

EL SOROLL MATA!

An Ethnographic Experiment in The Doings and Undoings of Urban Noise

Guidebook – EASA2024



Protesters against noise in Barcelona (Source: La Vanguardia)

What will happen during the EASA2024 conference?

Decibel thresholds, zones, disability-adjusted healthy years (DALYs), alarms and megaphones, sound level meters, low frequencies, terraces, chatter, dog barks, the buzz of traffic, participatory processes, neighbourhood politics, measurement metrics, harmonisations, directives, plans and maps, working groups, laws, regulations, opening your window, then closing it, sleepless nights, electric cars and bicycles, mediators and educational programmes, an unnoticed hum, headaches, health, stress, pollution and environments, annoyance.

Noise is an elusive phenomenon. It takes shape in different ways and practices, in different public affects and structures of feeling, doing and undoing what counts as reliable knowledge, doing and undoing urban cohabitation. Noisy knowledge takes shape within the “dynamic friction” (Peterson 2021) between techniques, media and forms that seek to objectively fix it, and the sensibilities and bodily practices through which it is perceived.

This ethnographic experiment takes us into this dynamic friction, into the gap, of knowledge of noise. During your time in Barcelona, we are interested the challenges of trying to attune to and capture its noises. This experiment will happen along curated itineraries to places where noise has particular textures and resonances: to experience different kinds of noise, where noise has long been and still is a source of urban conflicts, and to test different modalities for attuning to specific noisescapes. At each noisy place, you are asked to try to attune to noise through a specific mode and medium: a drawing or sketch, a written description or text, photographs, a video, or through sound recording. Take your time. If you are in a group, please, then, compare your attunements, and your experiences through that modality. If you are on your own, you could try another modality: how does the sound recording compare, relate, come into friction with your textual description? Do they refer to the same thing? Does something new emerge from this relation? Do you find friction between the modes? Or, perhaps, it's seamless?

The aim is to explore the challenge of capturing, attuning and relating to noise in distinct ways, and to reflect on the difficulties of making noisy knowledge (in groups and/or with different modalities of capture).

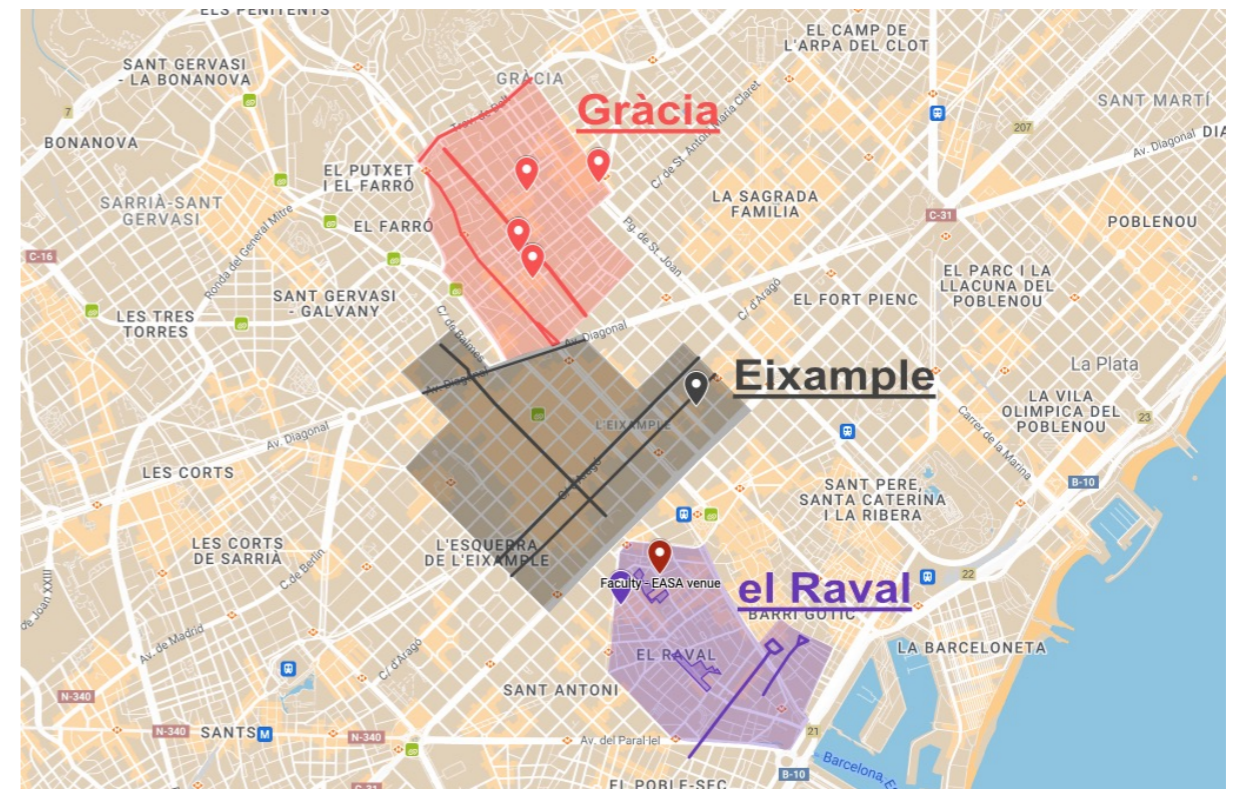
This experiment seeks to provide conference goers an opportunity to explore the city of Barcelona through an acute urban and environmental issue while they are not at the conference venue. Instead of a specific place and time for the experiment,

we will ask the participants to use their moments outside of the conference throughout the week to follow the itineraries and participate in the experiment. To do so, three main areas have been selected:

1. El Raval
2. Eixample
3. La Vila de Gràcia

The following parts of this dossier/guide will provide you with some contextual information about the noise issues for each of these areas and noise abatement practices and issues within Barcelona, while also providing some instructions for attuning to, documenting, and participating in this experiment. You will also be asked to upload your documentation materials – those bits and pieces of noise you've collected – digitally throughout the conference to the www.wavematters.eu website noise map; instructions for this will be presented below. During the final day of the conference (Friday July 26 between 11.15-13.00), participants will be invited to come together for a session to share their materials and experiences of noise in Barcelona. During this de-briefing session, an expert from the Barcelona city administration will join the conversation to discuss and re-act to our noisy experiences.

GENERAL MAP OF EXPERIMENT



Since the mid-1990s, noise has been one of the central public issues in European cities, and Barcelona is no exception. The recognition of environmental noise as one of the major environmental problems by the European Commission led to the approval of the European Noise Directive (END) in 2000, which requires that Member States develop an integrated noise plan, involving the publishing of noise maps, developing public education strategies, and local action plans to ameliorate noise and noise-related issues. A central aspect of the END is an attempt to establish harmonised methodologies to obtain reliable and comparable data across European cities, regarding different types of noise sources. In other words, the END seeks to define European noise – a similar noise across European cities.

In this regard, it is worth noting that while the Barcelona City Council has been working since the early 1990s to deploy “action programs” to fight against noise pollution, it was not until 2008 that the first Strategic Noise Map and the associated Action Plan were launched in accordance with the END requirements; a process that is updated every five years. Thus, the END has initiated a more systematic approach to tackling noise issues within European cities.

In recent years, the “struggle against noise” has increasingly become a more pressing public issue within Barcelona, triggering the formation of resident associations, and the problematisation of noise issues within the urban context. During the last decade, concerned resident associations have begun denouncing noise disturbances, mainly related to “nightlife”, in different areas of the city: Ciutat Vella, Eixample, the squares of Gràcia, Montjuïc, or Parc del Fòrum. In 2022, the civic campaign “Silenci... el Soroll Mata!” [In English: “Silence...noise kills!”] had initiated the constitution of XAVECS (Xarxa Veïnal Contra el soroll [in English, the Neighbourhood Network Against Noise]). It is an umbrella entity that gathers together diverse voices and neighbourhood associations against noise pollution. On their website, they proclaim:

“In the face of the increasing noise situation, which affects a large part of Barcelona's neighbourhoods, caused by economic, social, recreational, and sporting activities harmful to the health and privacy of residents and the misuse and abuse of public space, the city's residents unite to defend our fundamental rights: the right to rest, privacy, health, and life”. (Source: www.xavecs.org)

XAVECS calls for the city government to prioritise the noise problem through the implementation of necessary legislative, police, urban planning, social, environmental, and educational measures to reverse the current situation and achieve an adequate acoustic level for daily life and night-time rest. Sound and the regulation of noise is, for XAVECS, an important element for what it means to cohabit within the city; it is both a means for doing and undoing urban life. But, how do we find these “adequate acoustic levels”? How can they become “harmonised” across Barcelona (and Europe)?

A Brief Glossary

Before continuing, it is worth taking a short pause to elucidate some concepts that are key when discussing the technical language of calculations and assessments, regulations and ordinances, complaints and negotiations associated with noise. We present up to eight concepts in the form of a glossary.

Acoustic assessment: the result of applying any method that allows calculating, predicting, estimating, or measuring the acoustic quality and the effects of noise pollution.

Acoustic capacity map: instrument that assigns emission levels as objectives for the acoustic quality in a specific territory.

Acoustic emission: airborne sound radiated into the environment by a specific acoustic emitter. Typically, sound propagation is airborne. It is characterised by its acoustic power level (L_w).

Acoustic quality objective: the set of requirements that, in relation to noise pollution, must be met at a given time and in a specific space.

Environmental noise: unwanted or harmful outdoor noise generated by human activities, including noise emitted by means of transport, road, railway, or air traffic, and by neighbourhood, industrial, commercial, and service activities.

Noise immission: the introduction in the environment of acoustic vibrations from different emitting sources that negatively affect human beings, animals, plants or other objects.

Noise pollution: the presence in the environment of noise and/or vibrations, regardless of the acoustic emitter that originates them, which causes annoyance, risk, or harm to people, to the development of their activities, or to property of any nature, or which cause significant effects on the environment

Recreational noise: specific environmental noise emitted by leisure and recreational activities and calculated during night-time (from 23h to 7h).

Strategic noise map: set of maps that allow evaluating globally the population's exposure to noise in a specific area, due to the existence of different acoustic emitters, or to make global predictions for said area. This is the core instrument of the Environmental Noise Directive from the EU and must be updated every 5 years. They are also used to develop Actions Plans and other initiatives to mitigate noise issues.

Does Noise kill?

In Barcelona, after air pollution, noise is the second most impactful environmental factor on public health according to the ASPB (The Public Health Agency of Barcelona) (Font et al. 2022). The ASPB estimates that more than 210,000 people suffer from intense disturbances (severe emotional, psychological, or social impacts) and more than 60,000 people suffer from severe sleep disorders due to continuous exposure to traffic noise. In the most severe cases, noise can also contribute to the onset and worsening of cardiovascular and metabolic diseases (Barceló et al, 2016). In this regard, traffic noise is responsible for approximately 300 new cases of ischemic heart disease, and 3% of deaths related to it, each year, which translates to 30 annual deaths in Barcelona.

Additionally, data from the 2021 Barcelona Health Survey conducted by the ASPB (Bartoll-Roca et al, 2021) indicate that 55% of Barcelona residents consider their neighbourhood to be very noisy, and 18% report experiencing intense night-time disturbance due to recreational noise with a strong noise immission measured from inside their homes. Furthermore, 15% of the city's adults report waking up in the middle of the night more than once per week due to noise. The prevalence varies significantly by district, with Ciutat Vella, Sants-Montjuïc, and Eixample showing the worst indicators in the study.

In this regard, data from the [Strategic Noise Map](#), summarised in the following graphs, show that nearly 70% of the city's population is exposed to noise levels exceeding 55 dB throughout the day, and more than 57% of the population is exposed to over 50 dB at night, exceeding the WHO recommended limits of 53 dB over 24 hours and 45 dB at night (from 10 PM to 7 AM) to ensure people's health.

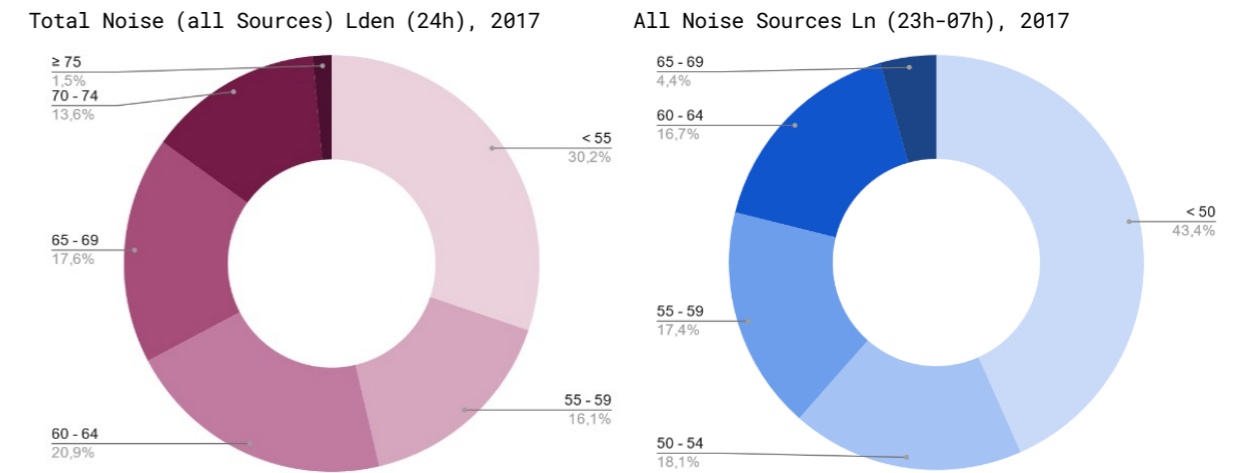


Figure 2. Population exposition to noise. 2017. Source: Ajuntament de Barcelona (2017)

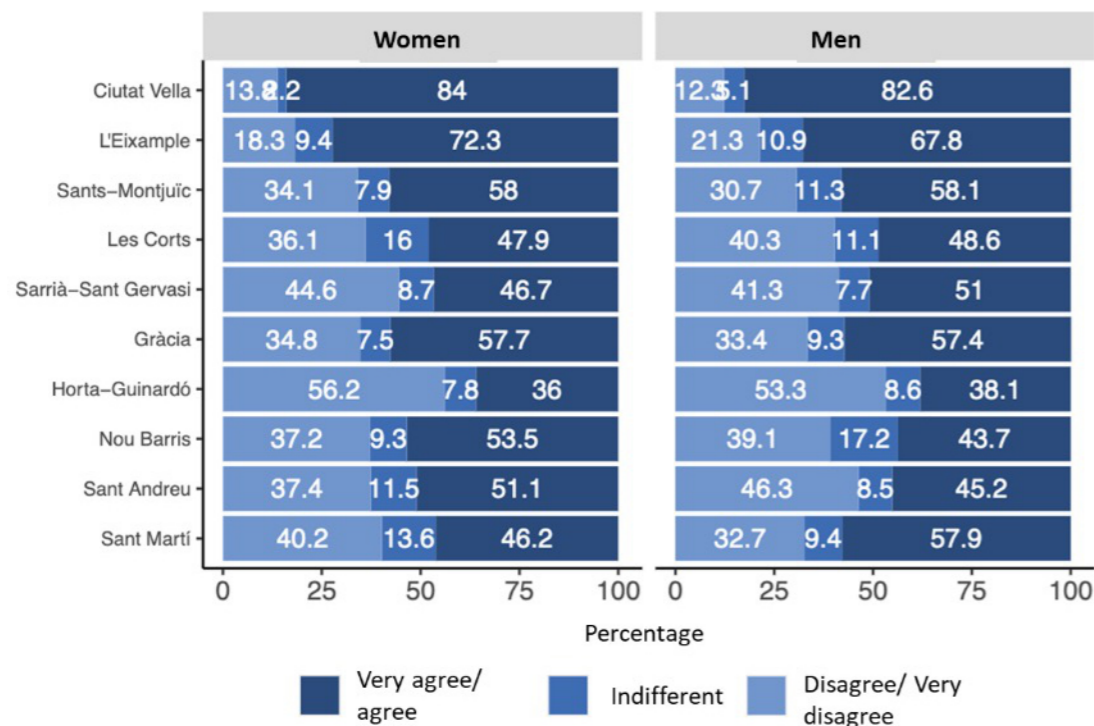


Figure 1. Perception of having excessive noise according to the district. Barcelona, 2021. Source: Bartoll-Roca et al. (2021)

How is Barcelona tackling noise pollution?

In 2018, the Generalitat de Catalunya (regional government), along with the councils of Barcelona and Sant Adrià del Besòs (a contiguous municipality), set up the [Action Plan 2018-2023](#) (as part of the END) with the aim of facing noise pollution issues globally and to ensure that the acoustic quality objectives were met by determining the priority actions to be taken in case noise exceeds the limits fixed by the acoustic capacity map for every street and zone.

Here you can see the heterogeneous list of actions:

A. Regulation and compliance with regulations

- A.1. Approval of the Ordinance that regulates the Low Emissions Zone.
- A.2. Mediation service in noisy areas.
- A.3. Have a formal technical structure that facilitates the development/monitoring of the Action plan.
- A.4. Maintain/update the noise map and acoustic capacity map, as well as the municipal ordinance.
- A.5. Approval and monitoring of the Sustainable Urban Mobility Plan (SUMP).
- A.6. Control of noise emitted by vehicles (cars, motorbikes, mopeds and trucks).
- A.7. Reduction of acoustic levels during loading and unloading operations.
- A.8. Acoustic limiters to limit the emission level in street concerts.
- A.9. Acoustic limiters in public establishments with music.
- A.10. Control and reduction of noise generated by construction and construction on public roads.
- A.11. Acoustic measures for the control and monitoring of noise in areas with "exceedances".

B. Economic and non-economic incentives

- B.1. Promotion of the use of bicycles.
- B.2. Incorporation of acoustic criteria in the cleaning and waste contracts specifications.
- B.3. Promotion of the use of vehicles with low noise emissions.

C. Investments

- C.1. Favor the conditions for walkability by improving sidewalk infrastructures for safety.
- C.2. Improvement and expansion of the bike lane network.
- C.3. Progressive replacement of the municipal vehicle fleet by a quieter and less polluting one.
- C.4. Improvement of the bus network and adaptation of roads to its needs.
- C.5. Maintenance service for roadway elements that cause noise.
- C.6. Urban improvement and conditioning of car parks at train stations.
- C.7. Implementation of 30 km/h zones and priority streets.
- C.8. Improvement of the acoustic level monitoring network.
- C.9. Paving with sound-absorbing asphalt.

D. Strategic actions

- D.1. Design of new residential buildings under acoustic reduction criteria.
- D.2. Review of school paths according to acoustic criteria.
- D.3. Promotion of shared vehicles.
- D.4. Acoustic characterization of urban spaces where recreational activities with music are carried out.

E. Sensitization and awareness

- E.1. Conduct workshops and talks in schools on good practices regarding noise.
- E.2. Efficient driving courses for municipal workers.
- E.3. Training courses to speed up the resolution of noise complaints, for technicians and police officers.
- E.4. Inform and sensitize citizens about noise.
- E.5. Awareness campaign about noise on terraces.
- E.6. Reduction of the acoustic impact of the noisiest vehicles.

As you can see, the Action Plans for combatting noise issues within cities are wide-ranging and heterogeneous; the above list is indicative in showing the variety of measures and impacts proposed to deal with noise pollution, but is also indicative of the diversity, variability and messy nature of noise itself. These are preventive, mitigative, protective or punitive measures that are expected to be carried out by a variety of different municipal departments, which, nevertheless, must be responsible for them in a coordinated manner. Far from being a concrete object, clearly defined and delimited, noise is a transversal issue that affects and is affected not only by a plurality of external actors and concerns, but is also an issue that crosses different departments, types of expertise, and forms of government within the administration itself.

Noise might kill, but not all noises are public

With the aim of delving into noise as an object of dispute in the city of Barcelona, the results of the Strategic Noise Map are presented here to understand the outcomes of acoustic emissions from different sources and their impact on the city over three aggregated periods - Day (Ld), Evening (Le), and Night (Ln). All data are extracted from the [official source](#) published by the Barcelona City Council.

The primary point to note is that noise can originate from various sources. In Barcelona, as in most cities globally, road traffic is the predominant noise source affecting nearly the entire city, both day and night. Consequently, the highest noise levels are found along the main roads, due to both city access and the volume of vehicles throughout the city. In contrast, the impact of major railway lines has now been diminished; nearly all railways in residential areas are covered, minimising noise impact on residents. Additionally, industrial activities have become less intense, reducing their noise impact, with areas like Sant Martí experiencing almost no industrial noise and other areas, including the Zona Franca, seeing reductions.

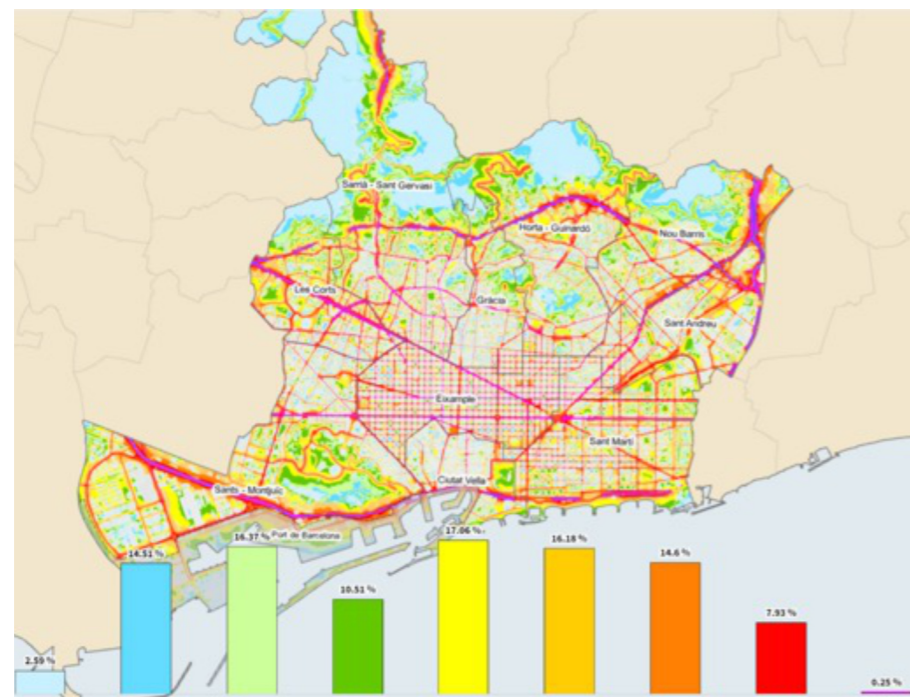


Figure 3. Total noise (all sources) and exposed population by dB(A). Day (Ld, 07h-21h). Source: Ajuntament de Barcelona

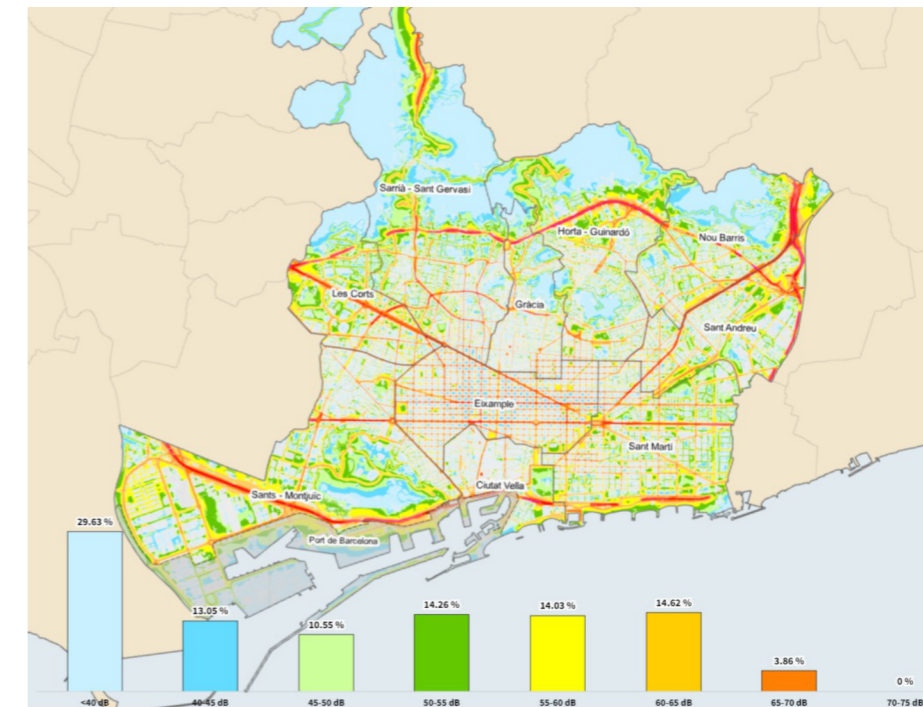


Figure 4. Total noise (all sources) and exposed population by dB(A). Night (Ln, 23h-07h). Source: Ajuntament de Barcelona

However, regarding noise pollution emitted from social activities in public spaces, the main contributor to the global noise levels on streets without traffic are social, cultural and commercial activities. Another source of noise pollution that creates conflict are recreational and sports activities that occur during the day in inner courtyards, especially in the Eixample district.

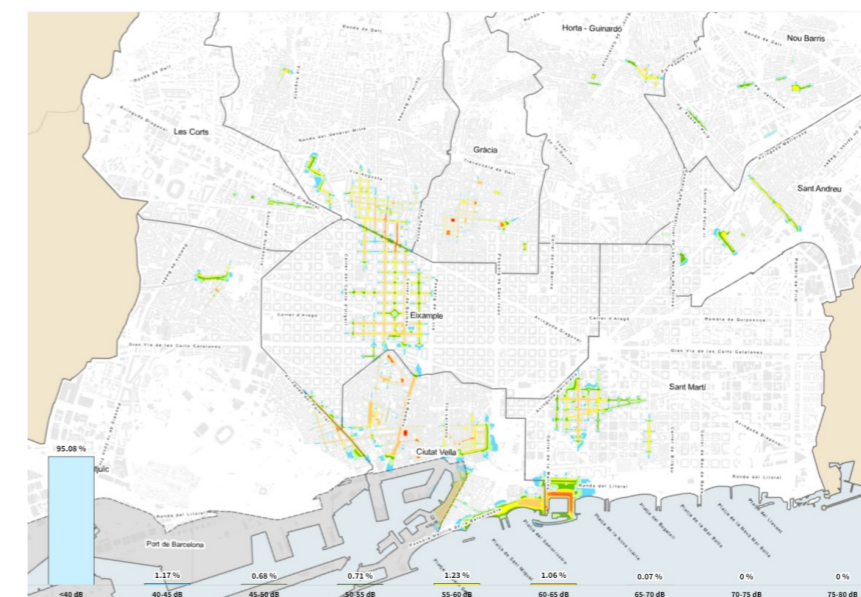


Figure 5. Recreational noise and exposed population by dB(A). Night (Ln, 23h-07h). Source: Ajuntament de Barcelona

Nevertheless, a major component of noise issues are the sounds that occur at night. Night-time noise related to the recreational use of public spaces is one of the most conflictual sources, according to citizen perception data and survey results (Bartoll-Roca et al, 2021). These issues are also the main concern for almost all the affected platforms that form the XAVECS. Thus, night-time noise pollution is one of the main public issues. It includes: the chatter of people on terraces, the boom booms of music equipment, escaping from open doors at bars and clubs, people gathering in squares, drinking, shouting, laughing – resulting from restaurant and nightlife activities, street terraces, and concert and event programming in venues hosting large festivals, such as the Parc del Fòrum or Montjuïc.

Accordingly, in response to this public discontent, the demonstrations and the pressure from the concerned voices, in May 2022, the Barcelona City Council triggered a specific plan ([Measures plan 2022-2030](#)) to specifically tackle night-life/night-time noise related conflicts. After measuring the noise pollution, they had also decided to create a new specific zoning category called “Zones Acústicament Tensionades en Horari Nocturn (ZATHN)” (Acoustically Stressed Zones During Night-time). The Council had, moreover, initially identified 11 areas (streets, squares, or broader areas, etc.) of where to aim specific actions such as the obligation to close the terraces one hour earlier (from 0h or 23h) or the consideration of areas as priority zones for subsidies to finance the acoustic insulation of affected residential buildings

This Measures Plan was also accompanied by a communication campaign to raise public awareness, which was immediately countered by the Gremi de Restauració (in English, the Restaurant Guild), the major pro-terraces lobby, with another campaign and a legal challenge against this municipal decision.

Issues related to noise have long been associated with cities, from street musicians annoying Charles Babbage to the low frequency bass of clubs today: it is at once a sign of urban doings, and of their undoings, of the functioning of infrastructure and their breakdown. Noise in Barcelona, as in other European cities, is difficult to regulate (how much noise is adequate anyway? What kinds of noise are allowable? Who decides?) and ameliorate, but it is also difficult to define, categorise, and classify in itself. Noise points to a heterogeneity of sources: it does not refer to a singular thing, but to an overlapping multitude, an excess, an overflowing. While thresholds, metrics, and technologies have been developed to fix noise as an “object,” it seems to always escape them. Noise takes us into a gap (between experiences and modes of capture, of the senses and metrics, of subjectivity and objectivity, etc.), a fundamental doubt, a disturbance – and a search for meaning without certainty or guarantee.



Figure 6. On the right, the public awareness campaign set by the Barcelona City Council with the claim "By night, respect". On the left, the response from the Restaurant Guild with the claim "Grounded without dessert"

EL RAVAL

The Raval neighbourhood is one of the four neighbourhoods that make up the Ciutat Vella district. The morphology of the streets were "rural" in origin, as it was initially at the outskirts of the medieval city, and only became fully urbanised in the early 19th century by hosting many manufacturing activities. When the walls around the city eventually "fell," and the city expanded, Raval, due to its proximity to the port and its history as a working-class neighbourhood, has historically been a welcoming area for migrant populations and transient populations, many of whom have eventually settled permanently. In the 1980s, the neighbourhood underwent significant urban change with the demolition and renovation of building blocks, such as the opening of the Rambla del Raval, or the urban renewal linked to the cultural cluster of MACBA (Museu d'Art Contemporani de Barcelona), CCCB (Centre de Cultura Contemporània de Barcelona), and the Faculty of Geography and History at the University. Today, the widespread gentrification process in the central neighbourhoods of Barcelona is evident in Raval, especially in the northwest part. Nonetheless, Raval remains one of the neighbourhoods with the lowest per capita income in the city.

Raval is the neighbourhood that hosts the greatest diversity of nationalities in Barcelona, with the population of Filipino origin (8%) being the predominant foreign nationality. However, since the 19th century, the image of Raval has predominantly revolved around its nightlife, informal activities, drug use and prostitution. Today, despite the persecution and eradication of these practices in recent decades, one can still perceive them when walking through the neighbourhood.

Regarding noise, road traffic on the central streets is the primary source of noise emissions, especially the roads surrounding the neighbourhood, during both day and night, as you can see in the Strategic Noise Map below.



Figure 7. El Raval. Total Noise (all source) and Recreational noise. Day & Night. 2017. Source: Ajuntament de Barcelona

Nevertheless, recreational noise at night (which is not visible through the Strategic Noise Map) is the main source of public disputes. This type of noise is linked to nightlife activities – bars, terraces, clubs, and discotheques – but also to social activity on streets – activity that happens around the MACBA and the CCCB ([1.1 on the map](#)), where sports and social activities such as skateboarding, and where terraces are open late. In this sense, open spaces that encourage "hanging out," whether consuming on a terrace or not, are also the spaces where much of the social activity – and its associated sounds – is concentrated throughout the day, but also until late at night. This is especially the case of the Rambla del Raval ([1.3 on the map](#)), one of the most iconic urban renewal areas in Barcelona from the early 2000s; a large avenue created through the demolition of various housing blocks, and is today one of the most important open areas of the neighbourhood.



Figure 8. "Silenci". Graffiti in el Raval, 2022. Source: Betevé

The Raval, as already mentioned, has a historical nightlife "offering," one that, although it has evolved over the years, still includes many activities dating back decades. In fact, historic dance halls, which have been converted into discotheques and concert halls, are critical points of neighbourhood noise complaints. In this regard, the dance hall La Paloma ([1.2 on the map](#)) is a paradigmatic case. Located in the former headquarters of the Comas foundry (where the statue dedicated to Christopher Columbus that crowns the Ramblas of Barcelona was built), it was inaugurated as a party hall in 1903, and has taken on various forms and names. After more than 100 years of operation, in 2006 the Barcelona City Council had ordered its closure due to not precisely meeting the acoustic pollution criteria of the Environmental Ordinance. In 2023, 16 years after its closure and with a comprehensive reform that includes renewed acoustic insulation of the building, La Paloma has reopened its doors. Nevertheless, conflicts arising from its noises are once again repeatedly making headlines.

Finally, two of the streets most affected by noise pollution from nightlife are c/ Nou de la Rambla up to Plaça Reial, on the other side of Las Ramblas (1.4 on the map) and c/Arc del Teatre up to Plaça George Orwell along c/ Escudellers (1.5 on the map). Both streets were declared ZATHN (Acoustically Stressed Zones at Night) by the 2023-2030 Measures Plan due to the location of several bars and discotheques. This category has forced nightlife-related venues to close one hour earlier than the rest of the city, as well as prioritizing subsidies for the renovation and acoustic insulation of buildings. It is worth remembering that in 2014 there was a similar recognition of this area through the awareness campaign called "Sssplau recorda que els veïns volen descansar" els veïns volen descansar [in English, "Pleasssssssse recall that neighbours want to rest"]. History seems to be repeating itself.

MAP OF EL RAVAL WITH SUGGESTED SPOTS TO OBSERVE



EIXAMPLE

The Eixample district originates from the second half of the 19th century with the intention of expanding (in Catalan, eixamplar) the residential and industrial city by occupying the rural plain, while also connecting the different pre-existing historical centres such as Gràcia, Sants, Sant Martí de Provençals, and Sant Andreu del Palomar, which are now their own neighbourhoods. In 1860, after the demolition of the medieval walls, the Cerdà plan was approved, and with it began the urbanisation of the orthogonal street grid, with widths of 20, 30, and 50 meters, blocks of 113.3 square meters and the characteristic 45-degree chamfers [the slanted transitional edge of the buildings] of each corner. The original Cerdà Plan was designed under the hygienist ideas of the time under the statement of "ruralising the city and urbanising the countryside" and included a large number of green spaces among the interior spaces of buildings that occupied only two of the four sides of the blocks. This was a modernist "bourgeois" project (not unlike other modernist urban plans in the late 19th and early 20th century) that contrasted with the extreme density of the Old City. However, its implementation was quickly engulfed by speculation and the densification of the housing blocks. This continued until the end of its implementation during the first half of the 20th century, making it one of the most densely populated urban areas in Barcelona with more than 200,000 inhabitants in less than 8 km² and one of the most complex in terms of uses, functions and economic activities.

Today, Eixample is the heart of the city, the functional centre of Barcelona with the highest flows of vehicle and pedestrian traffic and the greatest density and variety of commercial activities. Beyond the famous Passeig de Gràcia, a site of heritage and symbolic value, and today a tourist attraction, the Eixample is also one of the areas with the highest intensity of economic activity, including office, services, hotel, commercial, and restaurant uses. Although the Eixample has historically housed a population of Spanish and Catalan origin with middle and high incomes, today it is one of the most aged districts, and at the same time, experiencing the most significant changes in terms of gentrification processes. Additionally, Eixample has undergone some recent changes as a result of the "pacification" and re-design of its streets over the past 20 years, a process that has been intensified recently with the Superilla programme (Baucells, 2018), which aims to minimise vehicle traffic and create more pedestrian and active mobility spaces.

Despite its history of being an intense object of urban design, the Eixample is still one of the noisiest areas in the city. This is due to both the recreational noise from social activities and noise pollution from road traffic, especially along the major arteries that cross the Eixample, such as the Gran Via de les Corts Catalanes or the Avinguda Diagonal. There is, at the moment, an ongoing controversy regarding the tram connection through the central part of Avinguda Diagonal (Map 2.1). Similarly, the Carrer Aragó (Map 2.2), with a width of 30 meters, is one of the most important internal connection routes in the city, where high levels of noise pollution are recorded throughout the day, along with the highest levels of air pollution and the greatest number of traffic accidents (Cabús Lomba, 2024).

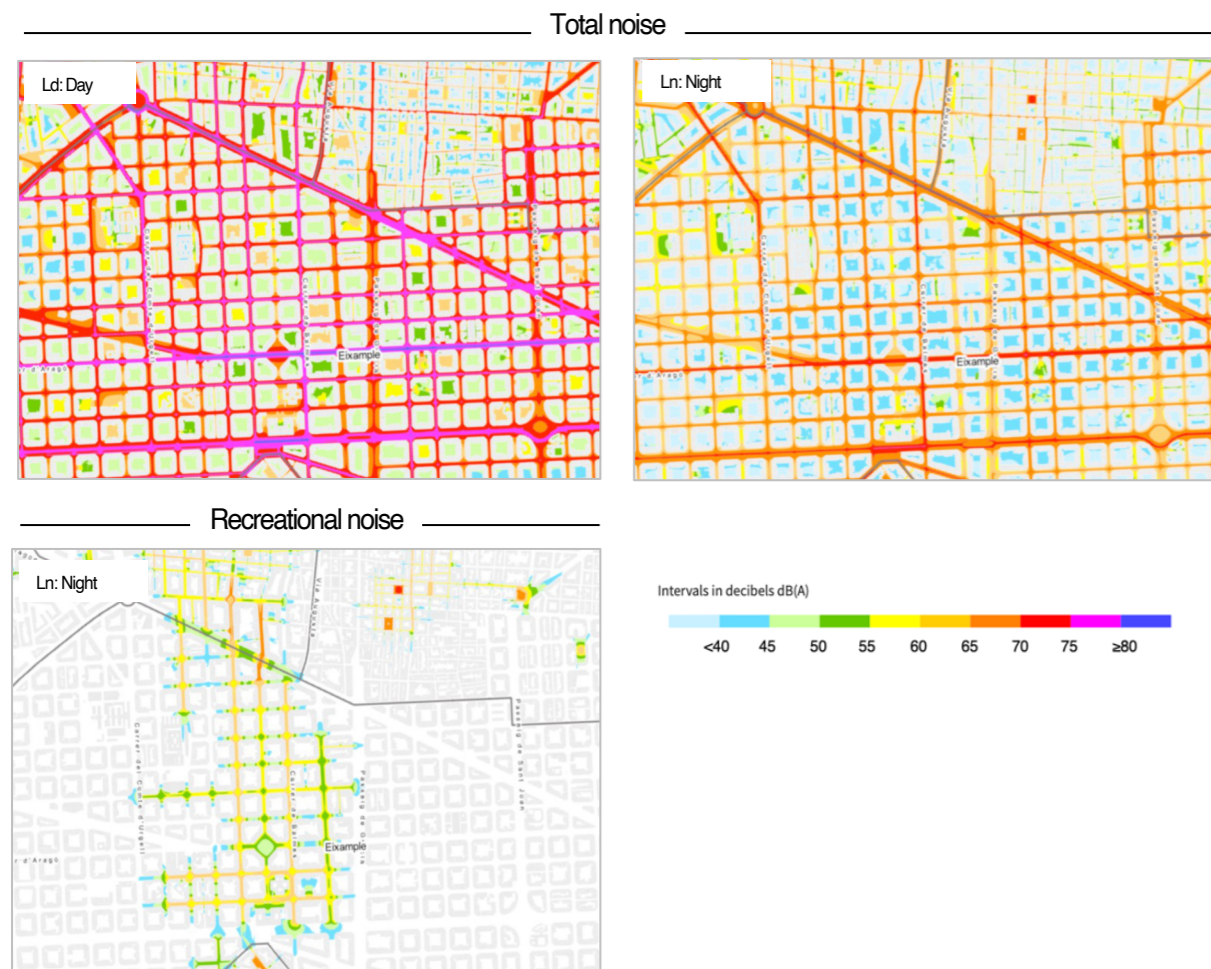


Figure 9. Eixample. Total Noise (all source) and Recreational noise. Day & Night. 2017. Source: Ajuntament de Barcelona

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This situation contrasts with the 20-meter-wide streets that have been “pacified” and re-designed over the past 20 years to become more pedestrian-friendly at a “human”-scale. Firstly, there are streets like the Enric Granados (Map 2.3), one of the first streets redesigned to reduce traffic in the Eixample, which has, however, now been heavily occupied by restaurant and bar terraces in a short space. The night-time recreational noise from this street has been the primary source of complaints by the SOS Enric Granados platform [<https://sosenricgranados.wordpress.com/>], a pioneer in the fight against recreational noise in Barcelona, promoting inspections and changes to

changes to municipal regulations regarding bars and terrace activities (Gonzalez, 2024). Crossing Avinguda Diagonal, we find at the same level Carrer Tusset (Map 2.3), a street that has historically hosted nightlife activities in the Zona Alta of Barcelona and has also been one of the most contested because of recreational noise pollution by local residents. Noise seems to find its way back: you reduce car traffic-related noise, and then recreational noise appears.



Figure 10. Silenci. SOS Enric Granados. Source: Jordi Play. Tot Barcelona

Carrer Consell de Cent (Map 2.4) is one of the streets transformed through the logic of the Superilla [Superblocks] program promoted by the city council from 2015 to 2023. This initiative aimed to reduce traffic, increase pedestrian space, prioritise active mobility, reduce speed, and disrupt the through-traffic nature of Eixample streets. The presence of terraces on this street is also much lower due to stricter regulations on leisure establishments and a “garden” design that prevents the concentration of large areas of tables.

The last of the proposed spaces for exploration is a type of space that is replicated throughout the Eixample, known as the Interiors d'Illa. These are public-use spaces surrounded by buildings, which the Strategic Noise Map identifies as specific types of spaces to be addressed as noisy places. The case of the “Torre de les Aigües” space (Map 2.5) is, for instance, paradigmatic. Due to complaints from residents about the noise caused by children's recreational activities in the water and sand playground area, the city council has ultimately decided to prohibit swimming at the “platgeta de l'Eixample” after trying solutions such as limiting the space's capacity, setting shorter hours, and banning scheduled collective activities (López, 2019). Finally, the city council undertook a comprehensive reform of the space, which was inaugurated in 2023.

MAP OF EIXAMPLE WITH SUGGESTED SPOTS TO OBSERVE



LA VILA DE GRÀCIA

The Vila de Gràcia is one of the most iconic and idiosyncratic neighbourhoods of Barcelona. This former village was annexed to Barcelona in 1897, coinciding with the urban integration with the development of the Eixample neighbourhood and the urban expansion of Gràcia itself. It's a neighbourhood with its own identity, marked by a cosmopolitan character for many years. The narrow streets, of rural origin, and the centuries-old buildings give way to dozens of small squares scattered throughout the neighbourhood, squares with diverse origins but mostly former open-air market spaces.

The large amount of commercial and cultural activities in Gràcia is one of its distinctive features, with key cultural infrastructure such as cinemas, theatres, and concert halls that attract audiences from all over the city. It is also a neighbourhood with a vibrant nightlife. The large influx of people at night is especially evident in the local establishments and terraces, as well as in public spaces. The neighbourhood's squares are the main meeting points for groups of young people from various parts of the city until late hours of the night; a practice that has been ongoing for decades. It's worth noting that the neighbourhood has also been undergoing a visibly evident process of gentrification for years, especially in the southern area closest to the Eixample. This area has seen the emergence of consumer venues such as bars or businesses targeting international audiences, not only tourists but also including the so-called "transnational mobilities" groups from so-called "Global North" countries, largely Europeans.



The Vila de Gràcia is not immune to conflicts related to environmental noise and noise pollution. Traffic noise is primarily present at the boundaries of the neighbourhood, corresponding to major metropolitan-scale infrastructure routes such as Avinguda Diagonal to the south or Travessera de Dalt to the north (Map 3.1). Despite recent reforms and reduction of traffic lanes, the Travessera de Dalt still experiences the highest levels of noise pollution in the city, particularly at its intersection with Plaça Lesseps.

Another street with a significant intensity of vehicles is the Gran de Gràcia (Map 3.2), the main artery of the neighbourhood that crosses it from North to South. This “big street” used to be the route of the tramway in the 19th and early 20th centuries until the development of the metro. Today it has a very high commercial density but also experiences constant traffic. Since the COVID-19 pandemic, the Barcelona City Council has been promoting a programme called “Obrint carrers” [in English, Opening Streets], which involves closing off traffic (including buses and taxis) through barriers and deploying staff to facilitate pedestrian and active mobility circulation on Saturdays and Sundays during the school season.

Another important route in the neighbourhood is the Torrent de l'Olla (Map 3.3), a single-lane street that is nevertheless quite busy. This street also accommodates bus lines and experiences local commercial and restaurant traffic for loading and unloading. In order to reduce traffic pollution on this street, the City Council had installed a new pavement that, according to municipal sources, reduces ambient temperature by 2 degrees Celsius and also serves as a noise-reduction measure, reducing total dB(A)s by 3 dB(A)s through the absorption of soundwaves (Ajuntament de Barcelona, 2021).

However, beyond noise related to road-traffic, issues related to noise pollution in the Vila de Gràcia tend to be associated with recreational noise in its squares, especially in the Plaça de la Vila, Plaça del Sol, Plaça de la Virreina, and the Plaça Joanic (Map 3.4). These spaces are highly vibrant during the evenings and nights, particularly with the arrival of warmer weather. Night-time recreational activities arise from the chatter, shouts, and laughter of patrons of bars' terraces in the squares, sporadic public space activities, as well as programmed leisure and cultural activities.

This issue has been manifesting for over 20 years (Sabaté, 2004), prompting various responses from the administration, although none have successfully curbed the activity and its associated noises. Measures such as redesigning space and urban furniture in some squares, setting hourly regulations for establishments through the Acoustically Stressed Zones at Night (ZATHN) considerations, mediation plans, increased police presence, and installing sound level meters have all been implemented without fully resolving the problem. It remains one of the most persistent conflicts in Gràcia (Sayavera, 2017).

MAP OF VILA DE GRÀCIA WITH SUGGESTED SPOTS TO OBSERVE



Figure 11. Neighbour at the Plaça del Sol with a Sound meter. 2017. Source: Juanma Ramos



INSTRUCTIONS FOR EXPERIMENT

The ethnographic experiment will happen in four stages. You can participate either in a group or individually. If you are in a group, each group member should choose one modality per observation site. If you are on your own, you could try multiple modalities in order to be able to compare the similarities and differences between modalities. You can also use the guidebook to select locations to complete the experiment.

STAGE ONE: CAPTURE

Either on your own or in your group, decide which noisy place you would like to tune into – you can find individual maps of each neighbourhood in the corresponding section of the Guidebook below; each individual map also indicates particular noisy place suggestions. You can find the whole map here: <https://shorturl.at/wmFUs>

Utilising different sensory modalities, and equipping ourselves with different tools (photographs, video, texts, drawings, audio recordings), we seek to gather various traces of the sonorous, and experiment with ways of assembling, patchworking the sonorous or noise-scapes that we encounter. We are interested in reflecting on how these incomplete traces from the differing modalities can be patched together, and in the “dynamic frictions” between the modalities, tools, and the experiences of noise.

Each of the modalities and tools capture a particular trace of the sonorous in a different way. Words and sounds relate awkwardly: the hum of traffic, the rattle of the train, ha-ha-ha, or *splash!* In discussing the relation between sounds and words, Roland Barthes had wondered whether “we [are] condemned to the adjective? Are we reduced to the dilemma of either the predicable or the ineffable?” On their own, it is difficult to relate to what audio recordings refer to, the source of sounds – they often conjure different connections or shapes. And, while R. Murray Schafer once wrote that he has never seen a sound, sometimes we can hear the wind through a photograph. Do we trust the “audio-vision” of film and video, or how sounds and images relate to conjure movement? What kind of audio-visual perception emerges in film? How do all of these relate together, add, or subtract from one another? In this experiment, we will explore the gaps, challenges, and frictions that arise when trying to come to grips with noise.

Choose a mode from the 5 below and spend time documenting the sonic event, source, or object encountered (ca. 30 minutes).

PHOTOGRAPH the sonic event or object paying attention to the material, social and sonorous elements and context. After 30 minutes, review the photographs and create a sequence between 5 and 10 photos of the sonic event or object.

FILM the sonic event or object paying attention to the material, social and sonorous elements and context. After 30 minutes, review your audio-visual documentations; select or edit a sequence of video between 10 and 30 seconds.

WRITE the sonic event or object paying attention to the material, social and sonorous elements and context. After 30 minutes, review your field notes and narrate an aspect of the event or object. This “text” can take any form (max. 350 words, or ½ page).

RECORD the sonic event or object in a way that is tuned into the material, social and sonorous elements and context. You can use your mobile phone. After 30 minutes, review the recordings and select sounds or excerpts.

DRAW the sonic event or object paying attention to the material, social and sonorous elements and context. After 30 minutes, review your drawings and sketches and try to create a single visual artefact.

****If you are participating on your own, consider selecting multiple modalities for each site of observation in order to participate in the next stage (comparing the modalities). If you are in a group, each member of the group should select a different modality in order to participate in the next stage. If you go to several sites, you could change modalities at each site.****

STAGE TWO: COMPARE

Share your documentation with others in your group and reflect on the challenges of tuning into the sounds, and what it says about the relation between sound and urban life in Barcelona. Attend also to the documentary artefacts of others in your group and reflect on how your understanding of the sonic event or object changes when brought into relationship with others’ artefacts. What are the possibilities and limits of each modality? How are they enhanced or reduced when combined with others? What “dynamic friction” appears in the gaps (between modalities, between each experience and modality of the noise)?

If you are participating on your own, complete the above stage by reflecting on how each modality differs and relates to one another.

STAGE THREE: UPLOAD

Upload your material documentation onto the www.wavematters.eu map. You can do this either as a group (with a single upload) or each individual can upload their own materials. Instructions for uploading can be found below.

STAGE FOUR: EXCHANGE

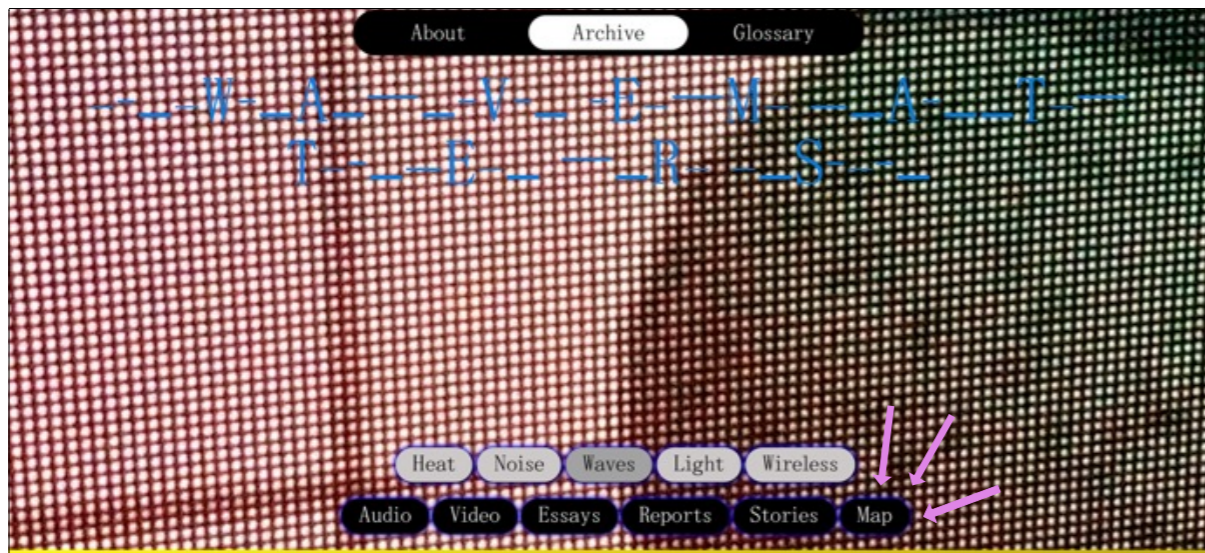
On Friday 26 July 2024, at 11.15-13.00, join us at the conference venue for a collective de-brief and reflection session on the experiment itself. Here, we would like to discuss our experiences in the experiment and reflect on what it means to listen to noise in Barcelona and the challenges of tuning into it through different modalities.

We will be joined by an official from the Barcelona City Council who will tell us more about the challenges of noise issues in Barcelona, and join us in unpacking this gap between the experience of noise and its measurement or capture, and the challenges of knowing noise in itself.

INSTRUCTIONS FOR DIGITAL UPLOAD TO THE WAVEMATTERS WEBSITE

1. Collect your materials. Note down the Date and Time of Observation, the address of observation, and the Geo-Coordinates of observation [you can copy them from Google Maps (see Step 3). If you cannot locate them, please ensure that you have the correct address so that the coordinates can be found eventually].

2. Go to www.wavematters.eu and click on the "Map" button. This can be completed either on your computer or through your mobile phone.



3. Complete all the Necessary Fields. Give your entry a Title. Select EASA 2024 as the Project (Session). Choose Noise as your Theme. Enter Date and Time of Observation, Geo-Coordinates [to find the coordinates you can get them from Google Maps. You click on the location and the coordinates will be displayed in blue at the bottom of the page in the middle of the box. Alternatively, you can "right click", and they will appear at the top of the box that appears], Street, Postal Code, City, and Country. [If you are unable to find the geo-coordinates, please make sure that you have entered the correct and full address details; and the geo-coordinates can be found later].

A screenshot of the "NEW ENTRY" form on the Wavematters website. The form is set against a background of a map of Barcelona. The form fields include: "Title of your entry*" (a text input field), "Project (Session)*" (a dropdown menu with "EASA 2024" selected), "Themes*" (a dropdown menu with "Heat" selected), "Date and Time of Observation" (a date and time input field), "Geo-Coordinates*" (two input fields for "Latitude in decimal grade" and "Longitude in decimal grade"), and "Street*" (a text input field). There are also instructions at the bottom of the form: "To find the coordinates, we recommend that you copy them from Google Maps. All you need to do is click on the location and the coordinates will be displayed in blue at in the middle of the box that appears at the bottom of the page."

4. Continue by uploading materials. You can select which media files to upload according to which "modalities" you have used to capture noise. You can upload an Audio File (max. 256mb), a Video file (max. 256mb), a Feature Image and 4 other "images" (images = drawings and/or photographs), and there is a text box for a textual description. Depending on how you have completed the experiment, as a group or individually, you could either upload all of the materials that your group has collected as one entry, or you could individually upload your own materials.

A screenshot of the "Select Media Files for Upload" section on the Wavematters website. The section is titled "Select Media Files for Upload (256MB Maximum Size for Audio & Video)". It contains several buttons for selecting media files: "Audio File", "Video File", "Feature Image*", "Image 1", "Image 2", "Image 3", and "Image 4". Below these buttons is a "Text Description" input field. The background of the form is a map of Barcelona.

5. Please then add your Name, Surname, and an Author (name) or Pseudonym. Only the latter will publicly appear on the website. Please also include your email address. Your email address will not be publicly visible on the website.

Your Name*

Your Surname*

Author or Pseudonym*

Please enter the name with which you would like to appear as Author of your material. You can also use a Pseudonym if you prefer to not be publicly visible with your name.

Email Address*

I Consent to the use of this data publicly on this website. (Your Name and Email Address is only for our internal records and will not be shown, but your Author name or Pseudonym will appear.)

Upload

Imprint Data Privacy Cookie Preferences

6. Then click “upload” and you will receive a message to indicate you have successfully submitted your materials.

7. Once your entry has been reviewed and approved, it will appear on the map on the website in the yellow box shown below. If you would like to add another entry, click “New Entry” in the bottom corner. You can visit the map directly through this URL: www.wavematters.eu/map/

MAP OF WAVEMATTERS

ID	4669
HOWLING WINDS	
Location:	El Clot, Sant Marti 08018 Barcelona Spain
Date:	June 25, 2024 01:32 CET
Author:	Douglas Coupland
Project:	EASA 2024
Coordinates:	41.404672 2.187863
Images:	

New Entry

Website: www.wavematters.eu
 Email: elsorollmata@gmail.com
 Twitter: [@wavematters](https://twitter.com/wavematters)

Ignacio Farías, Albert Arias-Sans,
 Brett Mommersteeg, and the Wave
 Matters team