data from the immediate spatial environment of users is collected, analyzed and shared again instantly on the Internet. Sensor technology works "on the spot". In addition, the concept of joint sensing describes a type of deductive, user-oriented monitoring.

re-designing environment
 set of instruments for
 to modify and enrich



Ears of Corvetto

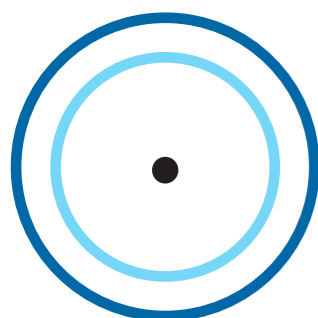
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Thousands posts were made in Instagram using the hashtag #Corvetto

This concept of unification is through hearing, communication and the exchange of emotions. After three years of Covid-19, humanity starts to be tired of online communication: which does not give a sense of closeness to the interlocutor. Proposed new social network will work on the edge of tactility and sensory perception. The main emphasis will be placed on offline, but only on the offline of the new world: reinterpreted and augmented by sound. Idea of involvement in the processes around you can bear fruit in the development of the district and the city as a whole, improve the dynamics of life and eliminate those problems that we talked about in previous parts. These virtual "Ears of Corvetto" will find their physical embodiment in the form of a series of spaces located remotely, but strongly linked to each other as a sequence.

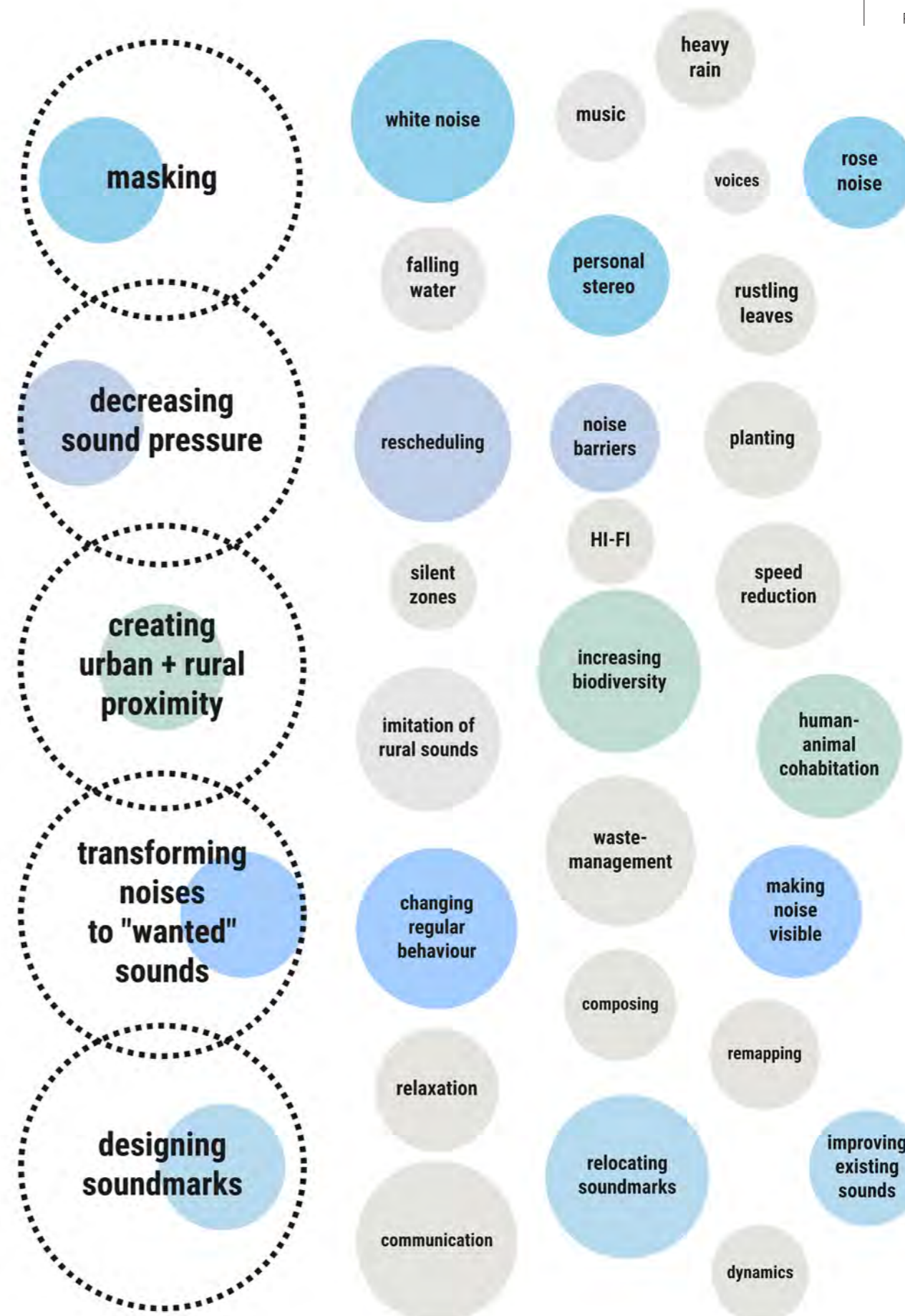
Instruments

How do we choose a tool to act?



The aim is to solve current problems and increase quality of life

To find our own way to solve the problem, it is extremely important for us to study the results of research and experiments in various fields. The diagram shows the results of noise control studies, the ideas of music and art figures: writers and cinematographers, road services. Such an effective strategy as masking is used in noisy megacities. As a rule, small and large water structures become masking tools: waterfalls: fountains or streams. Not only water can create white noise in the city, but also other sounds: collected in a monotonous sound and at the right volume level: to extinguish the effect of annoying keynote expressive sounds. There is one significant disadvantage in this method: the problem of noise pressure is not solved, and white noise only adds to the intensity of the overall sound background. It is necessary to develop a comprehensive approach to solving this problem: from changing the road surface to adjusting the work schedule of residents. This is not a design task, except for one possibility - to create absorbent surfaces using architectural methods, thus improving the situation. When these two methods are exhausted, there are still a few left. For example, the greening of the urban environment creates the proximity of the urban and rural landscape, attracts birds and animals. Such a change can significantly change the whole order of things. If we add to this the education of a new consumer culture that can transform noises into positive sounds, and against this background create conditions for new soundmarks, the feeling of Corvetto will become new and airy.



References

white noise
increasing biodiversity
planting
speed reduction
Parc Andre Citroen / Alain Provost
1992

relocating soundmarks
Bill Fontana
Harmonic Bridge
Urban sound sculptures / Bill Fontana
2006

composing
Playing the Building / David Byrne
2008

improving existing sounds
relaxation
Qu-Bit Chord V2
Ensemble Oscillator
Nebulae Plaits Disting/
Wac- Lounge
2021

dynamics
making noise visible
Intonarumori / Luigi Russolo
1913

composing
Toccatà and Fugue in D minor, BWV 565 / Johann Sebastian Bach
1704

composing
The Place Where You Go to Listen / John Luther Adams
1994

white noise
heavy rain
THE MAGIC OF SOUND / Zimoun
2011

communication
LINES / Anders Lind
2016

Pierre Schaeffer/ Musique Concrète, 1938

Musique concrète, strives to start with the "concrete" sounds that emanate from base phenomena and then abstracts them into a composition.

Reflection

- 066 Sound Compass
- 068 Project prefiguration
- 070 Sound scenarios
- 072 Project concept

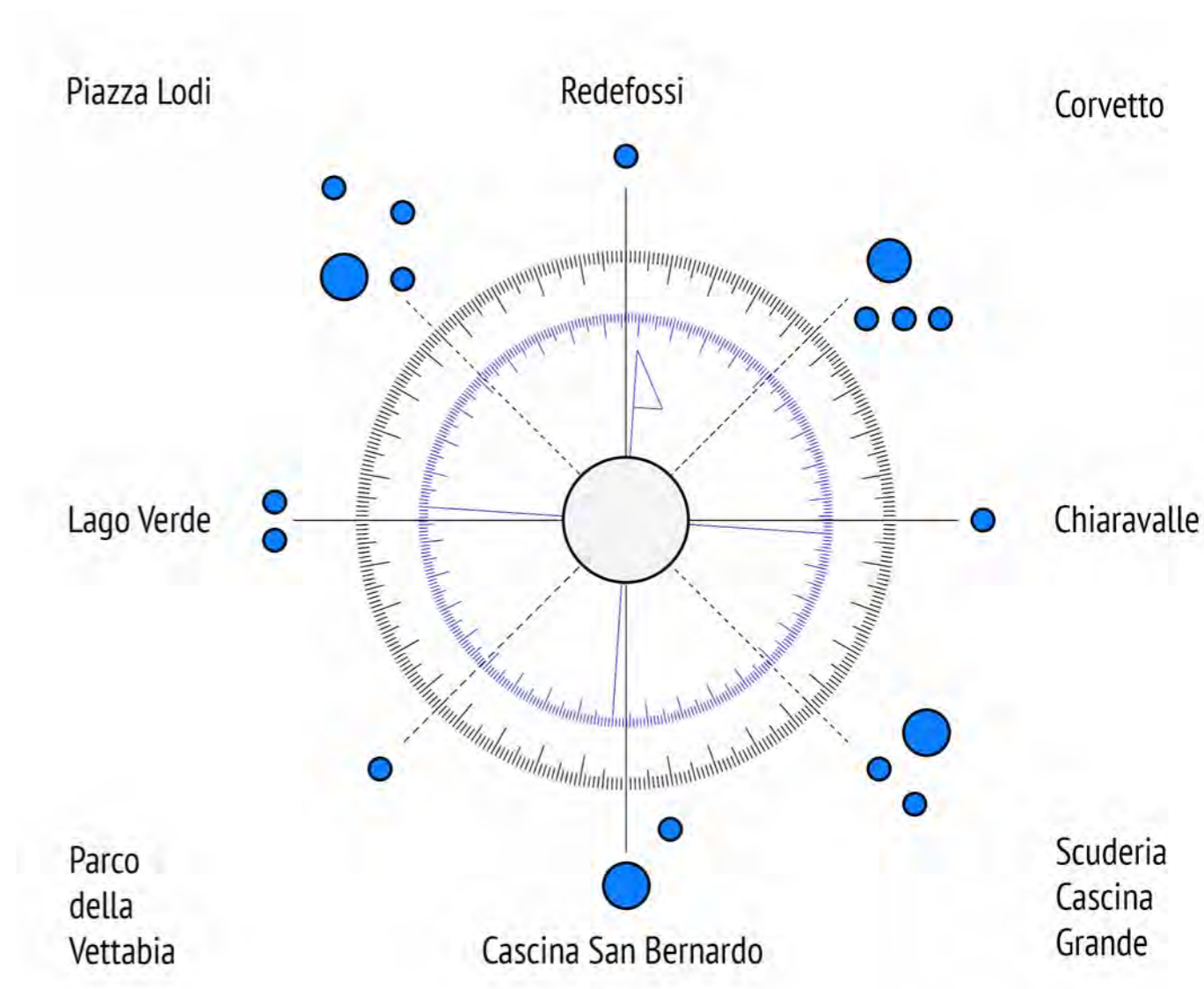
Sound Compass



Sound compass is a form of interconnection: romantic kind of navigation system, recreating sound of forgotten areas interactive points, that will allow people from different parts of the space to communicate and exchange decrease general street and metro sound pressure, by creating white noise and different kind of environment, more animal-friendly and involving people to the collective actions and experiences.

- 1 - Redefossi
- 2 - Lago Verde
- 3 - Parco della Vettabia
- 4 - Scuderia Cascina Grande
- 5 - Cascina San Bernardo
- 6 - Chiaravalle

← Selected locations will work together as a sound compass and representation of historical areas

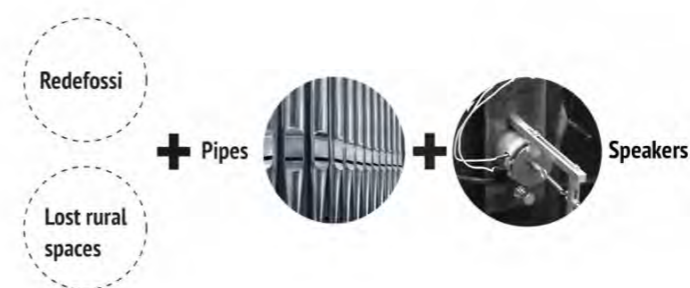


Project prefiguration

Components, references & scale distribution

The project will be based on these main components: Redefossi channel & lost rural spaces, metal pipes and sound speakers. For the references, there are "The Welt" by Andreu Alfaro for materiality and tactility effect; "Playing the Building" by David Byrne for interaction and Electronic Ears, used in Germany during the second world war for their shape, design and sound performance. Depending on the purpose, design elements scale from micro to macro. There will be six types of spaces forming the project: Dandelion field, Ears, Touch Redefossi, Sound Forest, Waterfall square & Silent Bridge.

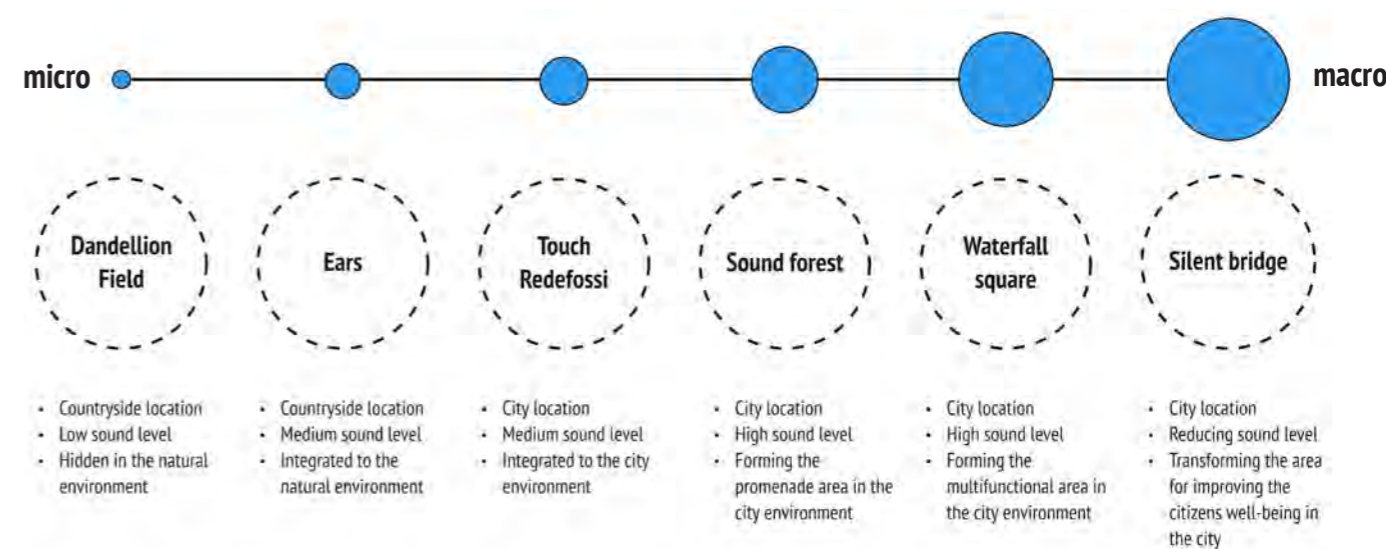
COMPONENTS



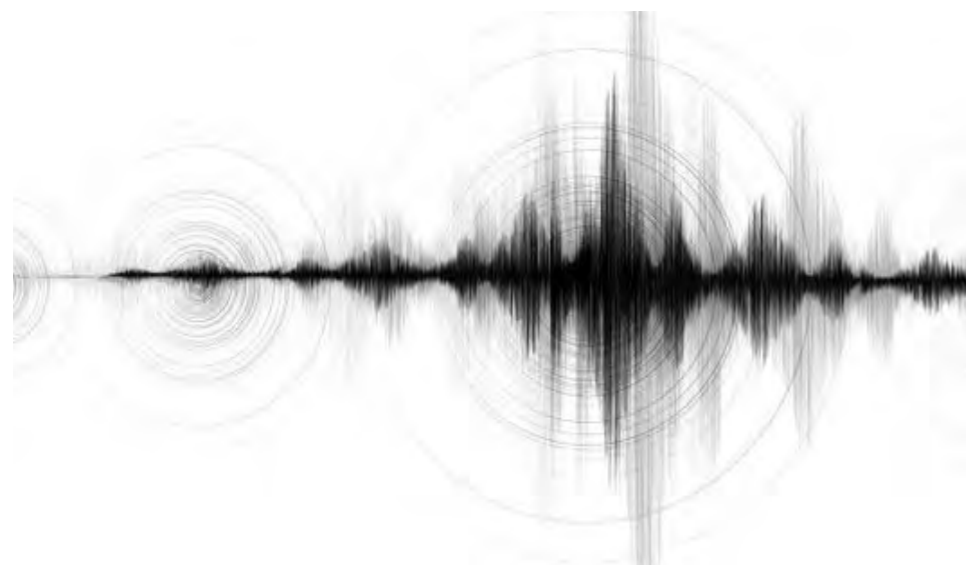
REFERENCES



SCALE



Sound scenarios



↑ Sound wave with circle vibration

Each typology of the project will enhance, highlight the closest (by Sound Compass) sound memories. The effect can change seasonally, but mainly it should bring the rural sounds to the noise-polluted areas and locations. The audio track is an important part of this urban construction. As Wim Wenders demonstrates in his Lisbon Story (1994), soundscapes define cities: they construct urban spaces and make them into specific places and sites of memory. As inhabitant-spectators of the haptic architectural journey, we are deeply affected by the sounds of a city.

- SOUND COMPASS
- PROJECT PREFIGURATION
- SOUND SCENARIOS**
- PROJECT CONCEPT



Project concept



Dandellion Field

Design:
Formed by very small design elements, looking like a kind of technological flowers, integrated to the field and shaping a focused sound cloud

Performance:
Sensitive to the movement, the system switches on when the human or animal arrives to the localization of the sound. The experience is aimed to those who stand or sit on the ground.



Ears

Design:
Single design element, medium in size located on a humans head high, standing alone and shaping a sound only for the one interacting with an object.

Performance:
Sensitive to the movement, the system switches on when the human or animal gets close to the design object. The experience is aimed to those who stand in a close proximity.



Touch Redefossi

Design:
Formed by medium size design elements placed on the walls of the underground passage, filling the whole area with the sound

Performance:
The sound is produced continuously during the metro working hours on the medium volume level. Sensitive to the touch, the system makes the sound stronger if someone puts his hand to the part of the installation.



Sound Forest

Design:
Formed by elements of various size, the main sensation is about walking through the artificial forest. The sound valley is shaped according to the existing natural fluxes. The forest is connecting the street with the underground. The installation includes signs on the floor and market tables and benches

Performance:
The sound is produced continuously during the day from 8am to 11pm, on the medium-high level.



Waterfall Square

Design:
Formed by elements of various size, mostly vertical and differentiated in density, the space aims to be both a shelter and a square for new urban activities. The installation includes functional kiosks, benches and tables

Performance:
The sound is produced continuously, even at night. It creates white noise, separating the zone from the loudness of the main area



Silent Bridge

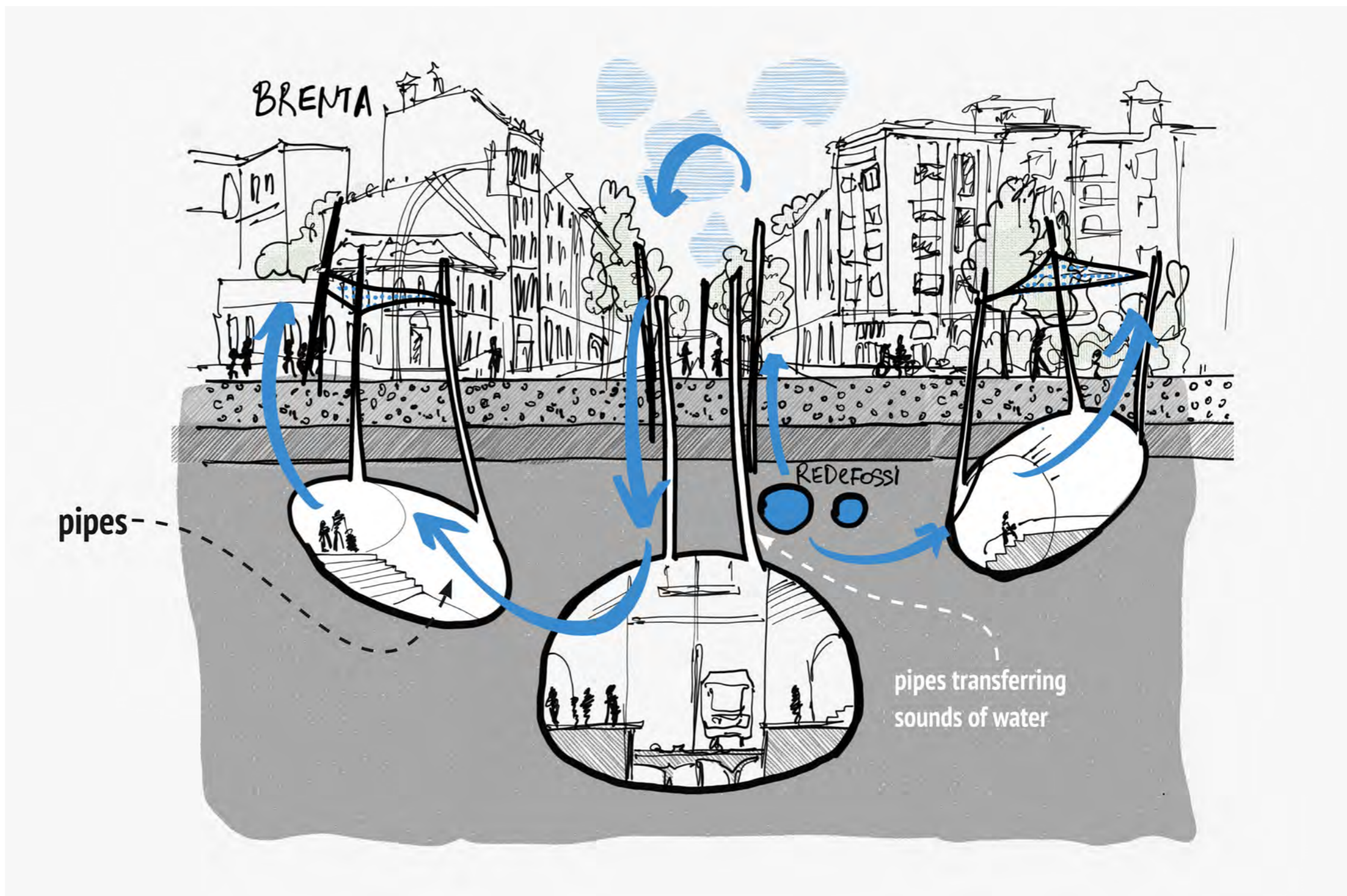
Design:
Formed by large and regular elements, fixed horizontally, the installation gives a new sensation to the whole area. This installation, even if connected to the waterfall square, is a separate object both in design and function

Performance:
The sound is not produced at all, but well absorbed and mirrored in order to bring silence and reduce noise pollution in the point of the city

Concept sketch



↑ Three metro stations are selected as basic locations due to high level of traffic and noise producing issues



Implementation

- 078 Spacial narration
- 082 Sound Forest
- 084 Ears & Dandellion Field
- 086 Waterfall Square & Sound Forest
- 108 Model photos

Spacial narration

IMPLEMENTATION

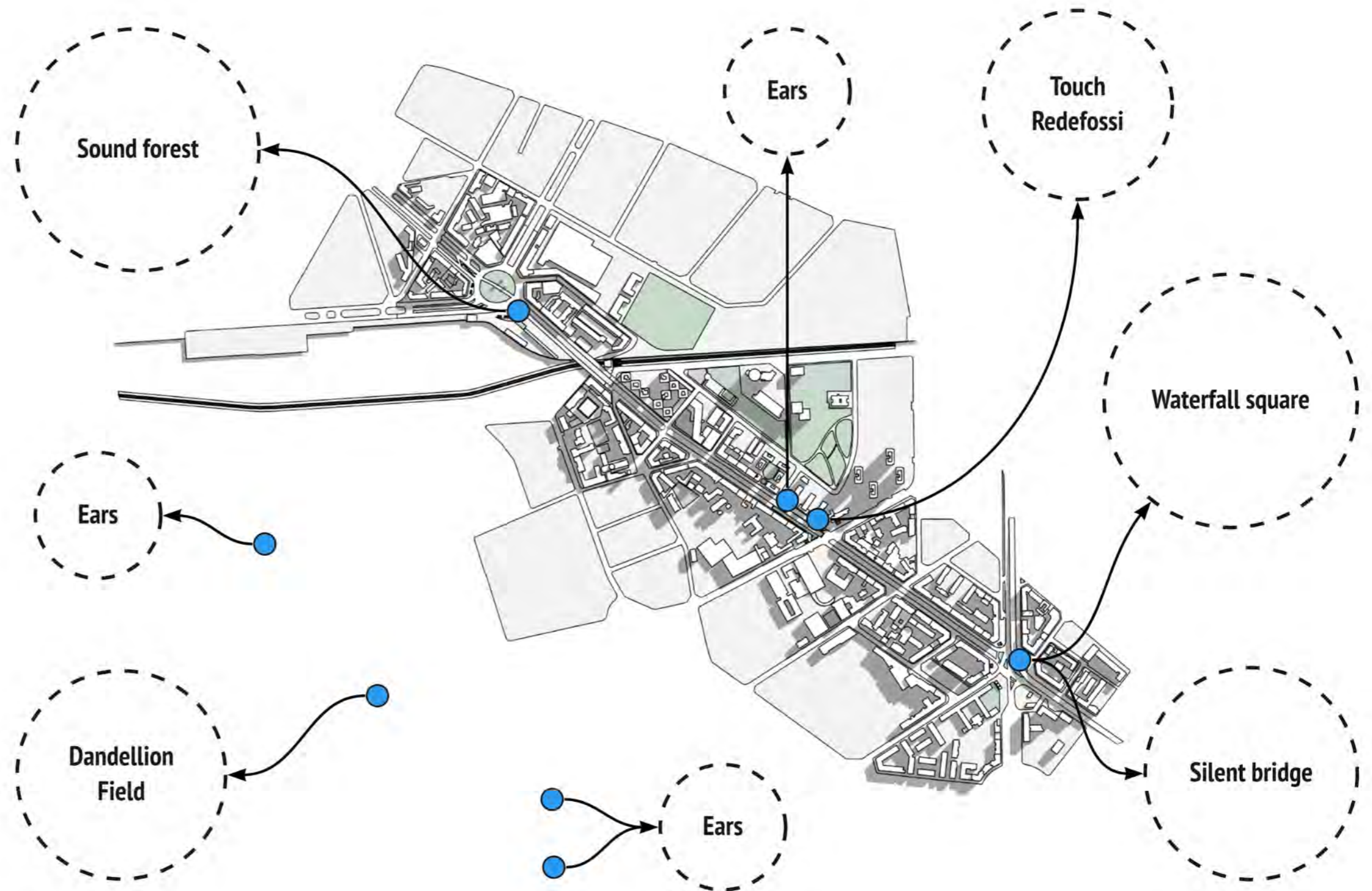
SPATIAL NARRATION

SOUND FOREST

EARS & DANDELLION FIELD

WATERFALL SQUARE & SOUND FOREST

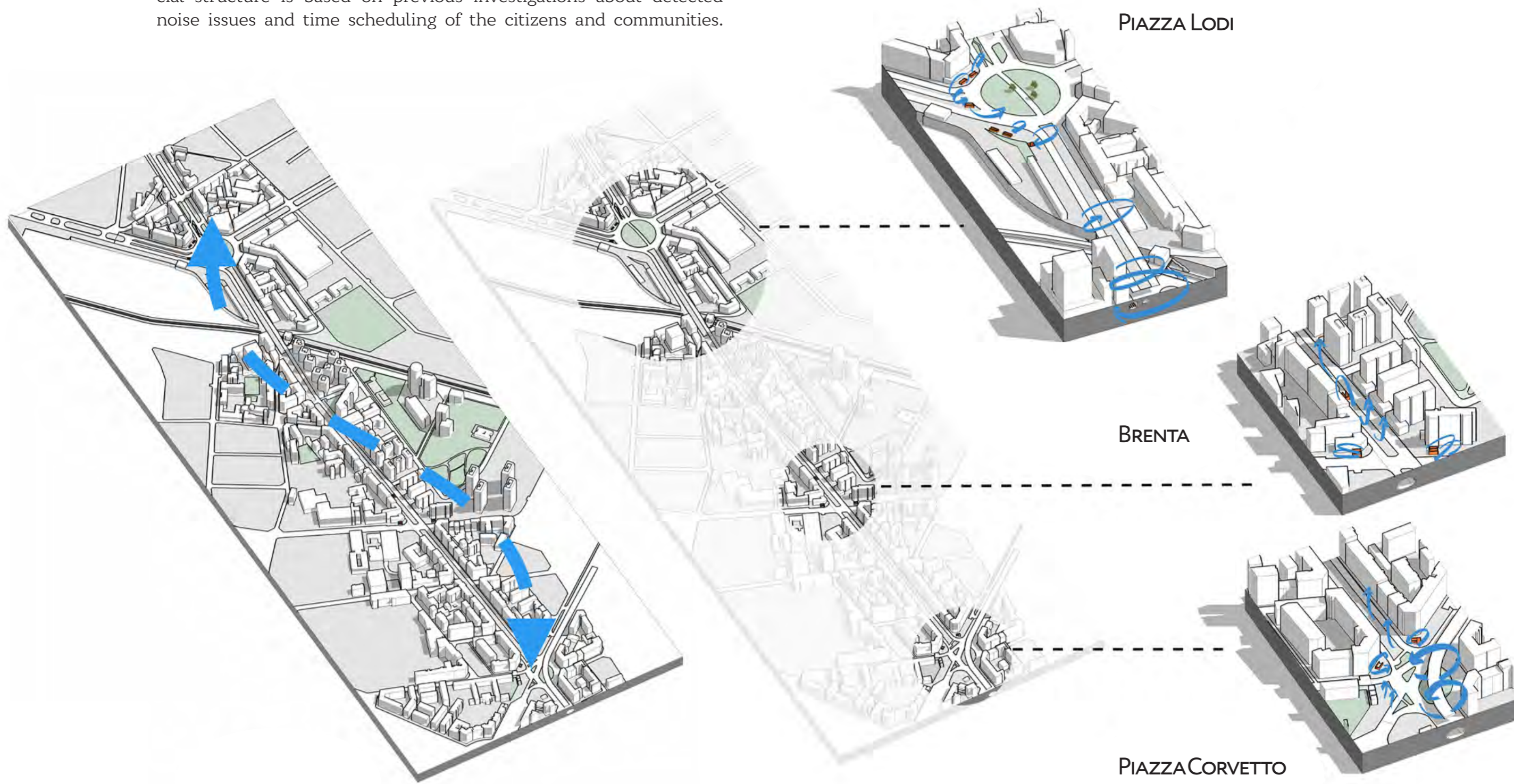
MODEL PHOTOS



Space transition

It's very important to handle the project activities within the natural fluxes and considering daily needs of the locals. The spatial structure is based on previous investigations about detected noise issues and time scheduling of the citizens and communities.

- SPATIAL NARRATION
- SOUND FOREST
- EARS & DANDELLION FIELD
- WATERFALL SQUARE & SOUND FOREST
- MODEL PHOTOS

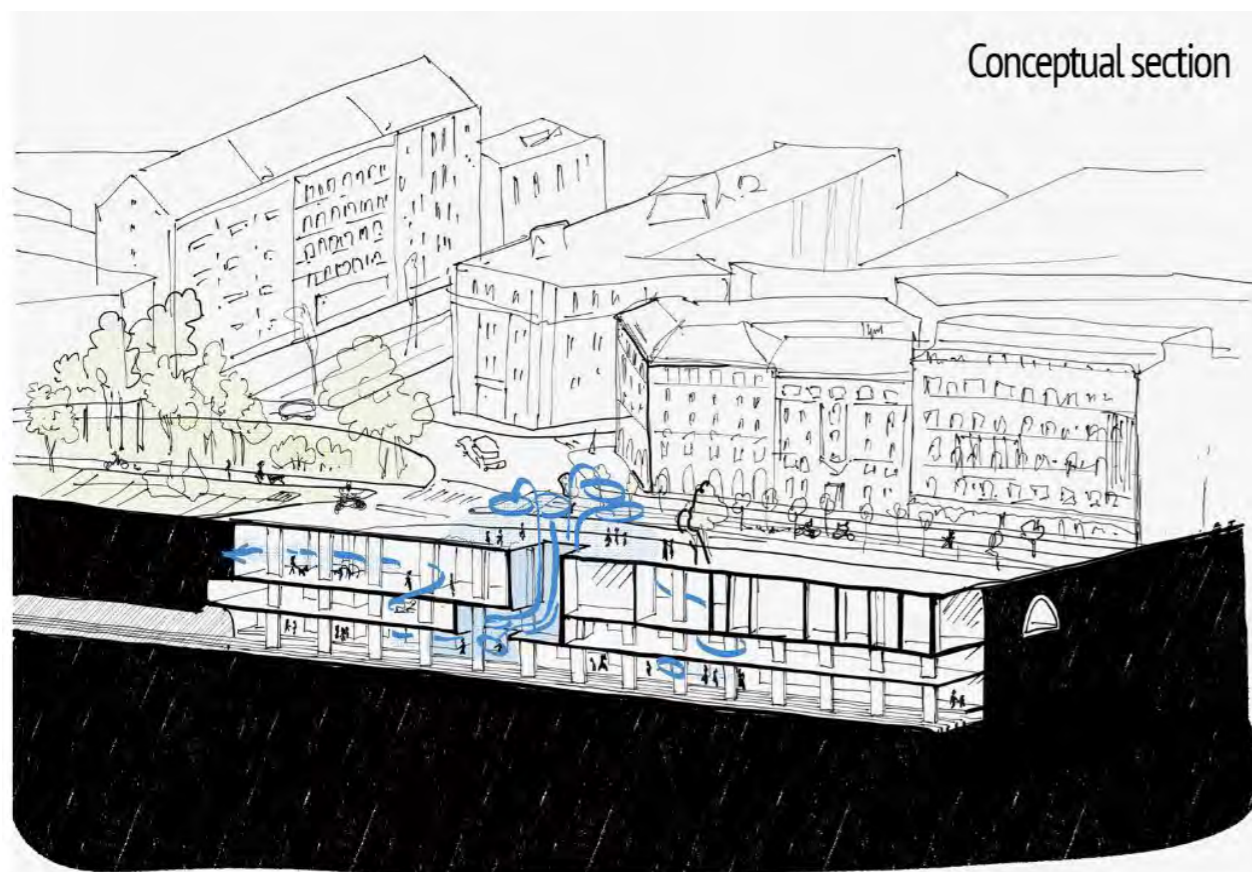


Sound Forest



PIAZZA LODI

- SPATIAL NARRATION
- SOUND FOREST**
- EARS & DANDELLION FIELD
- WATERFALL SQUARE & SOUND FOREST
- MODEL PHOTOS

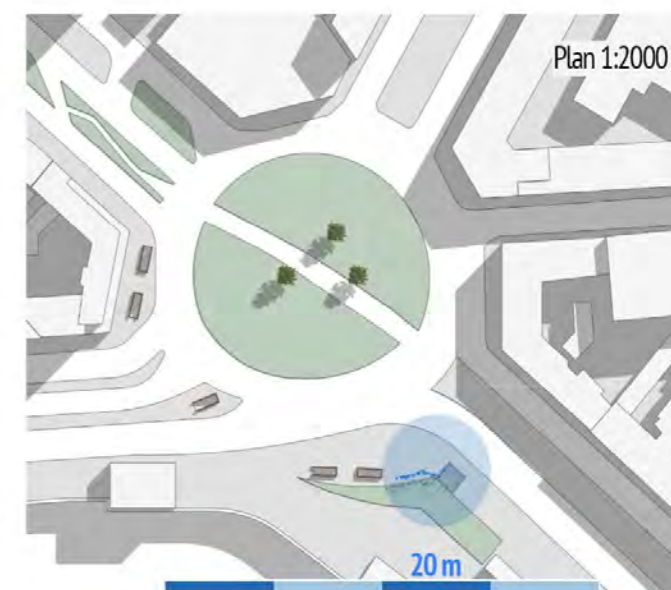


Design:

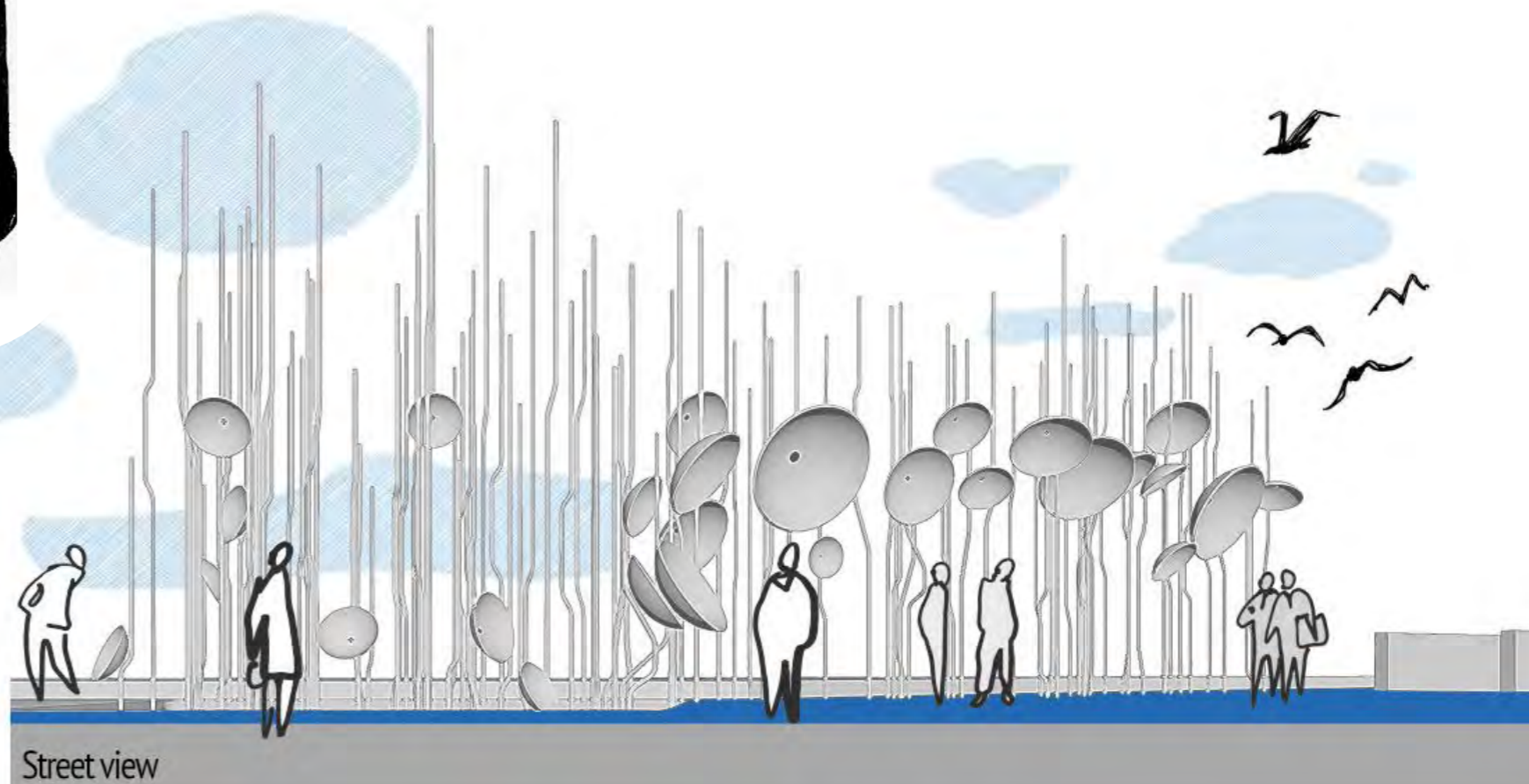
Formed by elements of various size, the main sensation is about walking trough the artificial forest. The sound valley is shaped according to the existing natural fluxes. The forest is connecting the street with the underground. The instalation includes special signs on the floor.

Performance:

The sound is produced continuously during the day from 8am to 11pm, on the medi-um-high level and according to the fluxes



Underground view



Ears & Dandellion Field

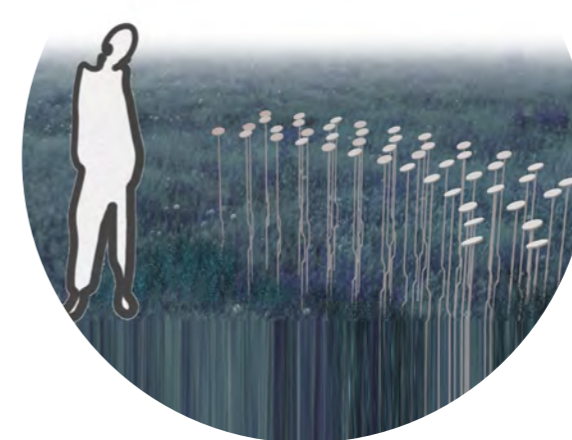
Dandellion Field

Design:

Formed by very small design elements, looking like a kind of technological flowers, integrated to the field and shaping a focused sound cloud

Performance:

Sensitive to the movement, the system switches on when the human or animal arrives to the localization of the sound. The experience is aimed to those who stand or sit on the ground in the middle.



DANDELLION FIELD

Ears

Design:

Single design element, medium in size located on a humans head high, standing alone and shaping a sound only for the one interacting with an object. There are planned several Ears on various parts of Corvetto.

Performance:

Sensitive to the movement, the system switches on when the human or animal gets close to the design object. The experience is aimed to those who stand in a closest proximity.



EARS

Waterfall Square & Silent Bridge

IMPLEMENTATION

SPATIAL
NARRATION
SOUND FOREST
EARS &
DANDELLION
FIELD

**WATERFALL
SQUARE & SOUND
FOREST**

MODEL PHOTOS



PIAZZA CORVETTO

Waterfall Square

Design:

Formed by elements of various size, mostly vertical and differentiated in density, the space aims to be both a shelter and a square for new urban activities. The installation includes functional benches and tables

Performance:

The sound is produced continuously, even at night. It creates white noise, separating the zone from the loudness and noise of the area

Silent Bridge

Design:

Formed by large and regular elements, fixed horizontally, the installation gives a new sensation to the whole area. This installation, even if connected to the waterfall square, is a separate object both in design and function

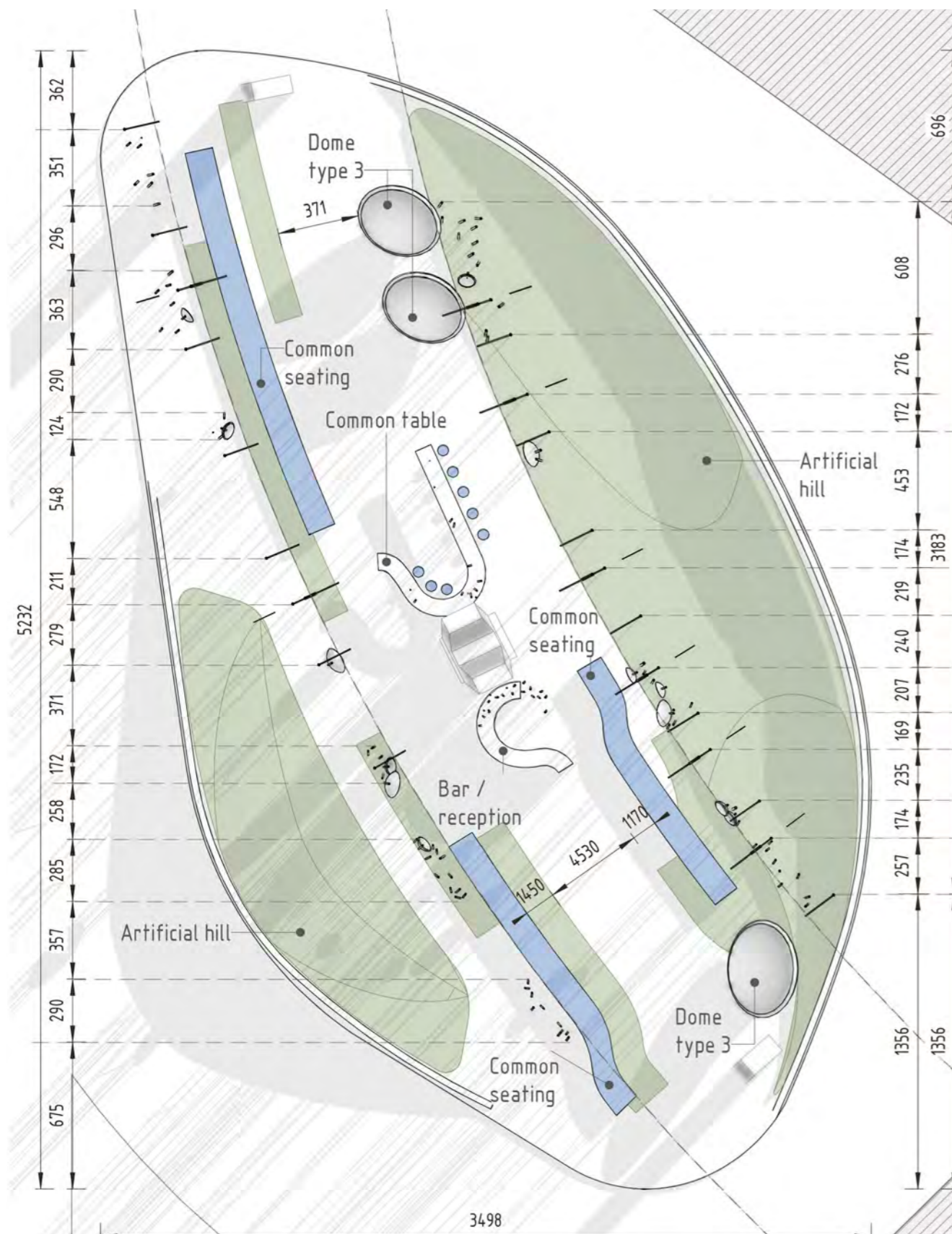
Performance:

The sound is not produced at all, but well absorbed and mirrored in order to bring silence and reduce noise pollution in the point of the city

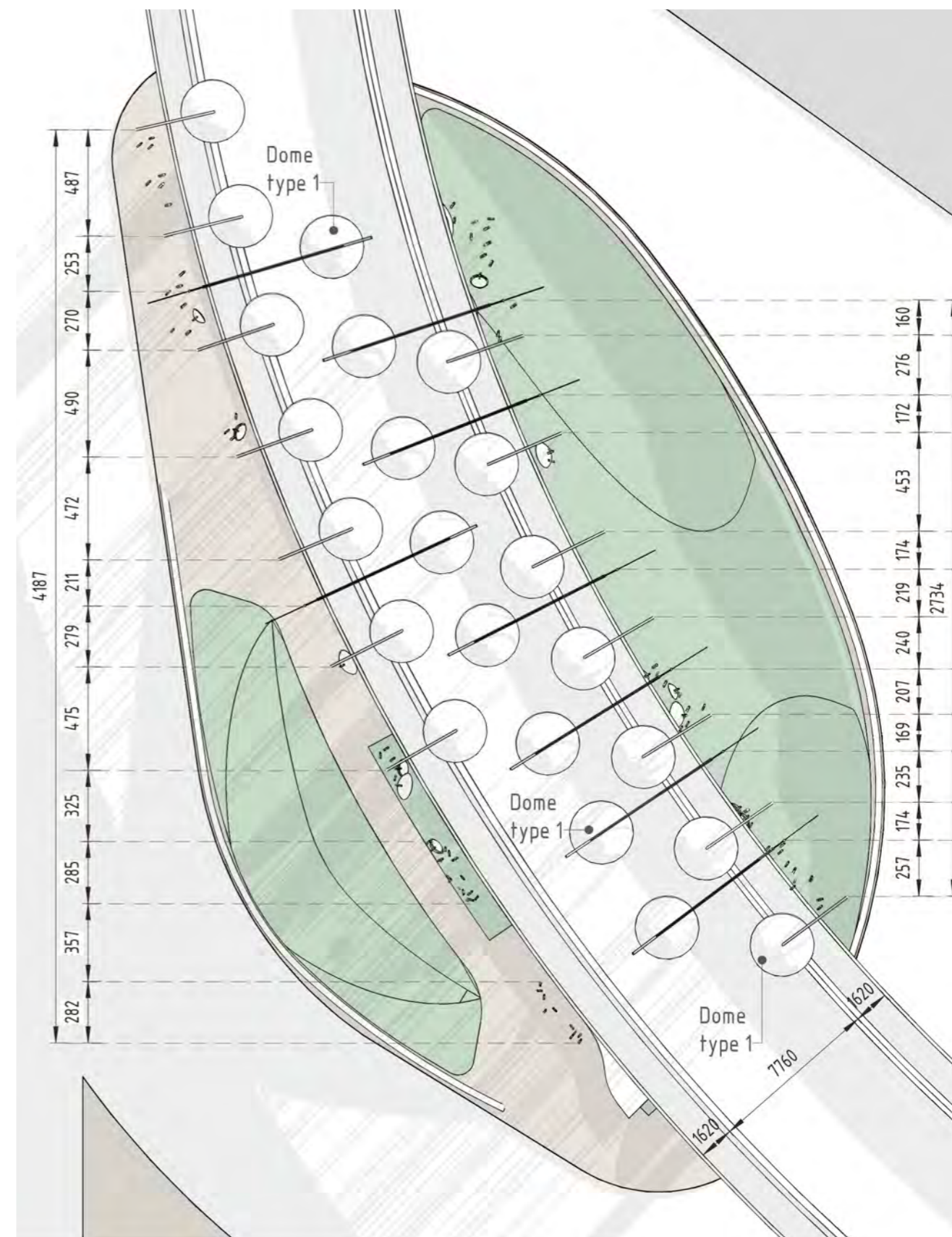


- SOUND
- COMPASS
- PROJECT
- PREFIGURATION
- SOUND
- SCENARIOS
- PROJECT
- CONCEPT

Ground level layout



Bridge level layout



SPATIAL
NARRATION
SOUND FOREST
EARS &
DANDELLION
FIELD

● WATERFALL
SQUARE & SOUND
FOREST

MODEL PHOTOS

Communities scheduling



7 AM - 11 AM: Local Market



9 AM - 11 AM: Breakfast with Giacomo



1 PM - 2 PM: Masterclasses

● Temporary exhibitions

● Pop-up store



3 PM - 4 PM: Social initiatives



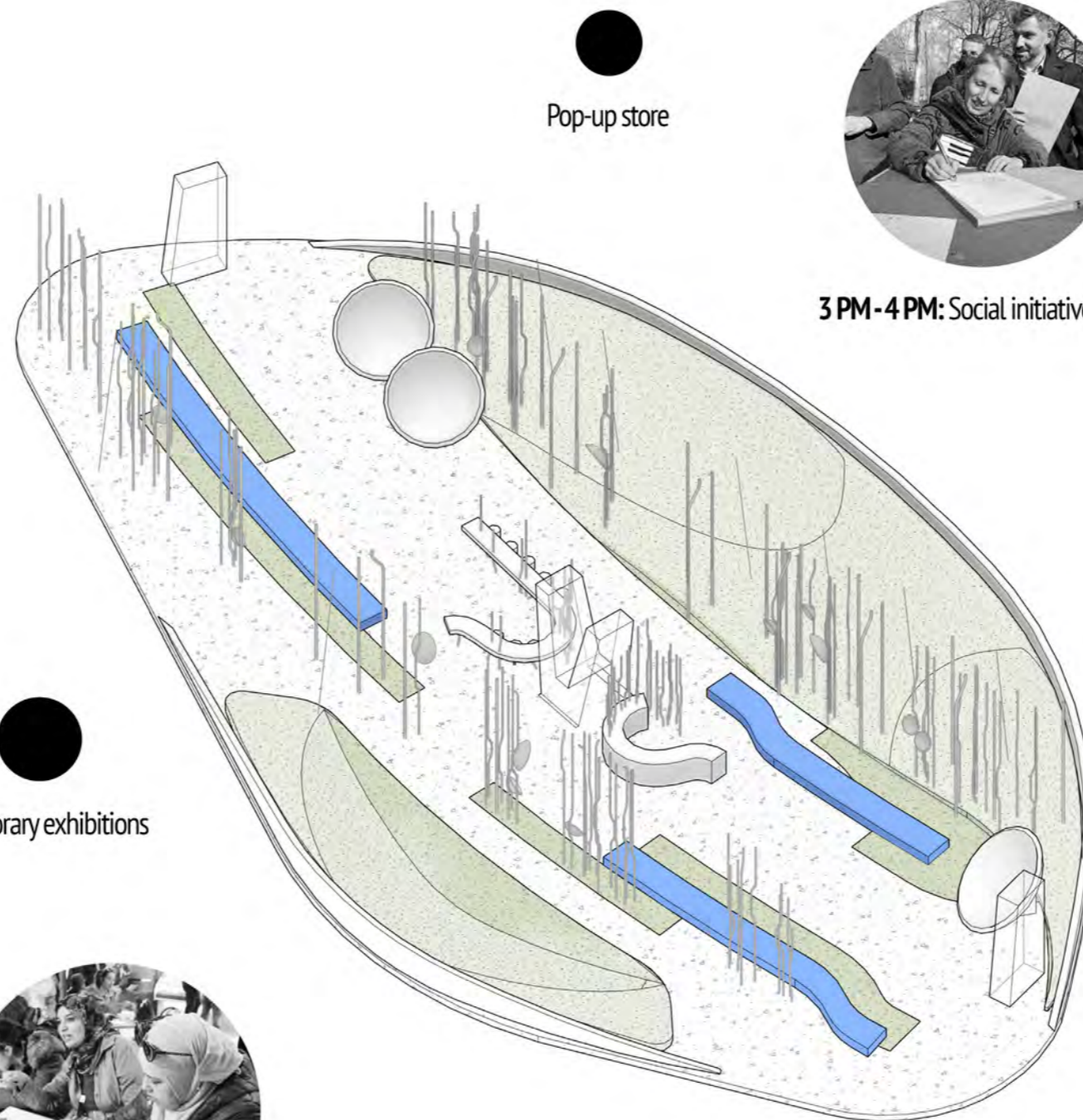
4 PM - 6 PM: Lectures

● Italian language courses

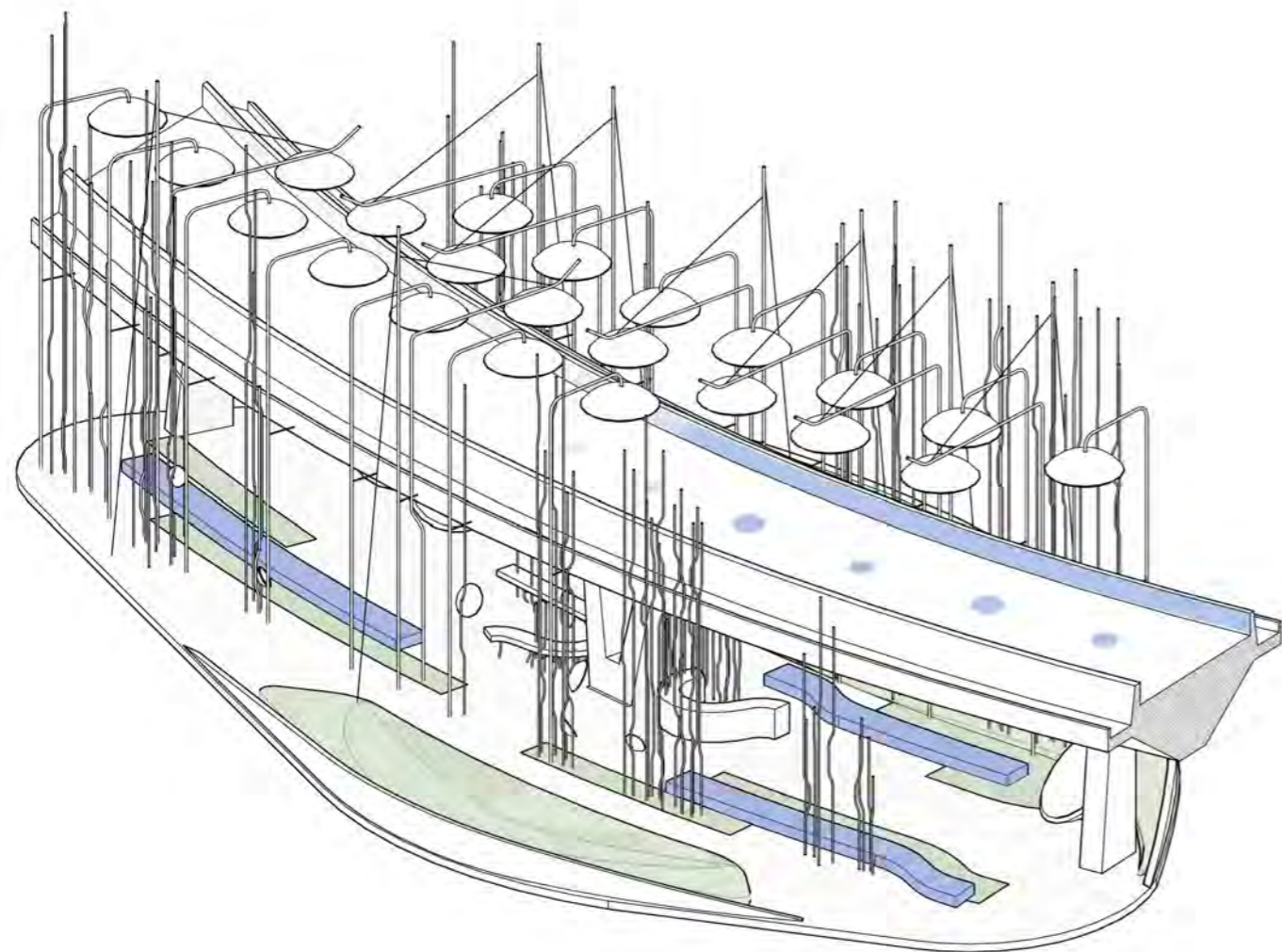


7 PM - 8 PM: Aperitivo

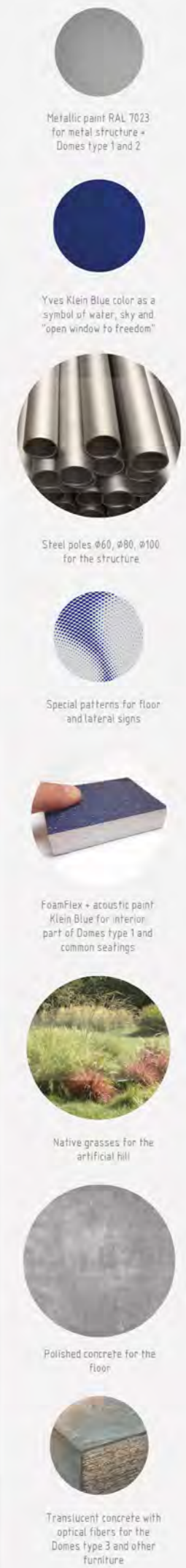
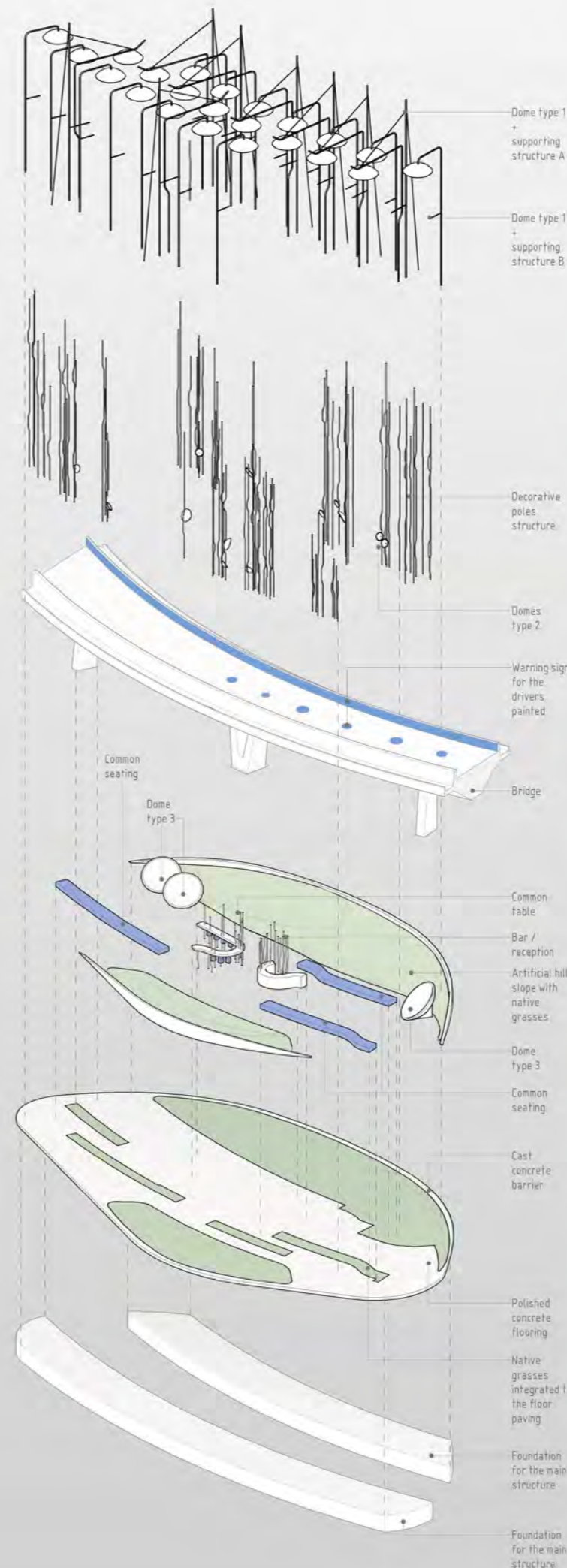
● Dancing classes



Components scheme



The choice of materials is determined by the historical subtext of the place. Lodi TIBB, a large industrial company that was engaged in the production of railway trains specialized in working with steel. Steel tubes were chosen as the material for the structure, for domes the material varies depending on the purpose. In combination with polished and translucent concrete used in furniture and floor decoration, a contrasting sound-absorbing material is used. Flex foam in blue named after Klein symbolizes the sky and water and works as an oppositional and softening material. Special patterns on the floor and walls are applied with paint for road signs.



Metallic paint RAL 7023 for metal structure + Domes type 1 and 2

Yves Klein Blue color as a symbol of water, sky and "open window to freedom"

Steel poles Ø60, Ø80, Ø100 for the structure

Special patterns for floor and lateral signs

FoamFlex + acoustic paint Klein Blue for interior part of Domes type 1 and common seatings

Native grasses for the artificial hill

Polished concrete for the floor

Translucent concrete with optical fibers for the Domes type 3 and other furniture

IMPLEMENTATION

SPATIAL NARRATION
SOUND FOREST
EARS & DANDELLION FIELD

WATERFALL SQUARE & SOUND FOREST

MODEL PHOTOS

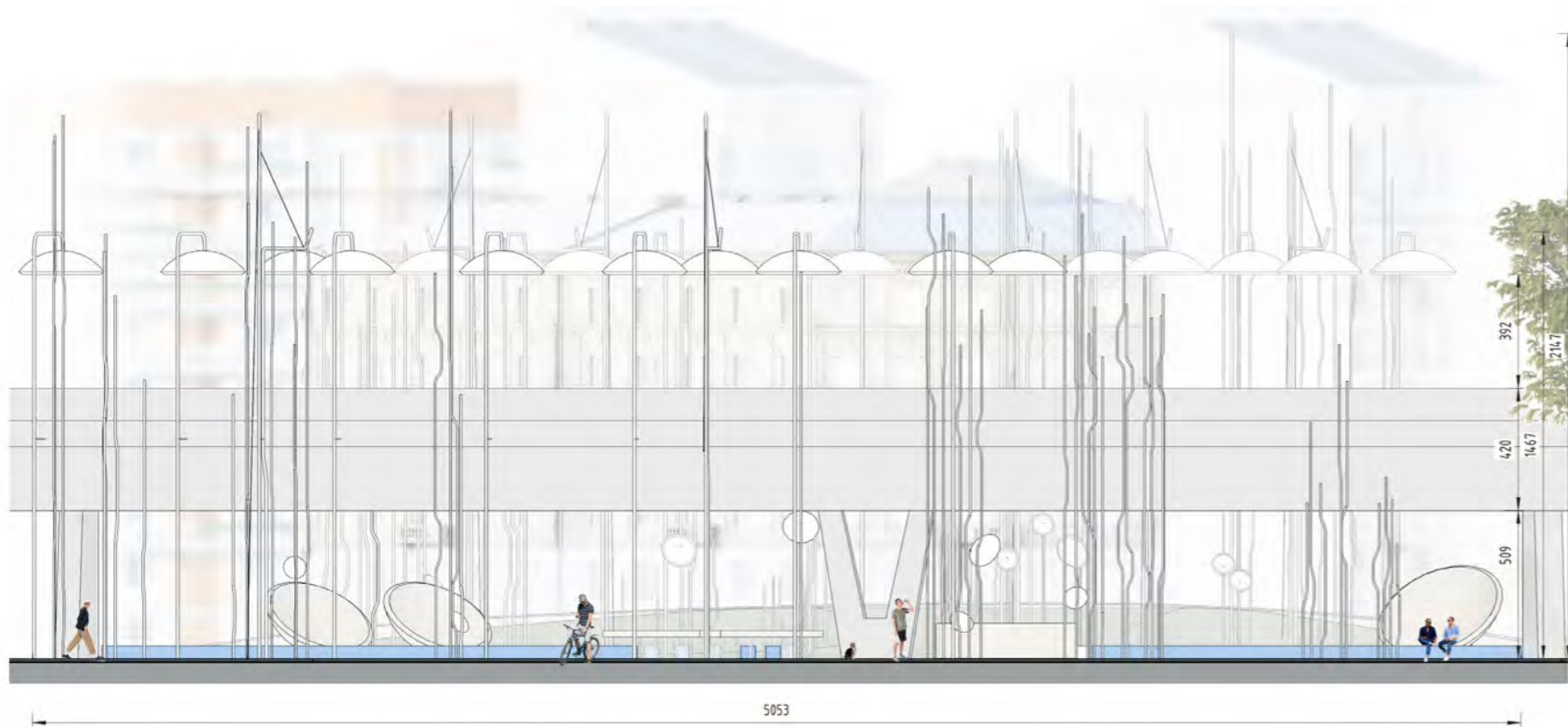
- SPATIAL NARRATION
- SOUND FOREST
- EARS & DANDELLION FIELD

● WATERFALL SQUARE & SOUND FOREST

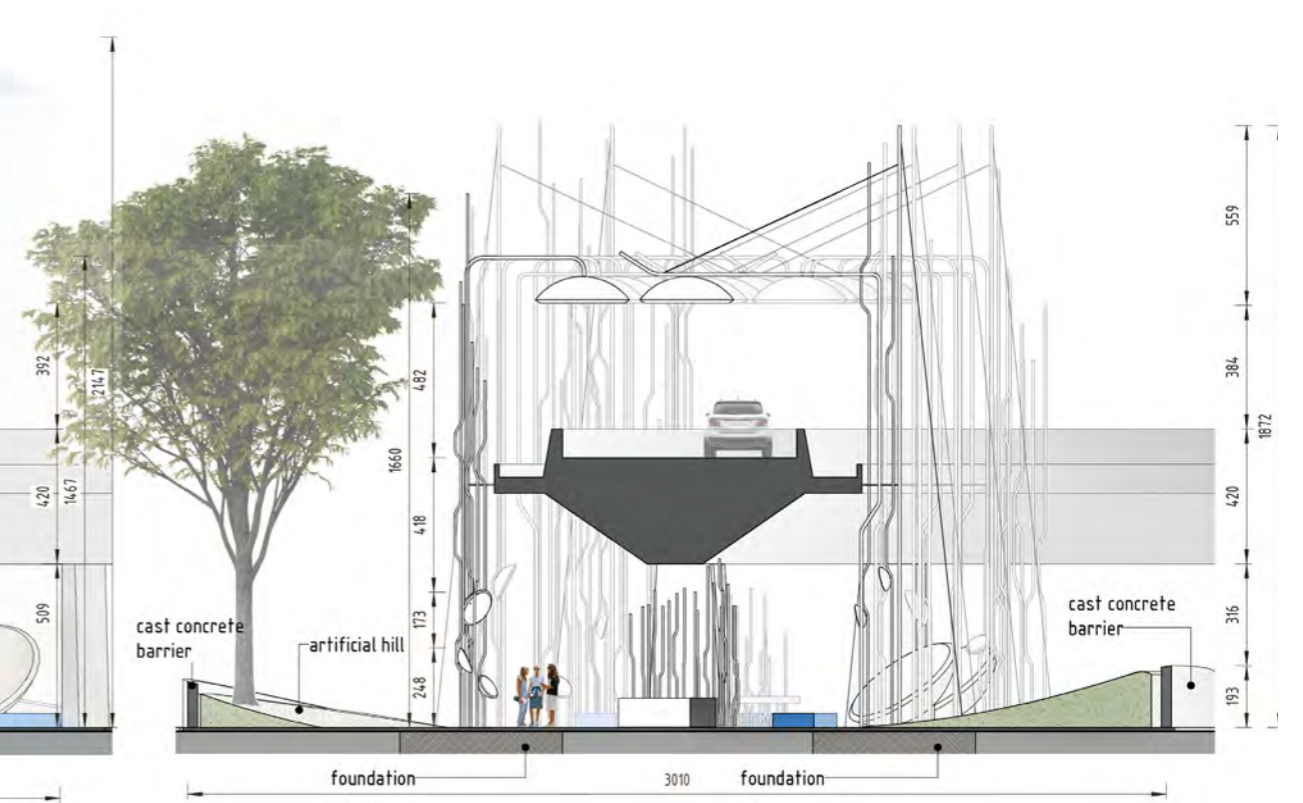
MODEL PHOTOS

Sections

SECTION A - A

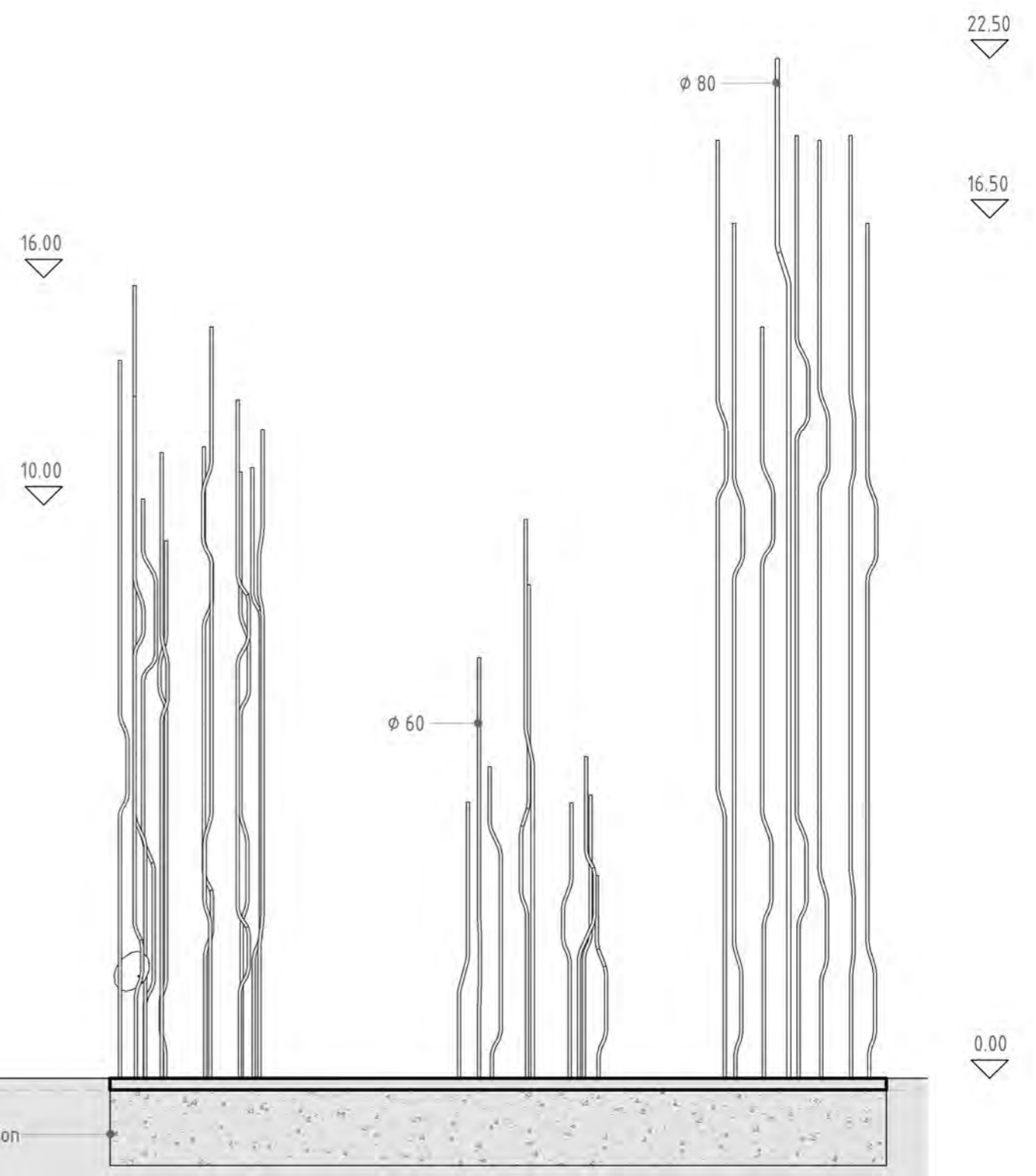
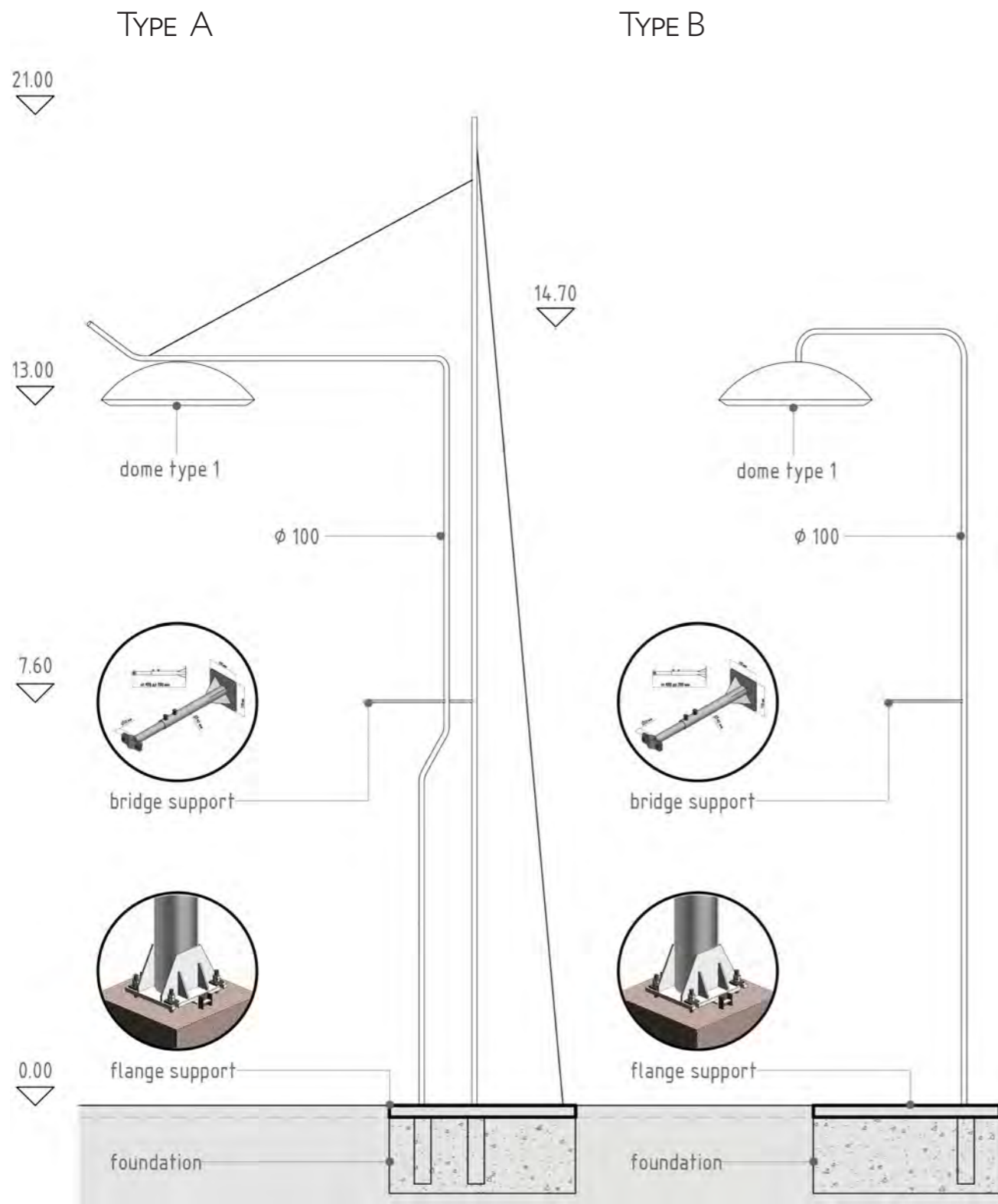


SECTION B - B



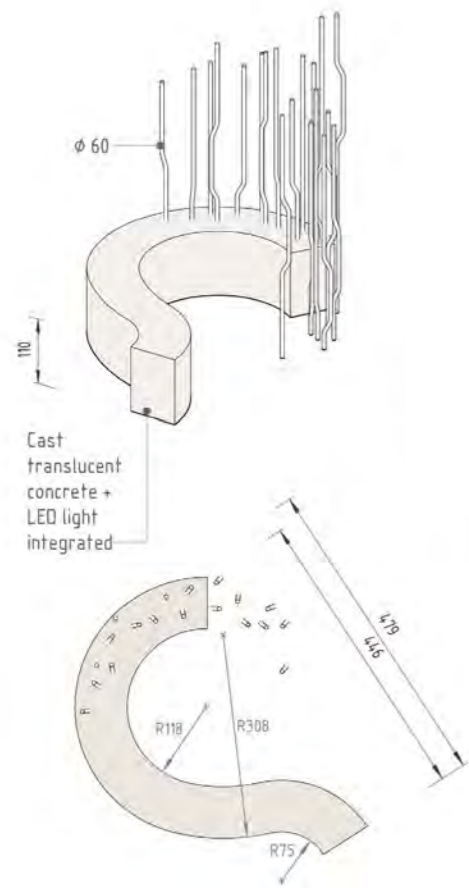
Dome type 1 supporting structures

Decorative pole structure

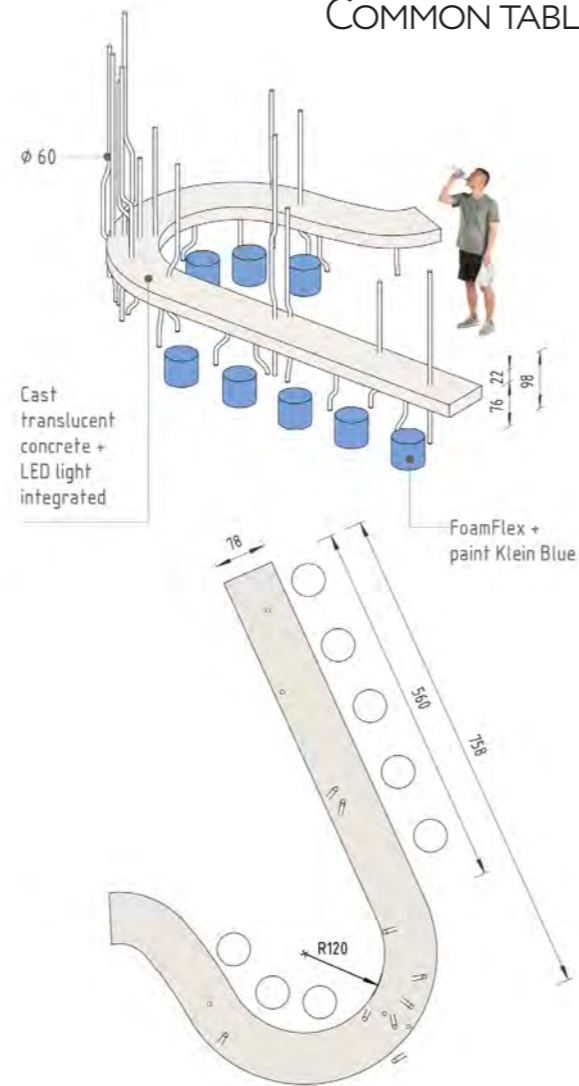


Furniture elements

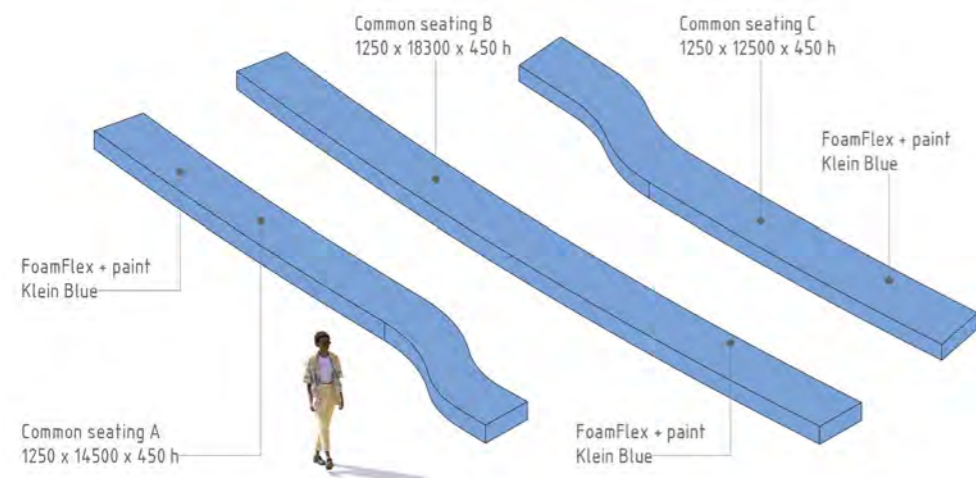
BAR / RECEPTION



COMMON TABLE



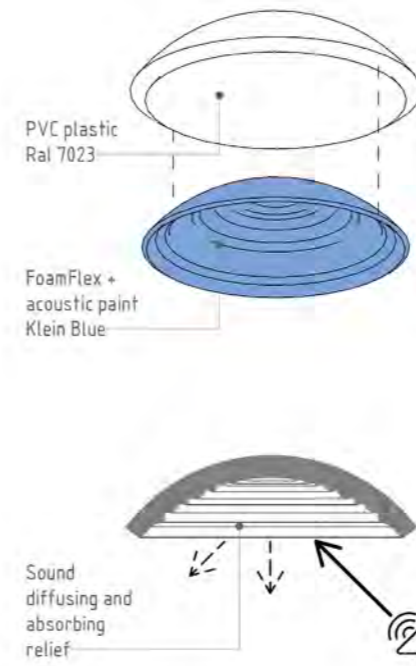
COMMON BENCHES



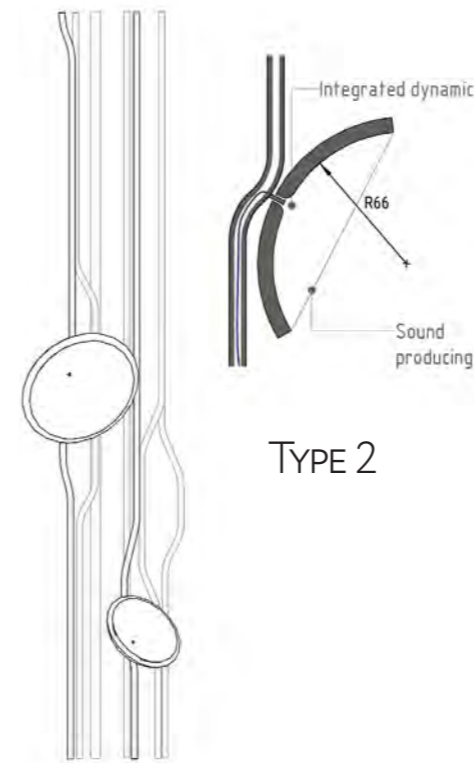
Multifunctional furniture is designed for creative use and can be used in a variety of situations - from increasing the area of the cafe to the local market.

Domes

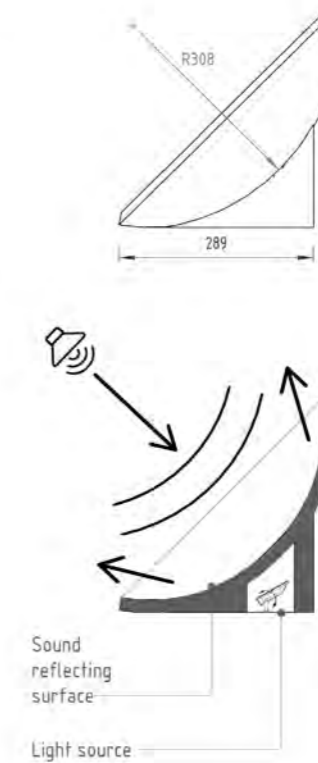
TYPE 1



TYPE 3

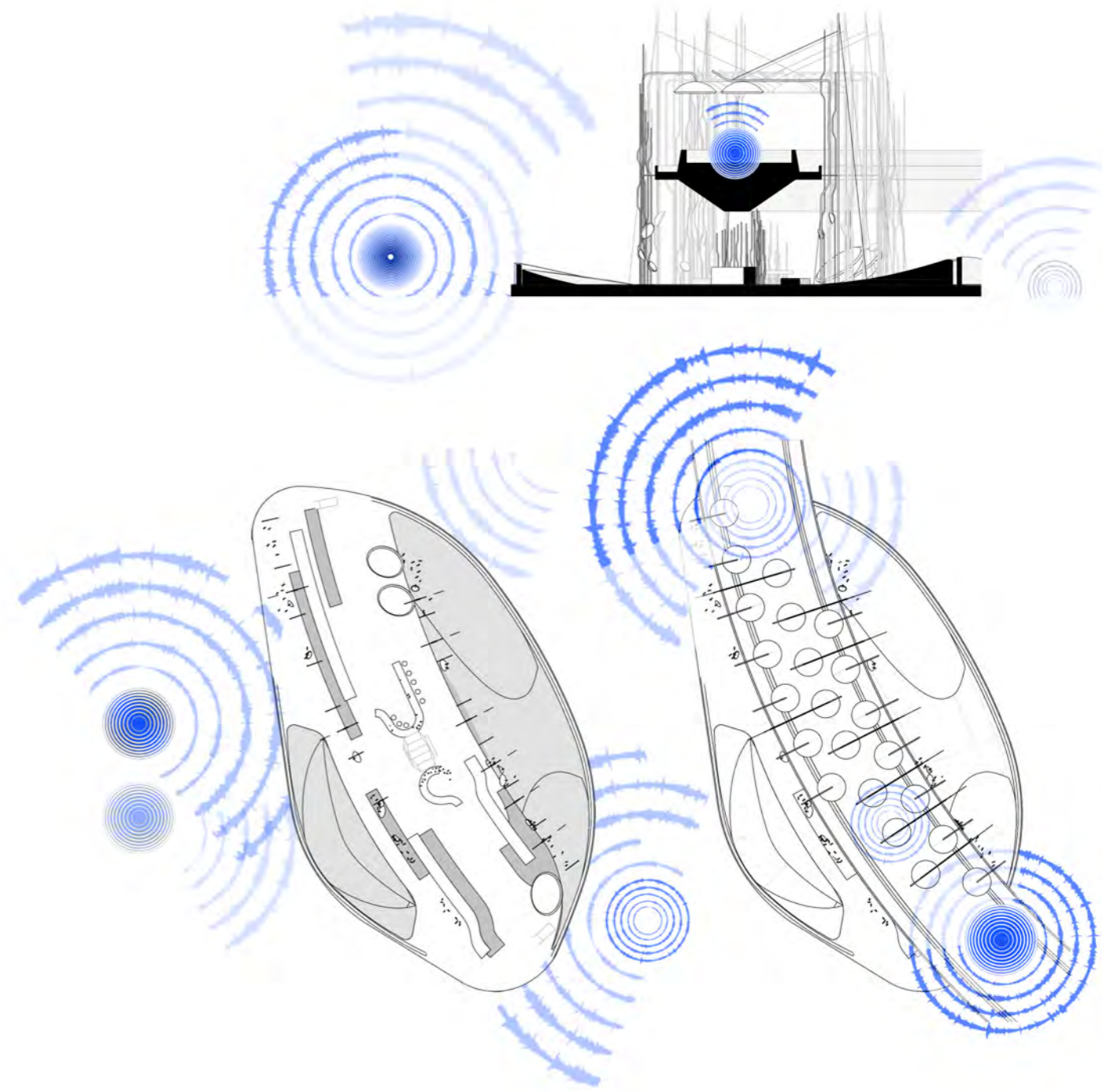


TYPE 2



Sound performance

The slope of the artificial hill forms an acoustic pocket, which does not penetrate the sounds of noise from the road. The street false ceiling above the bridge road closes the bubble of silence and protects the residents of neighboring houses from noise. Sounds of water produced by the domes inside Waterfall Square create an additional white noise barrier and enhances the performance of the spacial construction.



SPATIAL
NARRATION
SOUND FOREST
EARS &
DANDELLION
FIELD

● **WATERFALL
SQUARE & SOUND
FOREST**

MODEL PHOTOS

3d view. Waterfall square

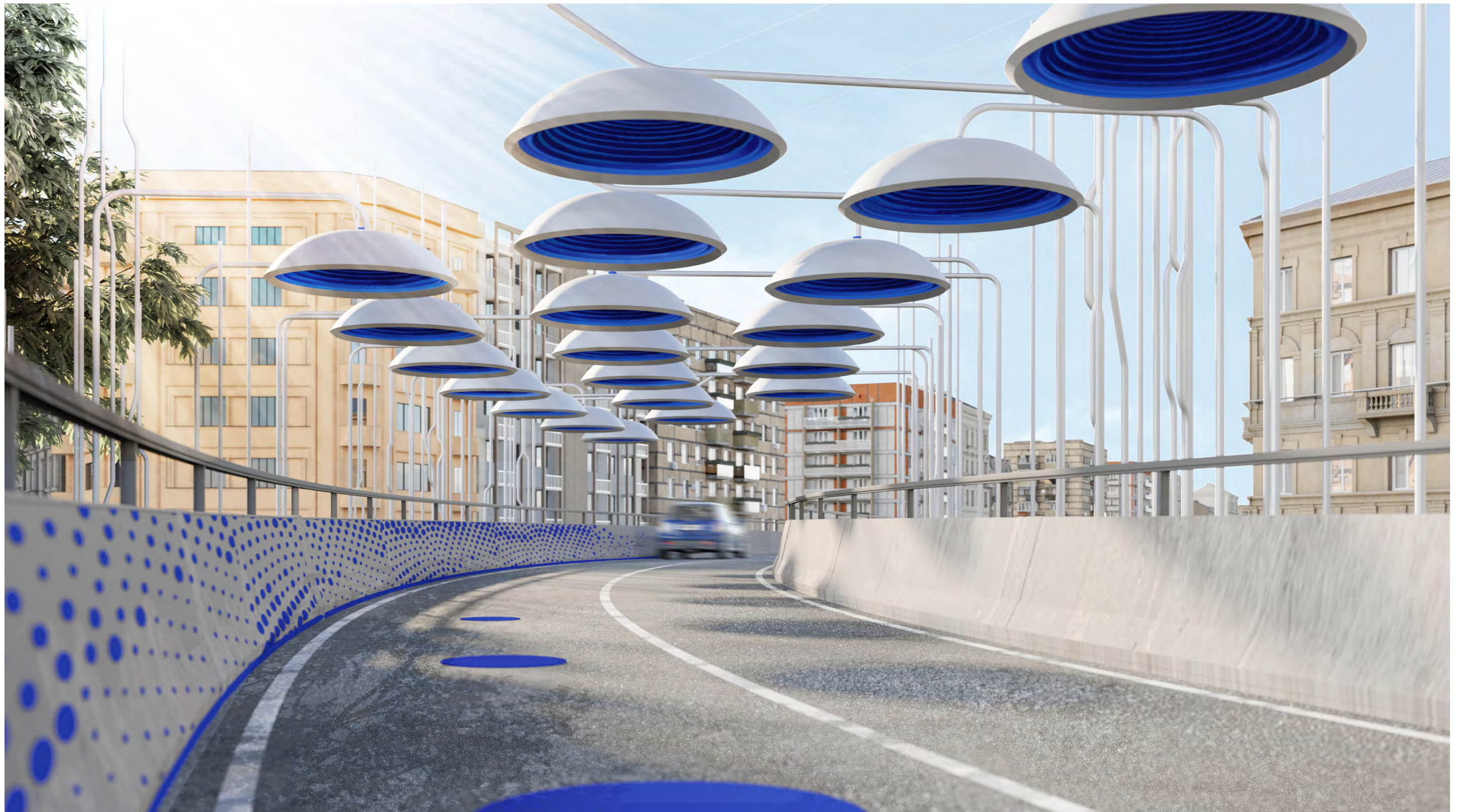


SPATIAL
NARRATION
SOUND FOREST
EARS &
DANDELLION
FIELD

● **WATERFALL
SQUARE & SOUND
FOREST**

MODEL PHOTOS

3d view. Silent bridge



SPATIAL
NARRATION
SOUND FOREST
EARS &
DANDELLION
FIELD

● **WATERFALL
SQUARE & SOUND
FOREST**

MODEL PHOTOS

3d view. Design intervention



Model photos

- SPATIAL NARRATION
- SOUND FOREST
- EARS & DANDELLION FIELD
- WATERFALL SQUARE & SOUND FOREST



- SPATIAL NARRATION
- SOUND FOREST
- EARS & DANDELLION FIELD
- WATERFALL SQUARE & SOUND FOREST

◆ MODEL PHOTOS



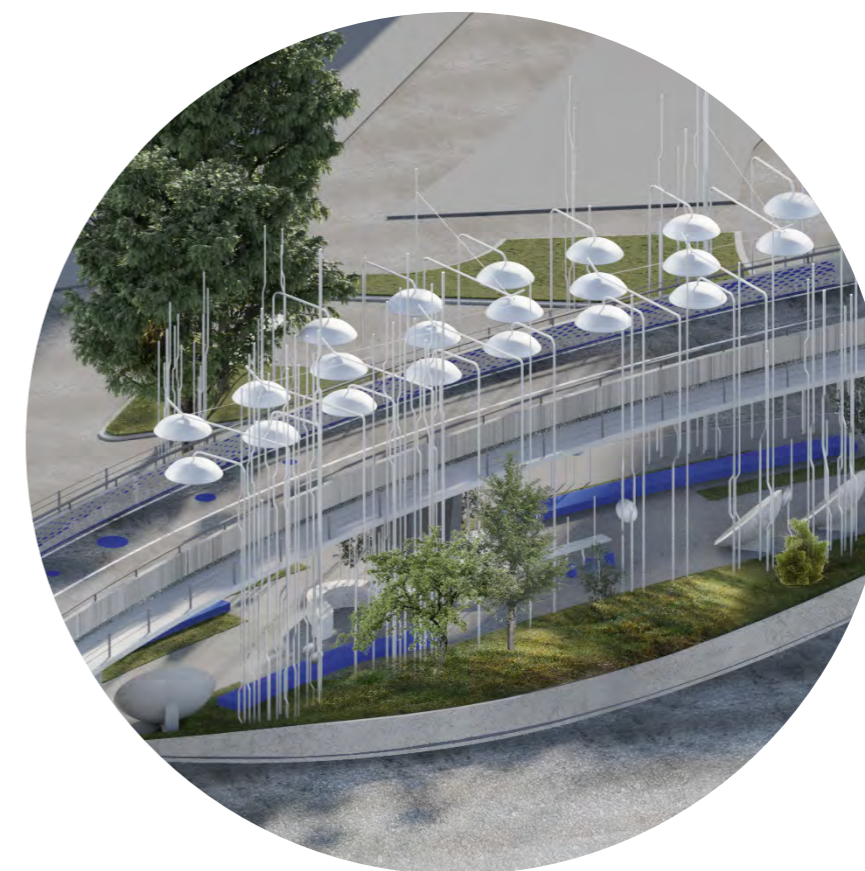
Synthesis

114	Acknowledgements
116	Bibliography

Acknowledgements

What is the result of design intervention?

For sure, site analysis and complex comprehensive study of the results of the project will require quite a long time for observations. The way in which the community will respond to new spaces will lay the foundation for the development of the project. Ears of Corvetto can become a long-running and developing program, expanding along with city initiatives.



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