



Needs assessment

Synthesis of a quantitative & qualitative study on vocational training opportunities for LEZ professionals

Lisa De Vos, Thomas Vanoutrive & Jana Deforche – November 2025











TABLE OF CONTENTS

| 1 IN | ITRODUCTION | 3 |
|------|--|----|
| L | EZ4all | 4 |
| 2 S | TUDY APPROACH | 5 |
| C | bjectives | 5 |
| S | tudy methods | 5 |
| Т | arget population of the study | 6 |
| С | Pata collection | 7 |
| 3 C | ONTEXT | 9 |
| L | EZ regulations | 10 |
| Р | rofessional actors in the urban ecosystem | 12 |
| 4 FI | NDINGS QUALITATIVE RESEARCH | 12 |
| 5 SI | JRVEY PARTICIPATION | 14 |
| P | rofessional domain | 15 |
| C | ontact with citizens | 17 |
| C | onclusion | 18 |
| 6 R | ESULTS | 19 |
| Р | erceived training opportunities | 19 |
| Α | ttitudes | 23 |
| K | nowledge | 28 |
| S | kills | 30 |
| C | luster analysis | 37 |
| C | Qualtitative assessment of results: webinar feedback | 38 |
| 7 IN | ISIGHTS | 40 |
| 8 B | BLIOGRAPHY | 42 |
| ANI | NEXES | |
| A. | INTERVIEW GUIDE | 2 |
| В. | QUESTIONNAIRE SURVEY: SOCIAL DIMENSIONS OF CAR-REGULATIVE POLICIES | 3 |
| C. | MAPPING OF REGIONAL PROFESSIONAL ECOSYSTEMS | 47 |
| D. | CLUSTER ANALYSIS | 52 |



1 INTRODUCTION

Over the last decade, Low Emission Zones (LEZ) have become an increasingly popular policy instrument. They are intended to decrease traffic-related air pollution and as such improve urban liveability and reduce health risks in built environments (Verbeek & Hinks, 2022). In 2022, 320 LEZs were active across the EU according to a study of the Clean Cities Campaign (Azdad et al., 2022). Between 2022 and 2025, Clean Cities Campaign has predicted a further 58% increase to over 500 LEZs within the EU, regulating access for polluting vehicles across many urban and periurban areas. LEZs are not the only strategy to reduce pollution: they fit within the broader spectrum of Urban Vehicle Access Regulations (UVARs) that are employed to alleviate negative impact related to high car use. UVARs can employ spatial interventions, pricing aspects or regulatory measures (such as LEZ) to influence and mainly restrict vehicle access (Franssen et al., 2023). Regularly, several of such car-restrictive strategies are combined to achieve sustainable mobility objectives. This is for example the case in the Brussels Capital Region and in the city of Lyon within the LEZ of the Metropolitan Region of Lyon, two of the pilot areas under the LEZ4all project.

Together with the growing popularity of such policy instruments, contestation and debate about negative effects have increased in volume as well. UVARs fit within the focus on changing individual travel behaviour (i.e. mobility management) that has been adopted in municipal and city-region planning (Hendriksson, 2019). Regulating mobility choices and particularly vehicle ownership and vehicle use in the name of environmental protection claims individual responsibilities for the purpose of the common good and touches the private sphere that many see as a place of individual freedom (Oosterlynck et al., 2019). This can lead to strong protest from those who feel their personal freedom is encroached upon by such measures, but even more precarious is that placing such responsibility at the individual level exacerbates existing differences in the capacities of citizens to act environmentally responsible. The intention to 'make the polluter pay', while not everyone has the same means to change vehicle or choose other travel options, can cause unintended social effects and contribute further to social inequality (Vandermoere et al., 2020). In the implementation of car-restrictive policies such as LEZ, local and national governments across Europe have made efforts with supporting measures, exemptions, progressive implementation of restrictions and/or communication campaigns to make sure everyone is 'on board' and to even out unintended negative social effects. Still, there are not many cases where such efforts have enticed the perception of a fair distribution of the burdens and benefits of UVARs. Civil society, citizen initiatives and academia continue to challenge the presence of social justice in the ways these policy frameworks are currently implemented (da Schio et al., 2023). This does not go unnoticed: in some urban areas initial LEZ policies are adapted in response to such challenges made. For example in Barcelona, the third pilot area under LEZ4all, adaptions in operational hours and additional exemption categories aimed to reduce the socio-economic impact of the LEZ that was feared by several groups upon the first introduction of the policy.

Financial compensations for example might require people to be able to make large investments upfront before receiving subsidies and are difficult for people relying on ephemeral car use (gaining and losing access to a car, with car ownership being a transient state alternated with weeks, months or years of carlessness) (Klein & Smart, 2017). Support measures are sometimes unknown to those targeted, require multi-step administration processes that take time or rely on digital tools that require digital skills and access to a digital device. Changing mode of transport (to public transport or bicycle for example) might come with challenges to accessibility (De Vrij & Vanoutrive, 2022) such as physical boundaries, problems in understanding, large time investments and conflicts with cultural values for different people. Non-take-up issues were repeatedly reported by the professionals involved in our research. This report, as part of the LEZ4all project, starts from the question how professionals could respond adequately to these challenges. What do professionals need to better prevent and tackle negative effects and social inequalities that carrestrictive policies such as LEZ and all types of UVARs might bring?



Car dependency is high in most European contexts as car accessibility has taken an important place in the way our built environments have been shaped since the 1950s onwards. Those who have limited travel possibilities might rely on forced car ownership (spending a large part of their limited financial means on a vehicle) or ephemeral car ownership to be able to reach essential destinations such as job, school, grocery stores or medical facilities (De Vrij & Vanoutrive, 2022). People can experience limitations on their mobility and travel options because of a wide range of characteristics and circumstances, possibly in combinations that further increase limitations (Rajé, 2004). Family composition, physical condition, skills, job status, ethnicity, gender but also place of residence, location of services and timing of travel might influence car dependency and render the use of alternative modes of transport challenging or impossible. Considerable constraints on mobility can cause social exclusion; when a person experiences such limitation(s), they find themselves in disadvantaged positions to participate fully in society. This exclusion and the disproportionate challenges people might face to access basic services because of such constraints on their mobility is known as mobility poverty. While not every person experiencing one of the abovementioned circumstances or characteristics immediately experiences mobility poverty, they are more vulnerable to it (Jeekel, 2019; Lucas et al., 2016). In this report, the terms 'people in disadvantaged positions' and 'people in vulnerable positions' are both used to refer to people who have such predisposition to constraints in mobility and mobility poverty. This scope is larger than that part of the population living in precarious conditions.

Furthermore, mobility poverty is a phenomenon that can easily go unnoticed; people develop (elaborate) strategies and practices to circumvent constraints on mobility, even though those might take considerable amounts of energy, time or money (Jouffe et al., 2015). The resourcefulness of people to find alternatives for regular car ownership or the unawareness about and unwillingness to rely on government support, can make their challenges and their needs stay under the radar of professionals. In such situations however, where mobility already requires large efforts, seeing travel options further limited through UVARs can especially cause frustration and feel unfair. Changing travel behaviour is difficult when alternatives are not known or require time and means to access (Auxilia, 2024). People's living conditions might in the end deteriorate more from the increased lack of travel options than they improve from the reduction of (long-term) negative impact of car traffic in their daily environment. Professionals in various fields might hold capacities to resolve such negative impact and respond to (a part of) the complex challenge to integrate environmental objectives with social justice, to make sure sustainable urban transitions are socially inclusive. The LEZ4all project aims to equip professionals with tools and capacities to be able to adequately contribute to resolving this challenge. This needs assessment therefor explores the current capacities and needs of professionals at the level of attitudes, knowledge and skills as a foundation to direct further project actions.

LEZ4all

The 2-year project LEZ4ALL (Low Emission Zones for All) is co-funded by the European Union under the Erasmus+ program, coordinated by Auxilia and including the University of Antwerp, Brussels Environment, and the Metropolitan Area of Barcelona as main partners. The project aims to contribute to more social equality in carrestrictive policies by better considering the conditions of every population group, especially those in the most vulnerable positions in terms of mobility, in the definition and implementation of LEZ and other UVAR. To achieve this, LEZ4all has the objective to improve the competences of professionals whose work is related to mobility poverty, social exclusion and/or sustainable mobility; these professionals' work can potentially reduce the impact of car-restrictive regulations on more vulnerable population groups. Through its activities, the project intends to bridge the gap between two worlds that rarely interact but have much to learn from each other: public policies on sustainable mobility and transport; and social justice, inclusion, and solidarity.

The first phase of the project is geared towards developing (a) a profound comprehension of encountered challenges and (b) potentially beneficial practices to anticipate and mitigate negative social impacts that car-restrictive policies



can cause for various urban population groups. By working in parallel on (1) an assessment of needs of professionals and (2) hands-on experimentation of tools and working methods within the public administrations involved in the project, the project roots itself firmly in practice.

In the second phase, the results of this dual exploration will guide the development and dissemination of **training modules** for professionals to **gain knowledge**, **develop skills**, **raise awareness** on mechanisms of social exclusion in mobility-focused sustainable transitions and to promote strategies to jointly close gaps in support systems and fulfil needs in professional ecosystems.

The project is part of a wider European boost of initiatives that centre interdisciplinary and practice-based learning, cross-sectoral collaboration and broad stakeholder engagement to enable adequate responses to complex contemporary societal challenges. By developing innovative training tools and building the capacities of both governmental and non-governmental actors, LEZ4all strives to ensure that communities in vulnerable situations are not left behind as cities adopt more stringent environmental standards. The metropolitan areas of Brussels, Barcelona, and Lyon are the primary pilot areas of this project, which aims to reach professionals in urban regions across Belgium, France, and Spain.

2 STUDY APPROACH

Objectives

This report is a key output of the first phase of the LEZ4all-project, which has the overall objective of a better comprehension of the relation between mobility and a just transition and improvement of the associated competences by professionals whose work is related to mobility poverty, social exclusion and/or sustainable mobility. It synthesizes the assessment of needs that took place during spring and summer of 2025. The assessment explores the training needs, both perceived and experienced, of the large scope of professionals whose work can influence the social impact of car-restrictive policies.

The setup of the study simultaneously served the purpose of establishing a **professional network**. As the project team reached out to targeted professionals for consultation in their research, these professionals were invited to become part of a network that could enhance learning exchange and cross-sectoral collaboration.

The study results will allow to uncover and address existing challenges for targeted professionals. In a subsequent part of the LEZ4all project, this knowledge will inform the development of relevant vocational training modules and a participant base for these modules.

Study methods

The study draws on different sources and study methods, both qualitative and quantitative in nature, to develop a well-rounded assessment. As Figure 1 shows, the initial steps consisted of a concise study of existing academic literature on mobility poverty, social effects of sustainable mobility policies, the association between social inequality and sustainable transition and the impact of professional biases and skills on policy implementation. In parallel, lived experiences of professionals were collected by means of interviews with key informants in three countries (Belgium, France, Spain) and contributions of project partners who have already valuable on-the-ground experience with the challenges in addressing social impact of UVARs. The observations from this qualitative research informed a next phase of quantitative research to extrapolate findings. An in-depth survey for professionals on training needs related to attitudes, knowledge and skills allowed to identify larger patterns in experienced and



perceived training needs among professionals in different job positions and fields of expertise. The results of this multi-track research are synthesized in this document.



Figure 1 research steps of the study on training needs of professionals

While the assessment considers a wide range of UVARs to cause similar needs and challenges for professionals, specifically LEZ regulation served in many instances as an entry point to explore those challenges in this research. Both in interviews and survey questionnaire, certain questions were geared towards the implementation of LEZ to make them relatable and practical for the respondents.

Target population of the study

To achieve the abovementioned objectives, the study has specifically targeted professionals whose work is related to sustainable mobility and mobility poverty and can potentially influence the impact of LEZ & UVAR on vulnerable population groups, hereafter named "LEZ professionals". Barcelona, Brussels and Lyon are the main targeted urban regions under LEZ4all, but professionals active in other urban areas or at a national level in Belgium, France and Spain have been included as well in this study to be able to draw meaningful conclusions on needs and prevalent skills while taking into account the specificities of governance structure and public sector operations between the three countries. Thus, actors in Antwerp, Ghent, Grenoble, Limoges, Madrid and Paris were invited to participate as well.



Figure 2 exacerbated social vulnerability can originate from a (combination of a) number of factors; this makes the scope of professionals with potential positive influence very broad

Mobility poverty and exacerbated social vulnerability induced by limited mobility options is multidimensional and can originate from (the combination of) a number of factors (see Figure 2) related to income, age, ethnicity, gender, (un)employment, disabilities, care needs, household structure, geography of housing and work location(s), digital literacy,... (Kuttler & Moraglio, 2021). The range of professionals who potentially have an influence on questions of mobility poverty experienced by the implementation of an LEZ is therefore broad. This can range from professionals shaping the design of LEZ or other mobility policies that impact accessibility in urban areas, to those who can help vulnerable groups navigate the regulations and the opportunities that are part of these policies. To make sure that the projects' output is sufficiently specific to be relevant for professionals, the project focuses on three target professional domains. These domains are identified as having potential to mitigate negative social impact of LEZ in a relatively direct way.

The target population consists of professionals working on one or more of the following issues:



- on urban environment and issues of air and noise pollution
- on different types of support for people in socially vulnerable situations / disadvantaged positions
- on mobility and transport planning

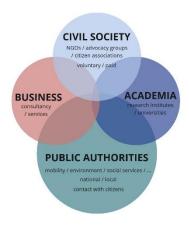


Figure 3 quadruple helix for LEZ professionals

The concept of the Quadruple Helix emphasises the value of a learning process that includes actors from different fields to achieve changes in complex social issues (Carayannis & Rakhmatullin, 2014)(Nigten & Kotey 2017) While public authorities have an undeniable influence on the social impact of LEZ, actors active in the business world, in civil society and in academia around the abovementioned issues can be influential in the impact socially disadvantaged people experience from car-restrictive policies. The project therefore aims to include professionals from all four spheres of the quadruple helix of Figure 3 in the needs assessment and, depending on the results of the assessment, as target audiences for training modules. While civil servants active at public authorities make up the largest part of the target population, quota were set to include a diversity in type of respondents per urban region in the survey. These quotas included:

- Equal ratio in representation of the three key domains (mobility, environment, social welfare) among participants.
- Participation of at least 1 respondent from the business world, 1 respondent from civil society and 1 respondent from academia per urban region.
- Participation of political staff (staff member or elected representative) in each country.

Data collection

Interviews

A total of 12 semi-structured interviews was conducted online with key informants from different urban regions involved in the project, which are summarized in Table 1. The informants were selected based on the mapping exercise of professional networks (see annex C) and the local network of the different project partners. An interview guide provided a common set of base questions for each interview. This guide is attached to this report in Annex A.



| Urban Area | Date of interview | Job Description | | |
|--------------------------------|-------------------|---|--|--|
| City of Antwerp | 14/01/2025 | Civil servant at Dienst Stadsontwikkeling, Mobiliteit & Parkeren | | |
| Barcelona Metropolitan Area | 20/02/2025 | Coordinator at AMB Informació | | |
| Metropolitali Area | 04/02/2025 | Technician at AMB Àrea de Mobilitat, Transport i Sostenibilitat | | |
| | 25/02/2025 | Social worker at Barberà del Vallés Social Services | | |
| Brussels Capital Region | 19/02/2025 | Civil servant at Bruxelles Mobilité | | |
| Region | 25/02/2025 | Mobility Consultant & Trainer active in Brussels | | |
| | 27/02/2025 | Civil servant at <i>Brulocalis</i> | | |
| | | Civil servant at <i>Brulocalis</i> working with CPAS | | |
| Grenoble Metropolitan Area | 11/04/2025 | Civil servant at the Air Quality Unit of Grenoble Métropole | | |
| Lyon Metropolitan Area | 25/02/2025 | Civil servant working on mobility at Métropole de Lyon | | |
| Aled | 28/02/2025 | Civil servant at Agence des Mobilités du Grand Lyon | | |
| | 10/03/2025 | Civil servant working on social integration at <i>Ville de Villeurbanne</i> | | |

Table 1 overview of online interviews conducted for the research



Survey

The online survey was launched on March 24, 2025, and ran until May 6. It was made available in English, French with French terminology, French with Belgian terminology, Catalan, Spanish and Flemish Dutch. The full questionnaire can be found in annex B of this report. A survey invitation was sent to 87 actors identified through the professional ecosystem mapping. The invitation included a request to further disperse the survey among relevant profiles in the actor's own department and professional network. The survey received 337 individual responses, of which 252 responses¹ (n=252) were considered sufficiently complete for analysis. This response rate surpasses the initial project objective of 150 completed questionnaires.

Observations on data collection

The high engagement in the survey and willingness of key informants to participate in the interviews can serve as a confirmation that our research topic is a relevant issue for many professionals. At the same time, we observed little participation from political staff in the survey. There was a remarkable urge from respondents to add nuance and additional remarks to the survey in open text fields and through messages to the contact address of the survey. This response can be interpreted as a reaction to the complexity of the topic, but it could also be a sign of the political sensitivity that surrounds LEZ and UVAR regulation in some regions and countries. These observations lead to a point of attention in the further activities of LEZ4all and for professional attitudes towards sustainable mobility policies: how can awareness for social impact of car-restrictive policies be anchored in policy development and implementation regardless of (changes in) the political landscape?

3 Context

The implementation of policies is related to governance structures and cultures. It is necessary to have an understanding of the differences in governance context between the various urban regions considered in this project to interpret study results correctly. For example, in Belgium regional authorities are responsible for the regulatory frameworks that provide the legal base for LEZs. This means that the LEZ in Brussels Capital Region is based on a different legal framework from those in Antwerp and Ghent. The latter are based on a law of the Flemish region. The regulatory framework for LEZ in Barcelona Metropolitan Area on the other hand was developed at metropolitan level first with the purpose of (step-by-step) implementation of LEZs in all municipalities of the Metropolitan Area of Barcelona. By now, regional and national policy processes are catching up and AMB's framework has served as the model for the regional regulation in Catalonia. Meanwhile the national government in France developed a legal framework and requirements to guide implementation of LEZs across the entire country. Within those specific governance contexts, LEZ regulations can differ in applicable emissions specifications, vehicle types that are allowed, exemptions, areas and timelines (Azdad et al., 2022). Needs and required capacities of LEZ professionals could vary depending on the specific characteristics of a LEZ and the communication strategy around its implementation.

At the same time, there is a specific constellation of professional actors and service providers active in each urban region. Governance structures shape these constellations to a certain extent, but local priorities, citizen initiatives and socially engaged business can cause considerable differences in this professional ecosystem. This creates different circumstances for people in disadvantaged positions to make them feel included or 'left behind' in the introduction of car-restrictive policies. This chapter gives a short overview of differences in local contexts of the urban regions involved.

 $^{^{1}}$ 224 responses with "Progress" = 100 and 28 responses w "Progress" >= 97 and < 100.



Furthermore, it is important to note the implementation of LEZ policy in the three main project areas found themselves at different stages during the study and impacted in different ways by processes at higher governance levels. In Spain there is currently an enabling political environment at national level for the introduction and expansion of LEZ, where financial support to regions is employed as a lever for accelerated implementation in urbanized areas across the country by the end of 2025. This allows for investment of resources in communication to urban populations and guidance of local authorities with sensitivity to existing socio-economic vulnerabilities by agencies with expertise such as AMB's Department of Mobility, Transport and Sustainability. In France an opposite movement is happening: on June 17, 2025, the National Assembly has adopted the abolition of LEZs as part of a 'simplification' bill, with opponents citing social inequality of the policy as a reason for its abolition (Vie-publique.fr, 2025). The precise consequences for existing LEZs are unclear until today, leaving public administrations in legal uncertainty on how to proceed. This causes authorities such as the Metropolitan Area of Lyon to continue 'business as usual, enforcing the LEZ as it exists already, but to redirect resources away from support or improvement of the existing scheme. In Belgium the political decision was made both in the Capital Region of Brussels (in October 2024) and in the Flemish Region (in September 2025) to postpone planned timelines for progressive exclusion of more vehicle categories. In Brussels this led to considerable protest from various citizen movements and other civil society organisations and a legal procedure, leading to the suspension of this postponement by the Constitutional Court (Hendrickx, 2025). This puts public administrations in an ambiguous spot², not being able to properly plan or communicate progressive steps of the LEZ scheme but also not abandoning the ongoing efforts in addressing social effects of the policy.

LEZ regulations

Table 2 summarizes the key characteristics of the LEZ in the main urban regions participating in this project. This side-by-side comparison allows to perceive local differences between policy frameworks and specifically between consequences for people in vulnerable positions.

| Urban Area | Barcelona Métropolitains Area | Brussels Capital Region | Lyon Metropolitan Area |
|---------------|--|---|--|
| LEZ specifics | LEZ regulation is developed at metropolitan level for the Metropolitan Area (as are the supporting services). Municipalities translate this to local legislation, in collaboration with the metropolitan government. This leads to a constellation of restricted traffic areas with the same norms in municipality centres across the metropolis. Vehicles without environmental label are banned from these LEZ areas labour days from Monday to Friday | The LEZ covers the entire regional territory, except for the R0 ring road and certain access roads. It is in place 24/7 for personal and professional vehicles with 4 wheels under 3,5 ton (planned for 2027 to include 2-wheel vehicles and heavy goods vehicles >3,5 ton in the restrictions). Alongside the LEZ, Brussels has introduced over the past 5 years circulation plans in various neighbourhoods under the Good Move regional mobility | Regulation based on the national "Crit'air" classification. All French vehicles are obliged to have a Crit'air sticker, so do foreign vehicles who are circulating in a restricted traffic zone. The LEZ in the Metropolitan Area of Lyon covers 5 municipalities (Lyon, Villeurbanne, Caluire-et-Cuire and parts of Bron and Vénissieux) including major metropolitan roads and is in place 24/7. Since the summer of 2025, |

² The absence of a regional government in office in the BCR, with formation negotiations still ongoing since the elections of June 9, 2024, further adds to this ambiguity as there is no public budget guiding resource allocation.



| | 7am-8pm | plan. These plans have an impact on car mobility and modal shift in the city as well. | another UVAR is introduced in the city of Lyon under the form of a Restricted Traffic Zone, only accessible for certain vehicles. |
|--------------------|---|--|---|
| Timeline | Start Jan 2020 Progressive expansion of regulated area (more municipalities within the metropolitan region) in 2021 and in 2024 | Start Jan 2018, with a calendar of progressive exclusion of more vehicle categories in the LEZ area | Start 2020 for professional vehicles, expanded to private vehicles in 2023, with a calendar of progressive exclusion of vehicle categories |
| Exemptions | Essential services With registration: foreign vehicles, grace period for vehicles that will be replaced, vehicles for people with reduced mobility, for people with medical requirements, for periodical medical treatments, for special services, for activities with municipal authorisation, for professionals approaching retirement age, for low-income households | Emergency vehicles, vehicles on electricity or hydrogen, motorized two-wheelers, heavy goods vehicles (>3,5 t), motor homes, oldtimers With registration: vehicles for people with a disability, for caregivers with social rights, for school transport, fair/market vehicles, exceptional transport, mobile cranes, priority vehicles, special maintenance vehicles, armed forces vehicles | Emergency vehicles and essential services, vehicles for people with a disability With registration: grace period for vehicles that will be replaced, oldtimers, people working shifts, personal or professional 'petit rouleur' vehicles (driving < 52 days/year), market vehicles, certain delivery vehicles and utility vehicles |
| Social measures | +Exemptions for many population groups with potential socio-economic vulnerability (see above) +Daily permits can be purchased, at reduced price for low-income households +LEZ applies only labour days from Monday to Friday 7am -8pm | +Exemptions with social character (see above) +Income-based scrappage premium +Personalized mobility counselling +Investments in modal shift +Preferential rate public transport passes for various population groups (+65, youth, limited income) +Bike promotion for people in socio-economic vulnerability +Promotion of inclusive carsharing +Taxi check for people in vulnerable situations | +Opening of the Mobility Agency (Agence des Mobilités), where advise and support on LEZ is available; closing the digital divide on mobility is one of their priorities +Specific actions implemented by the Mobility Agency in Quartiers Prioritaires de la politique de la Ville³ – priority neighbourhoods +Income-related premiums for vehicle replacements +Investments in cycling infrastructure and a new tram line in low-income neighbourhoods +Exemptions in regional legislation (see above) for shift workers, grace period, 'petit rouleur' vehicles |

Table 2 key characteristics of the LEZ in the three main urban regions targeted in the LEZ4all project

It was observed across all urban regions that, not illogically, outreach to the population concentrates at the start of the implementation of a LEZ: communication campaigns in online and offline channels, information sessions and/or

³ Quartier Prioritaire de la politique de la Ville is a national policy classification that covers the most disadvantaged neighbourhoods. These neighbourhoods or districts require priority intervention by public authorities, particularly in terms of urban renewal.



popup information points. While certain citizen support services are continuous (and topic-specific), such as the LEZ team at the citizen contact centre by AMB Informació in Barcelona, the involvement of social organisations and services appears to happen only 'temporarily', around this starting point of implementation. Social staff might be invited to attend an information session or receive a brochure about LEZ and might have been consulted at some point during policy development; community centres might serve as points for information distribution (e.g. flyers are made available). Rarely however, were systems in place for ongoing technical support or collaboration with social sector actors. Training of new staff members, particular cases of citizens facing mobility restrictions, updates on LEZ policy or support measures etc. were (expected to be) handled by social staff on their own.

Professional actors in the urban ecosystem

Together with the project partners with local knowledge, the ecosystem of LEZ professionals of several urban regions targeted in our research was mapped. This included not only Barcelona, Brussels and Lyon, but also Antwerp and Limoges. The full ecosystem maps can be found in Annex C. The maps take into account all four spheres of the quadruple helix and include national, regional and local actors.

The ecosystems reveal differences in local governance context. Unsurprisingly, in smaller regions the number of actors in the ecosystem is limited. This entails a potentially high responsibility on only a few professionals to provide support to citizens or to monitor (in)equality in policy development, with perhaps limited means to take up such responsibilities. In French context, service provision appears to rely more on a combination of private parties and specialized autonomous government agencies, while in Barcelona support on mobility policies is embedded in a general structure of service delivery to citizens. Citizen associations, NGO's and other civil society actors (with social or environmental focus) from a strong presence in the ecosystems of Brussels but are dispersed as well in their activities. In most ecosystems, there are different departments and agencies at different governance levels active in the same domain in public authorities. Alignment of activities between these various departments requires clear structures and sufficient awareness of each other's work. Liaison figures can potentially play a key role in these efforts. These observations will have to be considered when developing trainings for different professionals.

4 Findings qualitative research

Several challenges emerged quite prominently from the interviews and conversations during the qualitative research phase:

- Communication on mobility is delicate.
 - Car ownership has cultural values, car dependency can be perceived in different ways, 'form' of communication around mobility policies can heavily influence public acceptance
- Information on LEZ and mobility is mainly found on dedicated channels.
- Professionals often start from their personal experience.
 - Mobility and environmental policymakers often have a hard time imagining the barriers people in vulnerable positions are facing (to access information, to change mobility behaviour, to ask for assistance). Social workers might rely on their personal mobility experience to assist people and might have a personal preference/bias for car use that resonates in their advice
- It is challenging to address non-take-up issues.
 - Professionals are increasingly aware of these issues; solutions are most often looked for in implementation and delivery of services to vulnerable people, less so in policy development
- Monitoring social effects of mobility policies is complex.



There is often no consistent evaluation method, negative (or positive) social results are largely anecdotal and only become apparent when citizens or collectives complain

Related to these challenges, professionals expressed various needs for themselves and for others. Some of the expressed needs can potentially be improved through vocational training. Other needs cannot be resolved at an individual level and require systemic changes in approach or implementation structures. In summary, there were four most prominent recurring needs:

- Training on communication is most often cited.
 - This entails different types of communication, from conversation techniques with distressed people affected by LEZ and population groups in vulnerable positions to intersectoral and intergovernmental exchanges and communication between policymakers and implementing services.
- Access to practical information on LEZ for 'front office' workers.
 Trainings or a platform with clear and applicable information on rules, exceptions and supporting measures would allow professionals in direct contact with citizens to guide them more adequately with advice on changing travel behaviour
- Trainings on barriers for different population groups and perspective taking in LEZ policy development.

 This need was identified by professionals in 'adjacent' positions. There should be more consciousness about systemic and personal barriers shaping people's mobility and a 'reflex' to consider the daily reality of different citizens when developing & launching a mobility / environmental policy
- Addressing socio-cultural connotations of car use and car ownership.
 There are certain values and a notion of personal freedom attached to car use and car ownership. How to resolve the threshold(s) embedded in losing personal freedom/status/others values when getting rid of a car?

It raises the question of the right to mobility—the ability to travel using a polluting vehicle—versus the right to breathe clean air and to aspire better health. As a local authority, this issue goes beyond our scope. There is a harmful relationship with cars in our societies, and we cannot position ourselves as the 'justice makers'!

Key informant from Lyon during interview

The findings of the qualitative phase guided the development of survey questions in the second research phase. The survey has the objective to quantify reported needs from this qualitative research over a larger sample as well as identify needs that were not perceived by professionals themselves.



5 Survey participation

To make an informed interpretation of the survey results, this chapter first describes the demographics of the respondents. Table 3 shows that all three countries are sufficiently represented in the results, with 39% of participants coming from Spain, 35% coming from Belgium and 22% from France. A small number of participants (4%) were based in different countries or did not disclose the region they are professionally active in.

| Urban region | Share of participants (n=252) |
|--------------|-------------------------------------|
| Barcelona | 38% |
| Brussels | 29% |
| Lyon | 13% |
| rest Belgium | 6% |
| rest France | 9% |
| rest Spain | 1% |
| unknown | 4% |

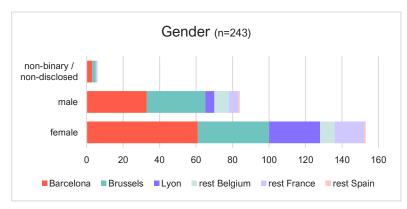


Table 3: respondents per region

Figure 4: gender of respondents by region

Figure 4 reveals a gender disbalance among participants, with almost 62% female participation. Especially in Barcelona and Lyon, a higher ratio of women completed the questionnaire. Both the focus of the project on the social dimension and the targeting of civil servants can have contributed to this disbalance. The prevalence of highly educated participants is most noticeable among the respondents from Brussels as well as the rest of Belgium (where the participation rate of women and men is almost equal). Figure 5 shows that the survey participants generally have a high level of education, with only 6% of participants without a degree from a higher education institution.

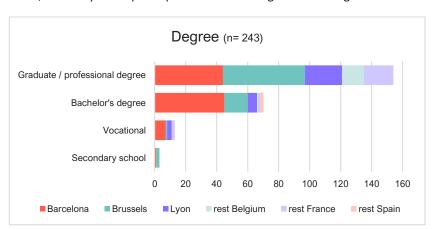


Figure 5: education of respondents by region

The participating population is diverse in age: Figure 6 shows a Gaussian distribution with a peak in age category 40-49, similarly represented across the different regions.



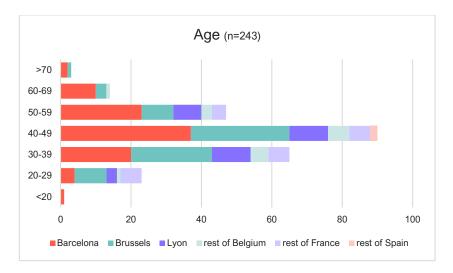


Figure 6 respondent age distribution by region

Professional domain

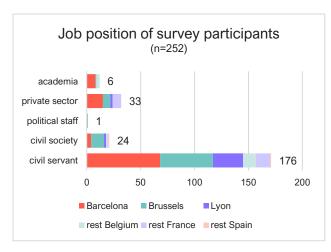


Figure 7 type of employer by region

Professionals active in public authorities are well represented in the survey results. The results in Figure 7 confirm that the project team was successful in encouraging participation among professionals from the other three spheres of the Quadruple Helix as well (i.e. private sector, research institutes and civil society). This is in line with the target population definition.

As several key informants reported during interviews, the Low Emission Zone ecosystem is highly fragmented, with government institutions, local organisations, NGO's and other organisations with different sizes and goals working side by side to provide services and support to various population groups. Including private

sector and civil society actors from this fragmented field in the project might be crucial to reach certain disadvantaged groups and achieve the project's objectives.

Looking at the various fields and topics participating LEZ professionals are active in⁴, across the regions there is a noticeable majority of professionals with connections to the field(s) of mobility and transport. Figure 8 shows that only in Lyon the number of people active in socially related topics (social welfare or community work) surpasses the numbers in topics related to mobility, urban planning and the environment. In Belgium on the other hand, representation of the social sector is low. This might explain differences between the results for different regions.

⁴ It is possible that professionals are working on different topics at the same time in their line of work. Survey participants were thus given the possibility to indicate multiple topics they are working on. In the remainder of this study, results distributed by topic are shown as percentages relative to the total number of people active in this field.



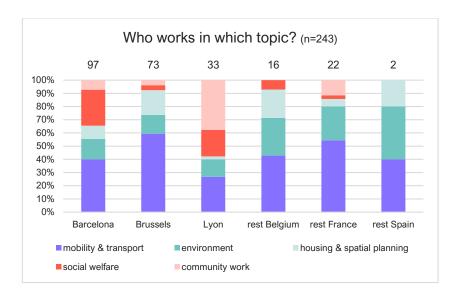


Figure 8 professional focus of respondents by region

Figure 9 and 10 show that the prevalence of mobility-related topics is highest among male participants and among the younger age categories (20-29 and 30-39). Demographic distribution of professionals active in the field of the environment, housing & spatial planning is quite even, although representation of the housing & planning field decreases in the 50+ age groups.

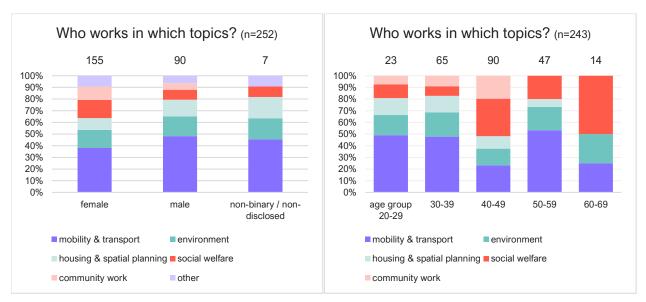


Figure 9 professional focus by gender

Figure 10 professional focus by age

Furthermore, as seen in Figure 9, a substantial number of participants chose to specify their field in the "other" category. Text analysis of the provided answers and clustering of topics resulted in the definition of 3 main topic categories and a 4th "additional" category for further analysis in this study. To identify differences in capacities and needs between professionals in different fields, the following categories will be employed:

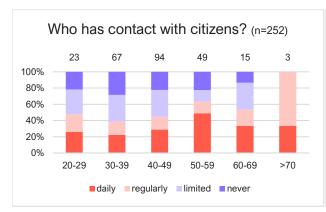
- 1. Active in socially related topics: social welfare, community work, inclusion & equality, social justice, work with one or more disadvantaged population groups such as older adults, youth or people with a disability
- 2. Active in topics related to mobility: mobility, transportation, traffic



- 3. Active in topics related to urban planning and the environment: environment, pollution, energy, housing, planning, spatial planning, public space
- 4. Active in the field of general citizen services & training/education

Contact with citizens

Next to the topic(s) professionals are active in, this study considers contact with (potentially vulnerable) citizens as a second potential differentiator for training needs among professionals. This variable is an explicit way of differentiating between, on the one hand, jobs that entail forms of service delivery and implementation of policy and on the other hand, jobs that are geared toward policy development, planning and internal processes. Throughout this study, the difference between these two types of jobs is identified as "front office jobs" for the first category and "back office jobs" for the latter. The distribution between front office jobs (who have daily or regular contact with citizens) and back office jobs (who have limited or no contact with citizens) is almost even in the survey results: 48,4% to 51,6%.



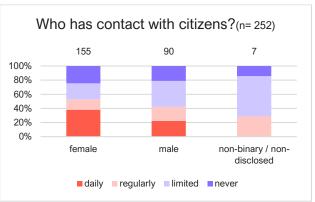


Figure 11 contact frequency by age

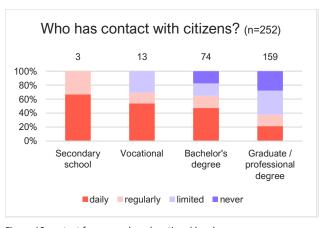


Figure 12 contact frequency by gender

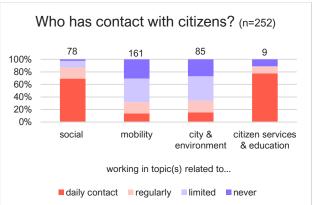


Figure 13 contact frequency by educational level

Figure 14 contact frequency by policy domain

The breakdown of the results in Figure 11, 12 and 13 shows that LEZ professionals in 50+ age categories, female professionals, and professionals with a lower level of education have more often daily or regular contact with citizens. Not unexpected, Figure 14 shows that contact with citizens is highly prevalent among professionals working in 'social' related topics and citizen services, with 70% of participants reporting daily contact with citizens. This is the



counter image of the distribution among professionals working in topics related to mobility and urban planning & environment where only 30% of respondents indicated to have regular or daily contact with citizens.

Conclusion

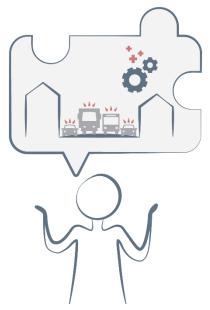


Figure 15: Among professionals working on topics of mobility there is a higher population of younger (age 20-39), male respondents that have limited or no contact with citizens.

In summary to this descriptive chapter, we can conclude that there are clear demographic differences between surveyed professionals working in front office jobs when compared to those working in back office jobs, and between those that have a professional focus on mobility, urban planning and environment, social issues or on citizen services.

A higher number of women participated in the survey. Male participants work less often in front office jobs and less often in socially related topics. Younger professionals (age 20-39) work more often on mobility-related topics and have less often regular or daily contact with citizens. There is a high representation of professionals in mobility and in urban planning & environment in Brussels and Belgium as a whole among the survey participants, while only a minor part of the professionals here reports working on social related topics. In France and Spain, there is a more even distribution between topics.

The analysis in the next chapter will employ the here identified four categories of professional topics and frequency of citizen contact as two main variables to interpret the results.



6 Results

The questionnaire and needs assessment serve the purpose of developing relevant and practice-based training modules and tools for LEZ professionals within the subsequent work packages of the LEZ4all-project. The analysis of results therefore starts from the self-reported training needs and interests of the survey participants. A training that can answer to such need will likely have a high participation interest.

Subsequently, the analysis will tie the results on the questionnaire components assessing attitudes, knowledge and skills to these perceived training needs. Various LEZ professionals might not (yet) be aware of potential training needs that can be identified through these results, but impact of training on such experienced needs could be even more effective to mitigate negative effects of car-restrictive policies on people in vulnerable positions. The survey design already incited more awareness of professionals on the learning needs they might experience.

This survey made it clear to me that I know little about the impact of mobility policies. Making the impact tangible already seems like a good start for a training.

Survey participant's answer on question about learning opportunities

Perceived training opportunities

KEY INSIGHTS OF THIS PART

Most participants in the survey find training relevant and believe that it is beneficial for other professionals as well. 25% see training needs for themselves, in their domain and for other domains.

Training should not be restricted to pure knowledge acquisition, but should also include skills and attitudes such as feeling empathy for those affected by LEZ-policies as well as being able to help them in a respectful way.

Survey participants were asked about learning interests and training needs at the end of the survey, after having completed the questionnaire on attitudes, knowledge and skills. At this point in the survey flow, after having been challenged on their knowledge and skills, only 5% of participants indicated that training related to mobility policies, their social effects and mitigation strategies is not relevant (Figure 16). This confirms that the LEZ4all-project can contribute to an improvement of the current situation.



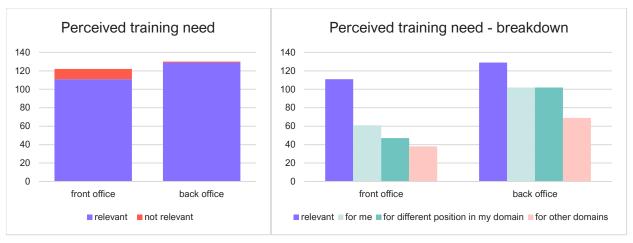


Figure 16 training needs by contact frequency

Figure 17 perceived relevance of training for different groups

As Figure 16 shows, almost all of the survey participants not interested in training work in front office jobs, but the number is small. The breakdown in Figure 17 shows that more professionals working in back office jobs with little to no contact with citizens found training relevant for multiple groups: for themselves, for others in their domain and/or for other domains. Table 4 indicates that up to a quarter of all participants (n=252) considers training relevant both for themselves, for other positions in their domain and for professionals in other domains. The majority, 65% of the participants, was interested in training for themselves, but there was a noticeable number of respondents considering training relevant for others rather than for themselves.

| training is relevant (n=252) | for me | for others in my domain | for other domains | for others in my domain + for other domains |
|---------------------------------|--------|-------------------------|-------------------|---|
| not for me | 0% | 12% | 17% | 2% |
| for me | 65% | 48% | 26% | 25% |
| total population | 65% | 59% | 42% | 27% |

Table 4 perceived relevance of training

In general, participants working on topics related to mobility or to (urban) environments, represented by a higher rate of back office professionals in the survey population, are more eager about the proposed training compared to those working in the social field where a higher rate of front office professionals in the survey population is involved in. This trend is reflected in the response rates per professional topic in Table 5.

Interestingly, the self-identified training needs coincide to a reasonable extent with the perception of other professionals, as shown in Figure 18. When participants were asked to elaborate on their first response and specify further which other position or domain should receive training, the domain of mobility was most often cited. Furthermore, more participants were convinced that policymakers should receive training than that professionals in direct contact with vulnerable population groups should.



| | | Of which consider training relevant: | | | | |
|--|-----|--------------------------------------|-----------------|-----------|---------------|--|
| | | | for other | | for me, my | |
| working in topic related | | | positions in my | for other | domain & | |
| to | N | for me | domain | domains | other domains | |
| social (welfare, community work, inclusion, equality, social justice, | | | | | | |
| disadvantaged group(s)) | 78 | 50% | 38% | 35% | 10% | |
| mobility (mobility, transport) | 161 | 72% | 71% | 47% | 34% | |
| city & environment | | | | | | |
| (environment, pollution, energy, housing, planning, spatial planning) | 85 | 76% | 75% | 49% | 36% | |
| citizen services & | | | | | | |
| education | 9 | 56% | 22% | 56% | 22% | |

Table 5 perceived relevance of training by professional focus

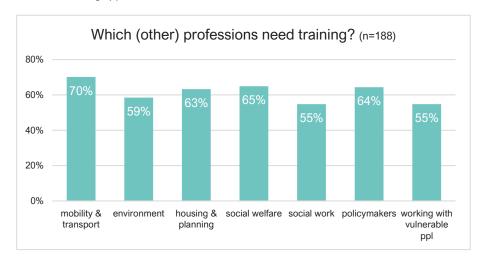


Figure 18 perceived training needs of other groups

Over half of the survey participants did not indicate their preferred frequency of training. Among those who did express their preference (n=102), 55% preferred to receive 3 subsequent short training sessions of 1 to max. 2 hours as a training, and 86 participants took the opportunity to express specific training topics they would be interested in. Of those, the 50 professionals working in back office mainly expressed interest in:

- Understanding vulnerability: learning about social exclusion and barriers for certain/minority population groups and training on strategies/tools to get vulnerable people heard, 'on board' and informed on policies
- Connection between vulnerability mobility environmental needs:
 What are the social impacts of LEZ? How to evaluate the social impact of policies?
- Understanding the social sector: How does social work operate and how are social policies developed? How to connect with actors in community work and social services?

Many of these interests indicated a desire for more intersectoral exchange and particularly for better connection and collaboration with the social services and community work. The 36 professionals working in front office focused on practical knowledge about LEZ policies and channels for support, but also on knowing the (societal) benefits of such policies to be able to explain their usefulness and on ways to engage with citizens who have concerns or troubles because of LEZ and other mobility policies. One participant summarized these interests concisely:



- Why are these measures being taken at the individual level and not others (which do exist) at a more structural or higher-impact level?
- Knowledge to be able to argue these measures and debunk fake news about them.
- Possibilities for those with mobility issues and lack of resources, and even those with resources who feel they shouldn't be using those for these measures.
- Communication skills to generate a sense of belonging in individuals so they can engage in a social/group/collective vision that makes them feel part of this change that benefits everyone.

Survey participant's answer on question about learning opportunities

The answer expresses the struggle of those in contact with citizens to bring across LEZ measures as beneficial without being well-versed in such environmental mobility policies nor involved in processes that precede the implementation of such policy. Access to practical information on car-restrictive policies are certainly not the only need. Interactive sessions were suggested, such as following a daily trajectory of someone who is struggling with mobility and is negatively affected by LEZ policy, or debate workshops with key actors that directly include people affected by LEZ in the debate. Another respondent identified several opportunities that are related to attitudes, skills and supporting innovations:

Training that focuses on empathy, on starting from a social perspective and individual needs, rather than the tendency to start from the perspective of one's own problem/offer. Such as 'Poverty explained to people with money'.

Training to engage in open and interactive conversation, how to listen and/or provide services with an eye for the vulnerability of the conversation partner.

Tool to scan services for barriers (administrative, digital, language skills, financial, physical, cognitive, cultural, norms & values, etc.).





These quotes make clear that participants do not limit perceived learning needs and opportunities to just expanding their knowledge and want more than information on LEZ and mobility policies.

Attitudes

KEY INSIGHTS OF THIS PART

- LEZ professionals have limited personal experience with on the one hand situations that cause social vulnerability and on the other hand impact of car-restrictive policies in their personal lives. Only 6% of participants reports having personal experience with both situations. Social empathy is thus an even more important skill for professionals to be able to consider in their work perspectives (of people experiencing various mobility restrictions and/or socio-economic challenges) differing from their own experience.
- Few LEZ professionals (14%), especially among those active in social topics (5%), have confidence in the effectiveness of supporting measures to mitigate negative impacts of LEZ policies for people in disadvantaged positions.
- A higher-than-average rate of LEZ professionals working in social topics has personal experience with car dependency (35%) and prioritizes car accessibility in the urban environment (44%). They do believe (68%) that promoting a modal shift is an inclusive measure.

Personal attitudes, values and perspectives on the world, can influence the way professionals execute work, both in service delivery and citizen interaction and in project and policy development. Inadvertently, professionals' attitudes can lead to building in discriminatory thresholds in policy frameworks or guide counselling towards personal preferences. For example, if a front office professional has a negative bias about public transport, it is less likely they will council citizens on how to use the public transport system. This analysis explores how attitudes that can weigh in on social effects of car-restrictive policies differ among professional fields and frames the implication of these differences for learning opportunities. To assess these differences, the survey included questions on the following three components:

- personal experience; with factors causing vulnerability to mobility poverty and with impact from carrestrictive policies such as LEZ
- appraisal of the association between social vulnerability and car-restrictive policies
- prioritization of values such as urban liveability, car accessibility, social equality and government responsibility in mobility.

As the participant's answer quoted on the previous page already points out, professionals have a tendency to start from their own perspective in their work: how someone understands sustainable mobility in their professional context is still closely interlinked with their own mobility practices This often leads to the neglection of the lived experiences of people in disadvantaged situations in policy and plan development (Hendriksson, 2019). Professionals who have personal experience with impact of car-restrictive policies or with conditions that can lead to mobility poverty, can fall back on this lived experience to be more cautious about potential negative effects of mobility policies. In the survey, personal experience was defined as something you experience yourself or something someone in your close surroundings experiences, such as a direct family member or close friend.



| | | Of which have expe | rience(s) in their personal life with | | |
|---|-----|--------------------|---------------------------------------|--------------------|--|
| | | | changed travel | both vulnerability | |
| | | causes for social | behaviour due to | and changed travel | |
| working in topic related to | n | vulnerability | LEZ | behaviour | |
| social (welfare, community work, inclusion, equality, social justice, | 78 | 42% | 18% | 3% | |
| disadvantaged group(s)) | | 12.1 | | | |
| mobility (mobility, transport) | 161 | 61% | 12% | 6% | |
| city & environment (environment, pollution, energy, housing, planning, spatial planning) | 85 | 60% | 12% | 7% | |
| citizen services & education | 9 | 44% | 33% | 22% | |
| total sample population | 252 | 54% | 16% | 6% | |

Table 6 respondents' experience with LEZ impacts

The results in Table 6 show that only few professionals working in topics related to mobility or city & environment had their own travel behaviour affected by LEZ policies. Professionals in social-related field and in citizen services report a higher rate of affected travel behaviour, although the percentages remain relatively low. Rates for personal experience with factors contributing to social vulnerability are overall higher, with 54% of participants having experience with at least one out of the five factors surveyed and 15% of professionals reporting personal experience with more than one factor. The following five factors contributing to social vulnerability were gauged:

- financial limitations experienced by 3% of professionals
- disability experienced by 14% of professionals
- digital illiteracy experienced by 22% of professionals
- car dependency experience by 24% of professionals
- challenges to access certain services in daily life such as supermarket visits or doctor's appointments experienced by 1% of professionals.

Remarkably, an opposite trend appears here with higher rates of professionals working in mobility- and city & environment-related topics reporting personal experience with at least one factor than professional working in the social field. This trend might be caused by differences in standards for self-reporting personal experience among professionals. People working in social topics who are likely to come into contact regularly with citizens who are heavily impacted by one or more of these factors, might have a higher threshold to consider experience in their personal life as noteworthy.

It is worth highlighting that car dependency jumps out of the overall pattern: 35% of professionals in social-related fields report experience with car dependency, a large majority of the 42% who indicated to have personal experience with one of the factors. Meanwhile rates of car dependency drop to 17% for professionals working in mobility-related topics and to 13% for professionals in the fields of city & environment. There is a considerable part of participants however, over 35%, who has reported no personal experience with any of the factors nor with changed travel behaviour. Only 6% of participants has both seen their travel behaviour affected by LEZ and has personal experience with conditions that could cause social vulnerability. Having personal experience with one of the five surveyed factors does not automatically lead to having personal experience with social vulnerability and specifically with mobility poverty. Most professionals can thus not relate from their own perspective to the situation people in vulnerable positions might find themselves in and the challenges they might subsequently encounter when car-



restrictive policies are put in place. This demonstrates the need for social empathy to properly consider different perspectives in their work.

| | Of which believe that people in disadvantaged positions, compared to the general population, experience | | | | | | | |
|--------------------------|---|------------------|-------------------|------------------|--|--|--|--|
| | sufficient mitigating | | | | | | | |
| working in topic related | more impact | less impact from | the same impact | support measures | | | | |
| to | from LEZ policies | LEZ policies | from LEZ policies | for LEZ policies | | | | |
| social | 69% | 3% | 23% | 5% | | | | |
| mobility | 64% | 2% | 16% | 19% | | | | |
| city & environment | 61% | 1% | 20% | 18% | | | | |
| total sample population | 66% | 2% | 18% | 14% | | | | |

Table 7 perceived impact of LEZ policies on people in disadvantaged positions

In the implementation of car-restrictive policies, it is often argued that population groups in socially vulnerable positions can benefit greatly from such policy because they more often live in urban areas where traffic-related pollution is high and are less likely to own a car themselves because of financial limitations. Yet Table 7 demonstrates a consensus among professionals that people in disadvantaged or socially vulnerable positions experience more impact from LEZ policies than the general population. The number of professionals who are convinced that support measures in their urban regions are sufficient to mitigate possible negative effects is limited, with only 14% of the participants expressing this sentiment. Especially among professionals in social services, there is very little confidence about the effectiveness of such measures: only 5% considers support measures sufficient to ensure people in vulnerable position do not experience more negative impact than the general population.

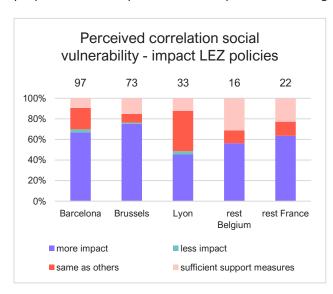


Figure 19 perceived social impact of LEZ policies

values they prioritized.

Support measures and policy frameworks differ from region to region: Figure 19 displays regional differences among the appraisal of LEZ policies. Confidence in the effectiveness of measures is highest in Belgium, while more professionals in Lyon are convinced that a LEZ policy, or the particular way it was implemented there, makes people in socially vulnerable positions experience the same effects as the general population does. Even with these regional differences, a learning opportunity lies in improving the appraisal of support measures for LEZ, either by trainings that can affect the development of more effective support measures, or training that can make existing support measures more known and appreciated among LEZ professionals.

Table 8 summarizes the final part of the assessment of attitudes, where professionals were asked to rate statements on a 6-point Likert scale to assess the

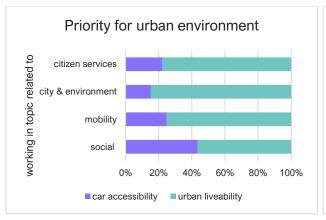


| | | Prioritize for the urban Consider a modal | | Consider government | | Appraisal of social equality in car- | | | |
|--------------------|-----|---|-------------|---------------------|----------|--------------------------------------|-------------|-------------|------------|
| | | environment | | shift | | | in mobility | restrictive | |
| | | environment | | SHIJU | | intervention | | restrictive | Jolicies |
| working in | | | | | not | | | belief in | concern |
| topic related | | car | urban | | good for | | | social | for social |
| to | n | accessibility | liveability | inclusive | everyone | detrimental | necessary | equality | inequality |
| social | 78 | 44% | 56% | 68% | 32% | 22% | 77% | 14% | 85% |
| mobility | 161 | 25% | 75% | 34% | 66% | 24% | 76% | 29% | 71% |
| city & environment | 85 | 15% | 85% | 33% | 67% | 18% | 82% | 20% | 80% |
| citizen | | | | | | | | | |
| services & | _ | | | , | | | | | |
| education | 9 | 22% | 78% | 67% | 33% | 33% | 67% | 33% | 67% |
| total sample | 252 | 220/ | 600/ | 4.40/ | E69/ | 240/ | 769/ | 350/ | 750/ |
| population | 252 | 32% | 68% | 44% | 56% | 24% | 76% | 25% | 75% |

Table 8 assessment of policies by professional groups

The results show that most values are prioritized in a similar way across the professional population. Three-quarters (76%) of the professionals consider government intervention in mobility of citizens necessary, although 75% of professionals has concerns about the risk of reinforcing social inequality through mobility policies such as LEZ. Figure 20 and Figure 21 show that attitudes are more dispersed on priorities for urban environment and appraisal of modal shift. The rate of professionals in the social field that prioritize car accessibility, (everyone) being able to access urban facilities and destinations by car, over environmental and health concerns for urban citizens for urban liveability climbs up to 44%, while the overall prioritization rate of 32% is remarkably lower. At the same time, more professionals in the social field (68%) and in citizen services (67%) believe that stimulating alternative modes of transport in a modal shift is inclusive and will contribute to more equal accessibility. Professionals in the fields of mobility, city & environment are more wary about the inclusiveness of the modal shift, perhaps because they have a more nuanced image through their expertise.





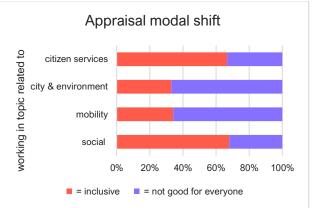
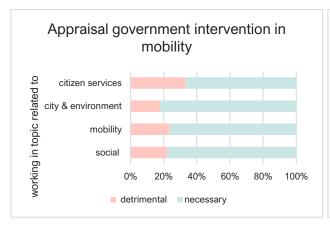


Figure 20 attitude on urban environment by professional topic

Figure 21 appraisal of modal shift by professional topic



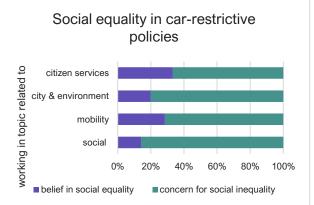


Figure 22 appraisal of government intervention in people's mobility by professional topic

Figure 23 appraisal of social equality in mobility policies by professional topic

Figure 23 shows that variations in the appraisal of social equality of car-restrictive policies is limited between groups of professionals, but that they generally fear that car-restrictive policies risk exacerbating social inequality. It is worthwhile taking this consideration into account when developing training modules, both in the development of the content of training modules as well as when communicating on the relevance of training.



Knowledge

KEY INSIGHTS OF THIS PART

- Low scores on questions about digital illiteracy, mobility poverty and vehicle types allowed in LEZ zones are noted across professional domains and reveal knowledge gaps (and perhaps biases) that are relevant to address in training of LEZ professionals.
- (Slightly) lower scores of professionals working in front office positions and in social topics on 'environmental-themed' questions about practicalities on the regulations of and the reasons for implementing an LEZ confirm the earlier discussed perceived training needs of front office professionals.

The survey participants completed a multiple-choice quiz with 14 questions to test their immediate knowledge on social vulnerability, environmental risks and measures in the urban environment and mobility policies and trends. For this purpose, a balanced mix of social-themed (5 questions), environment-themed (4 questions) and mobility-themed (4) questions was presented. The full questions, tailored to the various participating regions, can be consulted in the questionnaire in annex. Of the 14 questions, there were 5 questions where less than 1/3 of the participants answered correctly, which are summarized in Table 9. The least known topic concerned the level of digital illiteracy among the low-income working population (age 17-64): only 8% of the participants answered this question correctly. This rate was slightly higher among professionals working on social topics.

Some of the low-scoring questions do indicate knowledge gaps that can be relevant to resolve in order to make LEZ professionals better equipped in addressing negative social impacts of car-restrictive policies. Notably question 1, 2 and 5 in Table 9 contain opportunities to improve knowledge. It is important to highlight that only 15% of the professionals in fields of mobility and urban planning & environment could correctly define mobility poverty: for a professional population mainly working in back office, where concepts are employed to discuss approaches and take phenomena into account in strategy and policy development and monitoring, not being familiar with mobility poverty is likely to lead to resulting policies and strategies that do not take into account the risks of social vulnerability and the struggles disadvantaged population groups are facing.

| | | 1 Digital | 2 Concept | 3 Share of electric & | 4 | 5 Type of |
|------------------|-----|------------|-----------|-----------------------|--------------|-------------|
| working in topic | | illiteracy | 'mobility | hybrid in new car | Motorization | car allowed |
| related to | n | | poverty' | registrations | rate | in LEZ |
| | | | | | | |
| social | 75 | 11% | 28% | 31% | 23% | 13% |
| mobility | 157 | 8% | 15% | 25% | 31% | 41% |
| city & | | | | | | |
| environment | 84 | 8% | 15% | 33% | 40% | 36% |
| citizen services | | | | | | |
| & education | 9 | 0% | 44% | 33% | 22% | 22% |
| total sample | | | | | | |
| population | 245 | 8% | 19% | 25% | 28% | 32% |

Table 9 share of correct answers by professional group



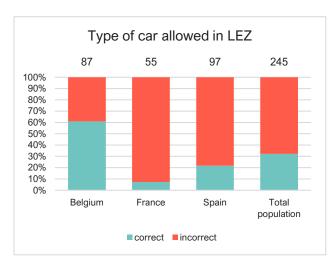


Figure 24 share of correct answers

For the 5th lowest-scoring question, testing knowledge on the car types that are allowed in LEZ zones, the side note has to be made that the answers to this question referred to Euro standard categories. In France, the Crit'air classification system is in place and Crit'air categories are the most common way of communicating about vehicle access instead of Euro standards. The regional distribution of the results on this particular question, as found in Figure 24, confirm that in France the rate of incorrect answers was remarkably higher compared to the other regions. Presumably, scores would have been better when employing Crit'air categories here.

Table 10 shows that average scores on the knowledge quiz were on the low side for all categories.

Professionals active in topics on city & environment scored best on questions in all three themes. Professionals in social services and community work did not score well on environment-themed questions, which were geared towards both practicalities on the regulations of and the reasons for implementing an LEZ.

| working in topic related to | n | average social themed questions (/5) | average mobility themed questions (/4) | average environment themed questions (/4) |
|--|-----|--|--|---|
| social (welfare, community work, inclusion, equality, social justice, disadvantaged group(s)) | 75 | 1,91 | 1,22 | 1,47 |
| mobility (mobility, transport) | 157 | 1,88 | 1,40 | 2,32 |
| city & environment (environment, pollution, energy, housing, planning, spatial planning) | 84 | 2,02 | 1,66 | 2,39 |
| citizen services & | | | | |
| education | 9 | 1,67 | 1,56 | 2,09 |
| total sample population | 245 | 1,85 | 1,33 | 2,04 |

Table 10 average scores of respondents by question theme and professional group

To conclude the knowledge assessment, Table 11 displays the breakdown of scores between front office and back office professionals. These run mostly in parallel; knowledge gaps are not clearly associated with either front office or back office positions. The only notable difference is in the higher scores on environment-themed questions among back office professionals. Combined with the results seen in Table 10 where practical knowledge on LEZ seems to be less common among professionals in the social services, this confirms the perceived training needs from front office professionals on LEZ policy and benefits as discussed at the start of this chapter.



| | social themed (| questions (/5) | mobility themed | d questions (/4) | environment themed questions (/4) | | |
|-------|-----------------|----------------|-----------------|------------------|-----------------------------------|-------------|--|
| score | front office | back office | front office | back office | front office | back office | |
| <1 | 14% | 15% | 22% | 15% | 19% | 4% | |
| 1 | 22% | 18% | 38% | 44% | 15% | 9% | |
| 2 | 36% | 39% | 26% | 28% | 34% | 36% | |
| 3 | 22% | 26% | 11% | 13% | 28% | 43% | |
| 4 | 6% | 1% | 3% | 0% | 3% | 8% | |
| >4 | 1% | 2% | | | | | |

Table 11 scores of respondents per job position

Skills

KEY INSIGHTS OF THIS PART

- 57% of LEZ professionals working in back office are not used to regular collaboration with other domains.

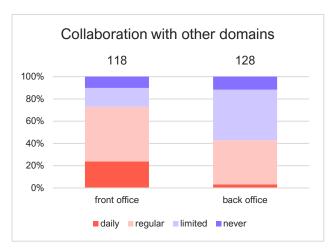
 Especially among professionals working in the topic of city & environment, rates of collaboration are low, not only for back office professionals but for front office staff as well.
- Not all LEZ professionals have a network that includes the actors that impact their work. Notably the connections between the Environmental Department(s) and LEZ professionals in the social field are less strong, while this department does impact the professionals' work.
- Front office professionals can benefit from better access to information on mobility issues of citizens (only 54% has good access). They can also benefit from better access to information on LEZ policies and support measures to help citizens: only 45% knows with certainty where to find this information.
- There is an opportunity to train back office professionals on methods to include more consultation of social expertise in their work (35-37% indicate they are interested in this).

In the survey, three skills were assessed for all participants: intersectoral collaboration, network assessment and social empathy. Taking citizen contact as a key variable for different relevant skills in different job positions, front office and back office LEZ professionals received additional questions on a number of position-specific skills. For the front office professionals, the skills covered by the questionnaire concern:

- identifying and addressing mobility poverty experienced by citizens they interact with
- locating information on mobility policies such as LEZ
- feedback mechanisms to policymakers

For the back office professionals, the skills surveyed in the questionnaire concern:

- including expertise from other domains during development of policies or other work
- including expertise from other domains during evaluation of policies, projects or other work
- monitoring of social impact of policies



As seen in Figure 25, the surveyed LEZ professionals working in front office positions are used to collaborate with people in other professional domains⁵ on a regular basis; 24% indicates to collaborate daily with other domains. The breakdown in Table 12 shows that these rates are in a large part due to high rates of collaboration among front office professionals working in social topics. LEZ professionals in back office positions perform less well in terms of collaboration across domains, with 57% of professionals only collaborating occasionally or never.

Figure 25 frequency of collaboration per job position

| | | Collaborates with other professional domains | | | | |
|------------------------------|-----|--|---------|---------|-------|--|
| working in topic related to | n | daily | regular | limited | never | |
| social | 75 | 31% | 48% | 12% | 9% | |
| front office | | 29% | 43% | 9% | 7% | |
| back office | | 1% | 5% | 3% | 3% | |
| mobility | 157 | 5% | 44% | 38% | 13% | |
| front office | | 4% | 16% | 7% | 4% | |
| back office | | 1% | 28% | 31% | 8% | |
| city & environment | 84 | 6% | 39% | 7% | 48% | |
| front office | | 2% | 8% | 4% | 19% | |
| back office | | 4% | 31% | 4% | 29% | |
| citizen services & education | 9 | 11% | 44% | 33% | 11% | |
| front office | | 11% | 33% | 33% | 0% | |
| back office | | 0% | 11% | 0% | 11% | |

Table 12 collaboration frequency

Particularly the numbers for professionals active in topics on city & environment in Table 12 stand out. Both in front office and back office positions, rates of professionals never collaborating with other domains are high, amounting to a total 48% of surveyed professionals in this field who never collaborate with other domains. While there are clearly learning opportunities to make intersectoral collaboration a habit, it can be worthwhile to explore if there are specific reasons in the field of urban planning & environment that cause the current lack of collaboration. Such reasons might require additional actions before training can be effective.

The degree of network connections of the participants was self-reported through an actor mapping exercise based on a stakeholder influence analysis tool regularly employed in multi-stakeholder collaboration (Stibbe & Prescott, 2024). The exercise both assesses influence of the actor on the participant's own work (*Does this organisation impact your work?*) and access to this actor as a first step to exchange or collaboration (*Do you know anyone at this*

⁵ The survey question did not specify which other domain(s). Hence, this question only assesses the skill to collaborate across sectors, not specifically collaboration with professionals in either the field of mobility, city & environment, citizen services or social matters.



organisation?). The actors mentioned in the question were tailored to regional differences to have recognisable names for the participants and a distinction was made between the actor list for front office professionals and back office professionals. Results were aggregated per actor on a square scatter plot for the 5 actor categories assessed across all participants: environment department (see Figure 26), mobility department (see Figure 27), social department (see Figure 28), local administrations (see Figure 29) and civil society organisations (Figure 30). The dots are plotted in each quadrant representing the percentage of the (sub)population on both axes.

The majority of participants indicated for the proposed actors that it influences their work and they have contacts with this actor. However, there is still a substantial number of participants reporting that they have no connection with an actor that does influence their work. The Environmental Department appears to be the least known to relevant professionals: 24% of all participants indicated they don't have contacts at this department but do experience impact in their work. Nuances are to be distinguished between different populations. Results for the connections of professionals working in mobility-related topics and city & environment related topics are generally very similar.

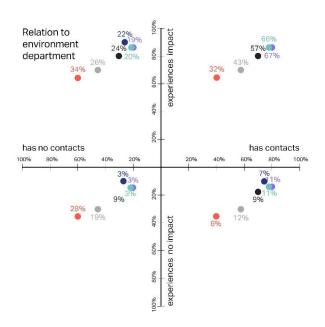


Figure 26 network strength assessment of relation of different professional profiles to the environment department

total sample
professionals working in...
social topic
mobility topic
city & environment topic
front office
back office

The scatter plot reveals the prevalence of 4 types of relationship to the environment department: (1) respondent's work is influenced by this department and they have contacts in the department, (2) their work is not influenced by this department and they have contacts, (3) their work is influenced by this department but they have no contacts in the department and (4) their work is not influenced by this department and they have no contacts. The plot shows that the environment department is influential on other's work: 81% of the total sample of respondents (indicated with black dots on the plot) recognizes an impact in their work (relationship type 1 & 3); at the same time, almost a quarter of all respondents (24%) has no direct contact with the department while experiencing such impact (relationship type 3). Considering the various subpopulations, professionals working in social topics (indicated with red dots on the plot) recognize less often an impact from the environment department in their work (only 66%), but a higher rate among them indicates to not have contacts with the department despite the impact they have on their work (34%). There are very few 'social professionals' that are connected with the department even when not being influenced by their work (6%, relationship type 4).

Professionals working on social topics more often show deviant patterns from the total sample. They indicate at a higher-than-average rate that their work is influenced by the environmental department without having contacts (34%) and by the department of mobility without having contacts (23%). They work more often together with civil society organisations than other professionals but are generally very well-connected to such organisations.

Professionals in other topics and back office professionals report more often to not have contacts in civil society organisations despite experiencing impact in their work, although the rate of participants considering these actors impactful on their work is lower than average. Results for local administrations are very close together across subpopulations although the number of professionals not having contacts here when they could be useful approaches the same rate as is the case for other actors.



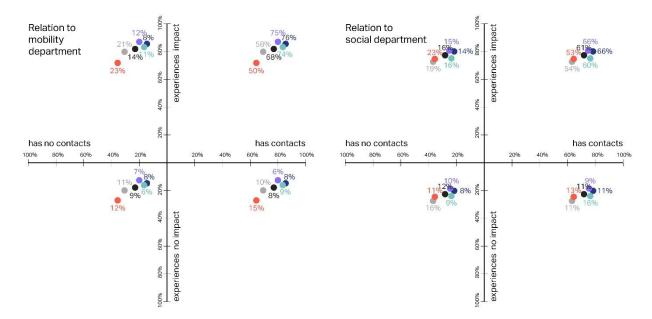


Figure 27 assessment of relation of to the mobility department

Figure 28 assessment of relation to the social department

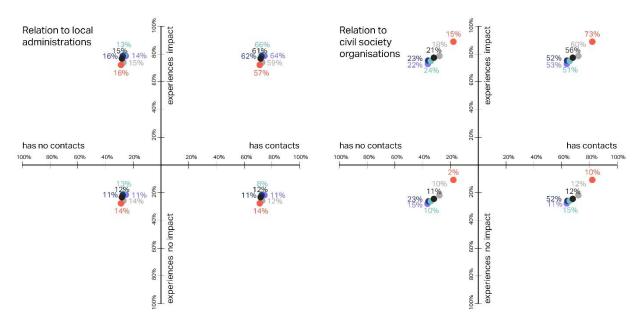


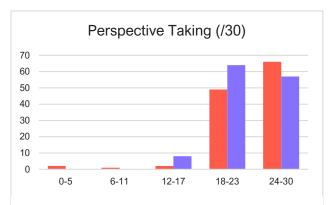
Figure 29 assessment of relation to local administrations

Figure 30 assessment of relation to civil society organisations

The results show there is still opportunity to improve connections of professionals in different fields. Exchange and network building could therefore be integrated in the training modules.

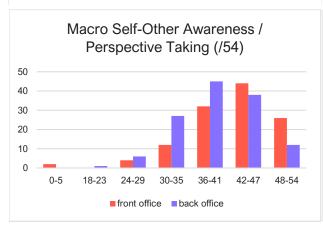
To assess social empathy, a skill that was highlighted earlier in this assessment as very relevant, three components of the Social Empathy Index (Segal, Wagaman, Gerdes & Lietz, 2012) were included in the survey. All participants scored reasonably high, with average scores of 77,2% on Perspective Taking (one of the five components of the Social Empathy Index that reflect interpersonal empathy), 75,3% on Macro Self-Other Awareness & Perspective Taking and 86,4% on Contextual Understanding of Systemic Barriers – the two latter being the large-scale social empathy components of the index.





Front office LEZ professionals score slightly higher on the Perspective Taking components than the back office professionals, both on interpersonal scale (Figure 31) and large scale (Figure 32). Back office LEZ professionals note down higher scores in the Contextual Understanding of Systemic Barriers (Figure 33).

Figure 31 scores for perspective taking empathy



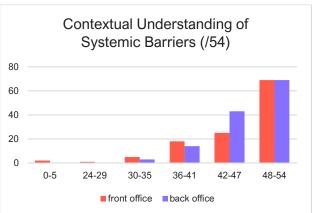


Figure 32 scores for macro self-other awareness empathy

Figure 33 scores for empathy through contextual understanding of systemic barriers

Front office skills

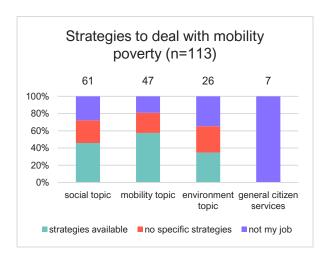
For LEZ professionals to be able to provide support for citizens they work with that are struggling with mobility, they first need to be knowledgeable on such struggles. Or in other words, to know who is at risk for mobility poverty. Table 13 shows that only 20% of front office professionals has access to such information. This percentage is slightly higher among professionals working on social topics or on citizen services & education. A large group of professionals note they can clearly identify mobility issues because of the interaction with the client. This means that for 54% of the front office professionals it is relatively easy to be aware of mobility issues. There is an almost equally large group that doesn't perceive mobility poverty in clients or citizens that easily: 5% of the professionals simply does not know about mobility struggles (predominantly those working in topics on city & environment), while the rest only occasionally knows about mobility issues. For professionals working in the field of city & environment and in citizen services, as many or more participants indicate they can only rarely identify mobility issues as there are participants that have this information readily available.



| | | Can identify mobility poverty / issues with mobility in their clients | | | | | | |
|--------------------|-----|---|-------------|--------------------|---------------|-------|---------|--|
| working in topic | | | clear from | sometimes | | not | no need | |
| related to | n | info available | interaction | (from interaction) | exceptionally | known | to know | |
| social | 66 | 24% | 39% | 23% | 6% | 5% | 3% | |
| mobility | 49 | 16% | 31% | 37% | 12% | 2% | 2% | |
| city & environment | 28 | 7% | 39% | 25% | 21% | 33% | 0% | |
| citizen services & | | | | | | | | |
| education | 8 | 25% | 13% | 25% | 25% | 0% | 0% | |
| total sample | | | | | | | | |
| population | 118 | 20% | 34% | 31% | 11% | 3% | 2% | |

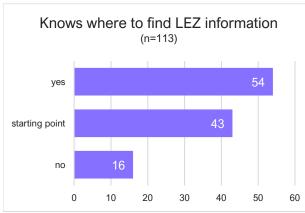
Table 13 ability to identify mobility issues among citizens

When having identified mobility struggles, being able to respond to such struggles and provide support is a next step. In front office jobs, 44% of LEZ professionals currently have specific strategies available to help citizens with mobility poverty or mobility-related struggles.



As Figure 34 shows, mainly professionals working in mobility-related topics have such strategies available. Nonetheless, this means the majority of professionals do not have strategies available and 33% of the participants do not consider it their job to address mobility issues. When aiming to activate front office professionals to provide mobility-related support to people in vulnerable situations, a part of the effort is to identify which professionals find themselves in suitable positions to deliver such support and/or to convince more front office professionals of their role in mitigating negative social effects of car-restrictive policies.

Figure 34 ability to respond to mobility issues



Knows where to find LEZ information (n=113)2 47 27 27 12 100% 80% 60% 40% 20% 0% Barcelona Brussels Lyon rest rest France Belgium ■yes ■ starting point ■ no

Figure 35 ability to find LEZ information

Figure 36 ability to find LEZ information per region

The role that is most-cited for front office professionals in the key informant interviews, in survey responses and among LEZ4All project partners relates to supplying reliable information to citizens on LEZ regulations, support measures and mobility alternatives. However, only 45% of them is confident they can find such information, as



shown in Figure 35. Another 36% has an idea where to start looking for information ('starting point'), while 13% of survey participants indicates they don't know where to find such information. Improving access to LEZ information for professionals is a clear opportunity for training or tools. Figure 36 shows considerable differences between urban regions; especially professionals in Barcelona indicate that they would benefit from better access to information, or are more self-aware about knowledge gaps on policies.

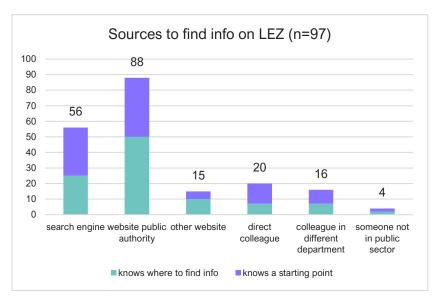


Figure 37 preferred sources to find LEZ information

Out of the 85% of front office professionals that indicate to know or have at least an idea where to look for information on LEZ and other mobility policies, the majority (61 respondents) would use more than one source to find such information. Figure 37 shows that online information seems to be preferred over asking in person: the public authorities' own website and a general search engine are the most often cited sources.

Lastly, to allow to address challenges in car-restrictive policy

frameworks that turn out to exacerbate inequalities or mobility struggles specifically for people in vulnerable positions, policymakers need to be informed on such challenges.

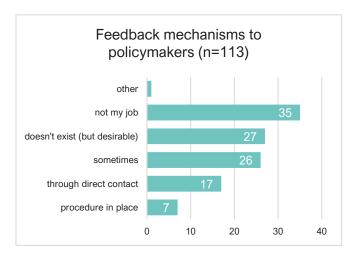


Figure 38 ability to relay feedback to policymakers

This could happen for example by activating front office professionals to supply feedback on their experiences with citizens to policymakers. The results from Figure 38 reveal that only a small group of front office professionals has a structured way to supply such feedback. Another group takes the opportunity to provide feedback during direct contact with policymakers. 24% of professionals indicated that mechanisms currently don't exist but that they would like to have such opportunities for feedback. This reveals another opportunity for improvement and training.

Back office skills

LEZ professionals working in back office positions

were questioned on their skills to consult expertise from other relevant domains in their work. For participants working on topics related to mobility, city & environment, they were asked about their capacity to include social expertise. Both in work development and in evaluation, professionals express a need for more consultation. Figure 39 shows that 37% of professionals indicate they would like to include social expertise more in work development (while already doing so sometimes) and 14% has no idea how to do such consultation. Similar numbers can be found



in Figure 40 about consultation of social expertise in evaluation of work, with 35% of back office professionals indicating they would like to include this more and 16% expressing not to know how to include such expertise in evaluation.

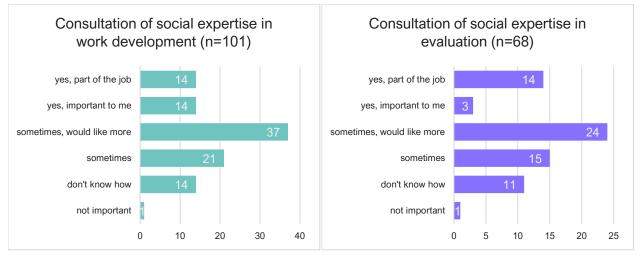


Figure 39 ability to consult social expertise during work development

Figure 40 ability to consult social expertise during work evaluation

Back office professionals working on a social topic were asked whether they consulted mobility expertise in work development and whether they see a connection between their work and mobility frameworks. The number of participants in this group was too low (n=4) to make any conclusions.

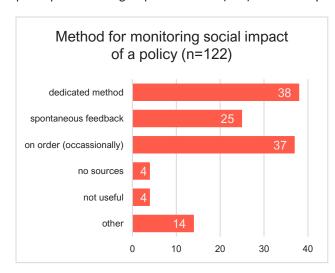


Figure 41 ability to monitor social impact

All back office professionals were asked about mechanisms to monitor social impact of work and specifically of policies. In 31% of the cases, a dedicated method or strategy is available for this. As can be seen in Figure 41, almost as often professionals can only occassionally monitor social impact and rely on specific studies or assessments made to order. Another considerable group of professionals (20%) relies on spontaneous feedback, for example by affected citizens. If affected population groups do not speak up or don't have access to channels of communication, this means that policymakers are not aware of negative social effects of their work.

Cluster analysis

A cluster analysis (n=231) of the survey responses further reveals associations between results on the different components, personal characteristics and professionals backgrounds of the participants. The methodology of the analysis can be found in annex D of this report.

Analysis of the 3 estimated clusters with sizes and shows that the biggest cluster of participants (109 respondents), cluster 3, includes professionals from different domains, job positions and has no outspoken prevalence of certain personal characteristics. From this, we can conclude that capacities and learning opportunities related to social impact of car-restrictive policies are similar for many professionals that have shown an interest in the project. This



cluster considers training relevant for themselves and for professionals in their domain, but less relevant for other domains. Their attitude is more critical towards government intervention in mobility policies.

In cluster 1 and 2, a smaller population (respectively 64 and 58 respondents) does show differing training needs that can be associated with certain personal characteristics and professional domains. Cluster 1 aggregates more male professionals that are slightly younger compared to the general population and predominatly work in topics related to mobility and city & environment. Members of cluster 1 are more highly educated, are hardly affected personally by LEZ policies and have less contact with citizens in their line of work. They prioritize environmental and health concerns for urban liveability over car accessibility and are positive about governmental intervention in mobility. Members of this cluster generally believe that the social impact of car-restrictive policies is not unequal and finds existing support measures more often sufficient to make sure people in disadvantaged positions do not experience disproportionate negative impact from LEZ regulations. Professionals in cluster 1 score highest on knowledge questions, specifically those related to environment and mobility, but are less experienced in collaboration with other professional domains. They do more frequently acknowledge a need for training of professionals in their own domain. Specifically for this cluster, trainings allowing exchange and collaboration with other professional domains and challenging optimistic biases on the social impact of car-restrictive policies can be very useful.

Participants aggregated in cluster 2 are more often active on social topics (social welfare and community work) and less so in topics related to mobility and the environment. Members of cluster 2 report less interest in training for themselves. They are more skilled in collaborating across domains but have lower scores on questions related to the environment/ LEZ regulations and have slightly less Contextual Understanding of Systemic Barriers. Personal experience with car dependency is more prevalent among members of this second cluster, as could be expected from the earlier analysis of personal vulnerabilities. For this cluster, training on practical skills to find LEZ-related information to explain benefits of such policies and to be familiar with alternatives in mobility can be most useful.

Qualtitative assessment of results: webinar feedback

As a final step in the synthesis of this study, the research results were shared and discussed with LEZ professionals during a 1-hour webinar on September 23, 2025. About 28 professionals participated in the discussion, held in smaller groups divided per language (French, Spanish, English and Dutch); the majority of the participants was active in the field of mobility. A smaller number was working in urban planning and environment (4). Social sector actors were not present during the webinar. The timing and format of the webinar could be a cause for this, or the communication channels employed to distribute the webinar invitation might have been geared more towards mobility professionals.

Professionals expressed the challenge of finding a balance between policy measures that on the hand are not hitting people in vulnerable positions harder, and on the other hand do not employ that many categories of exemptions and support to render the impact of the policy on air polution levels minimal. Several professionals confirmed the need for more collaboration between different fields. Finding connection between the reality of front office workers, social workers and mobility technicians was mentioned, but it was also highlighted that environment professionals and mobility professionals fulfill different roles in the development and implementation of a LEZ policy (at least in certain governance contexts). Aligning expectations and collaboration between these two fields prove to hold challenges as well. This nuances the image of a 'straightforward' disconnection between the social sector on the one hand and the mobility and environment sector on the other hand that was found in the study results. It was mentioned that learning networks at European level and national-level consultation structures between urban regions exist on the topic of LEZ, but they are geared toward professionals whose core responsibility is coordination or implementation of LEZ policy.



When discussing training possibilities that can resolve (some of) the observed needs with the participating LEZ professionals, there was a clear preference for interactive training methods, practice-based and focused on a certain topic to properly apprehend certain skills or knowledge. Working with cases or inspirational practices was highly appreciated as well. There was a slight preference for training in local languages to allow more in-depth exchange. Many of the earlier-mentioned training topics were repeated as relevant, with an emphasis on communication (between departments/fields and with citizens, in appropriate and empathetic ways), understanding of complex frameworks and concepts, advantages of LEZ and their social impact, empathy and consideration of everyone's perspectives in policy development and implementation. This feedback is particularly useful in the further course of the LEZ4all-project, where a number of training modules will be developed to help professionals improve different competences.



7 Insights

The training needs assessment reported here demonstrates that LEZ professionals acknowledge needs and challenges in addressing social impacts of car-restrictive policies and are positive about training opportunities. The assessment was carried out at a time where in all three urban areas national level decisions and increased media coverage on LEZ took place, which could have had an impact on the results of the assessment. Still, it can be concluded from this study that developing training modules to equip LEZ professionals with better competences to deal with (negative) social effects of mobility policies is a relevant action to implement for the LEZ4all-project.

The specific characteristics of a LEZ or other car-restrictive policy can differ greatly between countries and urban regions, as demonstrated by the comparison of the LEZ policy framework and accompanying governance structure between the three main pilot areas of the LEZ4all project. Furthermore, the political setup and priorities of national and local governments shows to have considerable influence on how much energy is dedicated to social effects of sustainable policies. In as far as possible, LEZ4all should aim to anchor social awareness within public authorities, regardless of changes in the political landscape. At the same time, the opportunities of an enabling environment at political level favouring social awareness and investments in sustainable mobility alternatives should be seized to secure resources and install tools and strategies that can contribute long-term to more social equality in the development and implementation of car-restrictive policies.

On certain capacities, training needs are more specific for a certain profile of LEZ professional. Trainings or tools to understand well all aspects of LEZ regulations are mainly relevant for **front office professionals** (professionals who have daily or regular contact with citizens). These professionals would likely also benefit most from tools or strategies to relay feedback and/or questions about policy implementation to policymakers. Another training opportunity for this type of professionals lies in strategies to communicate with people in disadvantaged positions and people in distress about mobility policies. **Back office professionals** (professionals who have limited or no direct contact with citizens) would benefit from training or workshops to understand better social support systems, to grasp the scope of population groups that are reached or that easily remain under the radar for example. Learning strategies to engage in collaboration with social actors would be a useful skill for these professionals as well. Lastly, an awareness about thresholds for people in disadvantaged positions for changing travel behaviour and accessing support measures would be beneficial for many professionals, but particularly among back office professionals adopting an attitude of awareness about potential thresholds for different population groups could be useful to address social inequalities linked to car-restrictive policies.

Professionals active in social topics rely more on a car themselves and might benefit from being made aware of this dependency and learning opportunities that can familiarize them with sutainable mobility alternatives. These professionals will need to be encouraged more to follow training; guides or easily accessible training tools that clarify the impact of mobility (policies) on their work could help for this. In reverse, professionals working in mobility and environmental topics could benefit from training that stimulates perspective taking and awareness and on the role that car-restrictive policies can play in exacerbating social inequalities.





Figure 42 training needs include the strengthening of intersectoral collaboration between social, environmental and mobility professionals, from the start of policy development to on-the-ground support for population groups in disadvantaged positions

However, an important finding is that many needs are recurring across professional domains and positions.

Training on intersectoral collaboration, strengthening of network and cross-sectoral feedback mechanisms (between environment, social and mobility professionals as three domains with their own role in the implementation of more socially just car-restrictive policies) need to be open and relevant for all types of professionals (see Figure 42). This applies as well to communication procedures between front office and back office positions. All professionals can improve knowledge on mobility poverty and biases on the number of people that are vulnerable to larger negative effects from mobility policies. A common language is needed on the social effects of mobility; knowledge of vocabulary and concepts on this topic is a first step to be able to develop policies and strategies that can address negative social effects. Competences shouldn't stay at a conceptual level, however. Experiencing the mobility challenges of people in different disadvantaged positions, for example by user journeys, is another relevant training

opportunity to increase professionals' awareness and competences in a very hands-on approach. A training or workshop on assessing benefits of urban liveability against car accessibility could be relevant for different professionals to challenge different attitudes and become aware of their personal biases. As current supporting measures are considered ineffective by many, the opportunity follows on learning and exchanging experiences on how to develop policy frameworks and measures that do manage to mitigate negative effects and that make citizens feel supported by policies, instead of being left behind.

From the observed differences in local governance structure, the training suggestions received in the survey and the feedback from professionals during the webinar, it can be concluded that **learning would be most effective in an interactive and face-to-face approach**. The complexity of the topic, the diversity of targeted professionals and the high need for exchange among sectors and professionals require sensitivity to local context and to differences in competence level among potential training participants when developing training modules. Lastly, it should be emphasized that the training should not only focus on **knowledge** acquisition. It will be equally important to train **skills** (such as empathy and communication) and **attitudes** (such as awareness for certain biases).

The existing challenges are **not something that can be solved with individual trainings alone**. Communication, feedback and exchange require structures and systems to be consistent. Access to information for professionals might require investments in means and challenges on non-take up issues can require shifts in implementation approaches and changes in attitudes at the political level. The LEZ4all project cannot solve all such issues itself. With thorough documentation of the contributions of professionals, dedicated evaluation of the project results and communication to a larger audience, this project can aim to bring such challenges to light as clearly as possible.



8 Bibliography

- AMB Àrea Metropolitana de Barcelona. (s.d.). *ZBE Metropolis of Barcelona. Registrations and permits for vehicles*. Accessed September 4 2025, at https://zberegistre.ambmobilitat.cat/en.
- Auxilia. (2024). *Familles Zones à Faibles Émissions* [Rapport d'exploration menée de mars 2022 à décembre 2024]. Auxilia Groupe SOS.
- Azdad, Z., Stoll B. & Müller, J. (2022) *Clean Cities: The development trends of low- and zero-emission zones in Europe.* Clean Cities Campaign. Accessed April 17 2025, at The-development-trends-of-low-emission-and-zero-emission-zones-in-Europe-1.pdf
- Carayannis, E.G. & Campbell, D.F.J. (2009) "Mode 3" and 'Quadruple Helix': toward a 21st century fractal innovation ecosystem", *Int. J. Technology Management*, 46(3/4), 201–234. https://doi.org/10.1504/IJTM.2009.023374
- da Schio, N., Van Eenoo, E., Caset, F., Vanparys, L., Bartiaux, F., Luppari, E., Ermans, T., Verbeek, T., Wayens, B., Boussauw, K., Maciejewska, M., Bothof, S., Te Boveldt, G., Cassiers, T. & Hantson, M. (2023). Why and how we should mainstream social justice in the car-restrictive policy agenda. *BSI Position Papers*. (6). https://bsiposition.hypotheses.org/2836.
- De Vrij, E., & Vanoutrive, T. (2022). 'No-one visits me anymore': Low Emission Zones and social exclusion via sustainable transport policy. *Journal of Environmental Policy & Planning*, 24(6), 640–652. https://doi.org/10.1080/1523908X.2021.2022465.
- EIT Urban Mobility. (2024, March 15). *Mastering mobility: low emissions zones*. Accessed April 18 2025, at https://www.eiturbanmobility.eu/knowledge-hub/mastering-mobility-low-emissions-zones/.
- Fransen, K., Versigghel, J., Guzman Vargas, D., Semanjski, I., Gautama, S., 2023. Sustainable mobility strategies deconstructed: a taxonomy of urban vehicle access regulations. *European Transport Research Review*. 15(3). https://doi.org/10.1186/s12544-023-00576-3.
- Hendrickx, K. (2025, September 11). Grondwettelijk Hof schorst uitstel lage-emissiezone. *BRUZZ*. Accessed October 16 2025 at https://www.bruzz.be/actua/mobiliteit/grondwettelijk-hof-schorst-uitstel-lage-emissiezone-2025-09-11
- Henriksson, M. (2019). The 'I' in sustainable planning: Constructions of users within municipal planning for sustainable mobility. In C. L. Scholten, & T. Joelsson (Eds.), *Integrating gender into transport planning* (pp. 177–197). Springer International Publishing. https://doi.org/10.1007/978-3-030-05042-9 8.
- Jeekel, H. (2018). *Inclusive Transport: fighting Involuntary Transport Disadvantages*. Elsevier. https://doi.org/10.1016/C2016-0-04941-0
- Jouffe, Y., Caubel, D., Fol, S., & Motte-Baumvol, B. (2015, January 19). Faire face aux inégalités de mobilité. *Cybergeo: European Journal of Geography* [online], Espace, Société, Territoire document 708, https://doi.org/10.4000/cybergeo.26697.
- Klein, N.J., Smart, M.J. (2017). Car today, gone tomorrow: The ephemeral car in low-income, immigrant and minority families. *Transportation*, 44, 495-510. https://doi.org/10.1007/s11116-015-9664-4
- Kuttler, T., & Moraglio, M. (Eds.). (2021). *Re-thinking mobility poverty. Understanding users' geographies, backgrounds and aptitudes*. Routledge. https://doi.org/10.4324/9780367333317
- Laissons respirer.brussels. (s.d.). Everything you need to know about the LEZ in the Brussels-Capital Region. Accessed September 4 2025, at https://www.lez.brussels/mytax/en/practical?tab=Agenda.



- Lucas, K., Mattioli, G., Verlinghieri, E., & Guzman, A. (2016). Transport poverty and its adverse social consequences. *Proceedings of the Institution of Civil Engineers - Transport*, 169(6), 353–365. https://doi.org/10.1680/jtran.15.00073
- Oosterlynck, S., Loots, I., Vandermoere, F., Raeymaeckers, P., Cools, P., Vandepitte, E., Kuyper, T., Coene, J., Morrens, B., Holemans, D., & Boost, D., Armoede en de ecologische kwestie: het maatschappelijk schuldmodel en sociaalecologische uitdagingen als collectieve dilemma's. In Coene, J., Raeymaeckers, P., Hubeau, B., Marchal, S., Remmen, R., & Van Haarlem, A. (Red.), *Armoede en sociale uitsluiting. Jaarboek 2019* (pp. 23-37). Acco.
- Nigten, A., & Kotey, H. (2017) Whitepaper: Hybrid Learning environments, Designing innovative, participatory and sustainable solutions for complex issues. https://doi.org/10.13140/RG.2.2.28553.75362.
- Rajé, F. (2004). *Transport, demand management, and social inclusion: The need for ethnic perspectives*. Routledge. https://doi.org/10.4324/9781315235653
- République Française. (s.d.). *Mieux respirer en ville. Dérogations et exemptions*. Accessed September 4 2025, at https://mieuxrespirerenville.gouv.fr/fiches-thematique/derogations.
- Segal, E.A., Wagaman, M.A, Gerdes, K.E & Lietz, C.A. (2012). Social Empathy Index (SEI). Phoenix: Arizona State University.
- Szepannek, G. (2018). clustMixType: User-Friendly Clustering of Mixed-Type Data in R. *The R Journal* 10(2), 200-208, https://doi.org/10.32614/RJ-2018-048.
- Stibbe, D., & Prescott, D. (2024). THE SDG PARTNERSHIP GUIDEBOOK: A practical guide to building high-impact multi-stakeholder partnerships for the Sustainable Development Goals. The Partnering Initiative & UN DESA. Accessed September 4 2025, at https://thepartneringinitiative.org/knowledge-centre/partnering-guidebook/.
- Vandermoere, F., Loots, I., & Oosterlynck, S. (2020). De les van de LEZ. *Samenleving & Politiek*, 27(3), 2-3. Accessed September 4 2025 at https://www.sampol.be/2020/03/de-les-van-de-lez.
- Verbeek, T., & Hincks, S., The 'just' management of urban air pollution? A geospatial analysis of low emission zones in Brussels and London, *Applied Geography*, 140, 10642. https://doi.org/10.1016/j.apgeog.2022.102642
- Vie-publique.fr. (2025, June 18). *Pollution de l'air : les zones à faibles émissions (ZFE) en quatre questions.* Accessed October 16 2025 at https://www.vie-publique.fr/questions-reponses/297933-zfe-pollution-de-lair-les-zones-faibles-emissions-en-questions





Annexes



A. Interview guide

Core questions; structure was modified and additional questions could be added during the course of the interview. The questions on this list were adapted before each interview to tailor them to the expertise and professional situation of the interviewee and were translated. Interviews were held in Dutch, English and French.

- Parallel to the introduction of LEZ and the accompanying social measures, have other mobility policies been developed with possible impact on access to alternatives or to other modes of transport for citizens?
- Did or does the city receive specific complaints about car restrictive regulations?
 What protests and public debates (in media for example) related to social justice and mobility exist in your urban region?
- In which way do you think mobility policies and car restrictive regulations risk to reinforce social inequalities?
 - Which challenges do you see in achieving the objective of cleaner air without negative impact on people with limited means to change the way they move around and out of the city?
- Is social equality an important political priority in your urban region, and is this part of the development of policies around mobility? Can you give examples to illustrate this?
- In the triangle mobility social justice healthy urban environments, we could state that each domain of expertise and policy is to a certain extent intertwined with and influencing the other two. Do you agree with this idea?
 - On which sides of this triangle do you think you and your direct colleagues are less familiar with the implications of such influence?
- Where do you see possible training needs and/or expertise gaps in the scope of the LEZ4ALL project? For the position you are working in?
 - And are there other professional groups (working on different topic/ in different sphere/ with or without direct contact with citizens) you see training needs for?



B. Questionnaire Survey:Social dimensions of car-regulative policies

Survey flow

EmbeddedData

Q_TotalDurationValue will be set from Panel or URL.

Standard: Intro (3 Questions)

Block: Attitude / personal background (21 Questions)

Branch: New Branch

If

Invalid Logic Click Here to Edit Logic

Block: Other city (2 Questions)

Standard: Attitude / values (6 Questions)

Branch: New Branch

If

If In which urban region are you working? Brussels Is Selected

Or In which urban region are you working? Antwerp Is Selected

Or Is this urban region in one of the following countries? Belgium Is Selected

Block: Knowledge Belgium (27 Questions)

Branch: New Branch

If

If In which urban region are you working? Barcelona Is Selected

Or In which urban region are you working? Madrid Is Selected

Or Is this urban region in one of the following countries? Spain Is Selected

Standard: Knowledge Spain (27 Questions)

Branch: New Branch

If

If In which urban region are you working? Limoges Is Selected

Or In which urban region are you working? Lyon Is Selected

Or In which urban region are you working? Paris Is Selected

Or Is this urban region in one of the following countries? France Is Selected

Or In which urban region are you working? Grenoble Is Selected

Standard: Knowledge France (27 Questions)

Block: Skills - Social Empathy Index (7 Questions)

Branch: New Branch

If

If How often do you interact with citizens or specifically with people in potential vulnerable situa...

Daily Is Selected

Or How often do you interact with citizens or specifically with people in potential vulnerable situa...

Regularly: more than twice a month Is Selected

Standard: Skills - Network assessment front office (22 Questions)



Block: Learning opportunities - front office (9 Questions)

Branch: New Branch

If

If How often do you interact with citizens or specifically with people in potential vulnerable situa...

Limited: once a month to once a year Is Selected

Or How often do you interact with citizens or specifically with people in potential vulnerable situa... Never or less than once a year Is Selected

Standard: Skills - Network assessment back office (22 Questions) Block: Learning opportunities - back office (9 Questions)

Block: Next Steps (5 Questions)

EndSurvey:

Questions

Start of Block: Intro

Q1.1 Dear participant,

You receive the invitation to participate in this survey since you are active in an organisation working on social policy, mobility, the environment and/or related domains. This survey is part of the European-funded project LEZ4ALL, which aims to develop support for professionals to address the social impact of vehicle access regulations such as Low Emission Zones (LEZ). For more information on the project click here.

Completing the survey will take about 20 minutes. You complete this survey voluntarily and under your personal name. We therefore do NOT ask you to answer from the point of view representing the organisation you work for. Please answer spontaneously from your own knowledge, opinions and experience as a professional.

The questionnaire consists of four parts:

- 1) Your personal experience and views about vehicle access regulations
- 2) Knowledge of social vulnerability, mobility and the environment
- 3) Professional skills
- 4) Learning opportunities

Would you like more information on the use of data you share in this survey? Please indicate yes below to read more.

| O Yes (4 | 4) | | | | | | | |
|----------|----|--|--|--|--|--|--|--|
| O No (5 | 5) | | | | | | | |



Display this question:

If =

Q1.2 Participation in this questionnaire is entirely voluntary. If you do not agree to the terms of the privacy statement, please end your participation here. University of Antwerp researchers collect this personal data to gain insight into the state of knowledge, attitudes and skills of the target group related to the social impact of car regulatory measures.

University of Antwerp processes your personal data and does not share them with third parties, except in the following case: if you have indicated that you wish to be kept informed of further results of the LEZ4ALL -project and/or wish to participate in future training sessions, your contact details are shared with the project partners Auxilia (clara.coornaert@auxilia-conseil.com), Area Metropolitana de Barcelona (jjove@amb.cat) and Brussels Environment (ndaschio@environnement.brussels). The data from this survey are kept for the duration of the LEZ4ALL project, which is expected to be 2 years. If you wish to view, limit, change or have your personal data deleted, please contact lisa.devos@uantwerpen.be.

Thank you in advance for your participation! On behalf of the research team,

Prof. Thomas Vanoutrive (UAntwerp)

Questions or comments can be mailed to lisa.devos@uantwerpen.be

| End of Block: Intro | | | | |
|--|--------------|--|--|--|
| Start of Block: Attitude / personal background | | | | |
| Q2.0 | | | | |
| Experience and views In this first part, you'll get questions to help us understand what you think about Low Emission Zon mobility regulations. | es (LEZ) and | | | |
| Q2.1 What is your year of birth? | | | | |
| Q2.2 How do you describe yourself? | | | | |
| O Male (1) | | | | |
| O Female (2) | | | | |
| O Non-binary / third gender (3) | | | | |
| O Prefer to self-describe (4) | | | | |
| O Prefer not to say (5) | | | | |



| Q2.3 What is the highest level of education you have completed? |
|---|
| Completed primary school (1) |
| Completed secondary school (2) |
| O Vocational or similar (3) |
| O University Bachelors degree (4) |
| Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS etc. (5) |
| O Prefer not to say (6) |
| Q2.4 In which urban region are you working? |
| O Antwerp (9) |
| O Brussels (10) |
| O Barcelona (11) |
| C Limoges (12) |
| O Lyon (13) |
| O Madrid (14) |
| O Paris (15) |
| O Grenoble (18) |
| O other (19) |
| Q2.5 Which description applies most accurately to you? |
| I work in the public sector, as a civil servant (1) |
| I work in the public sector, as political staff (2) |
| I work in the private sector (3) |
| I work in academia / research institute (4) |
| I work in civil society, in a paid position (5) |
| I work on a voluntary basis in (a) topic(s) relevant to this study (6) |



| O Prefe | not to say (7) |
|--------------------------|---|
| Q2.6 Optional: | what is the name of the organisation/agency/department you are working at? |
| Q2.7 How ofte your work? | n do you interact with citizens or specifically with people in potential vulnerable situations during |
| Oaily | (5) |
| O Regul | arly: more than twice a month (6) |
| Climite | ed: once a month to once a year (7) |
| O Never | or less than once a year (8) |
| Q2.8 Which the | eme(s) are you working on? (multiple answers possible) |
| | Mobility and transport (7) |
| | Social welfare (8) |
| | Environment and healthy living environments (9) |
| | Community work (10) |
| | Public space, housing or spatial planning (11) |
| | Other (12) |
| Q2.9 Which of | the following situations applies to you? (multiple answers possible) |
| | I experience my financial situation as too limited to provide for basic needs (1) |
| | I or someone in close proximity to me has a disability (2) |
| etc.) (3) | I or someone in close proximity to me has difficulties using digital tools (website, application, |



| | The car is the only sufficient means of transport for certain journeys in my daily life (4) |
|-----------------------------------|--|
| | I struggle to make certain journeys (e.g. to the supermarket, school, a trip, the doctor,) (5) |
| | I prefer not to say (6) |
| | None of the above (7) |
| Q2.10 Has the in | nplementation of a Low Emission Zone changed your own daily travel behaviour? |
| O No (20) | |
| O Yes (21 | |
| Display this que If Has the in | stion: mplementation of a Low Emission Zone changed your own daily travel behaviour? = Yes |
| Q2.12 In what w | ay has the implementation of a LEZ impacted your travel behaviour? (multiple answers possible) |
| | I bought a different car (new or second-hand) (1) |
| | I got rid of my car and use alternative means of transport (2) |
| | I have used a support measure (e.g. a subsidy or exception) that is part of the LEZ policy (3) |
| | I choose more often a means of transport other than my own car (4) |
| | I travel more often on foot or by bicycle (5) |
| | Other (6) |
| | Prefer not to say (7) |
| End of Block: A | attitude / personal background |

Start of Block: Other city



| Q2.13 Is this urban region in one of the following countries? | | | | | | | | |
|---|-------------------------|-----------------------|--------------------|--------------------|--|--|--|--|
| O Belgium (1) | O Belgium (1) | | | | | | | |
| O France (2) | | | | | | | | |
| O Spain (3) | | | | | | | | |
| O None of the ak | pove countries (4) | | | | | | | |
| End of Block: Other o | rity | | | | | | | |
| Start of Block: Attitu | de / values | | | | | | | |
| Q3.1 To what extent do | you agree with the foll | lowing statements? | | | | | | |
| | Strongly disagree (1) | Somewhat disagree (2) | Somewhat agree (3) | Strongly agree (4) | | | | |
| It is important to minimise car use because of its ecological impact. (1) | 0 | 0 | 0 | 0 | | | | |
| Everyone should be able to choose how they want to travel. The government should not intervene in this. (2) | 0 | 0 | | 0 | | | | |
| The government can only introduce regulations for cars if it also invests in making it easier to use sustainable transport, like buses, trains, or bikes. (3) | 0 | 0 | | 0 | | | | |
| LEZ contributes to social inequality. The rich will feel little impact. (4) | 0 | 0 | 0 | 0 | | | | |

Q3.2 To what extent do you agree with the following statements?



| | Strongly disagree (1) | Somewhat disagree (2) | Somewhat agree (3) | Strongly agree (4) |
|---|--|--|---|-----------------------|
| The health of people living in the city is more important than making it easy for everyone to drive into the city centre by car. (1) | 0 | 0 | 0 | 0 |
| If public transport would be free, all residents in an urban area would be equally mobile. (2) | 0 | 0 | 0 | 0 |
| The needs of people in vulnerable situations have nothing to do with mobility. (3) | 0 | 0 | 0 | 0 |
| LEZ rules are meant to change the types of cars on the road, not how many cars there are. (4) | 0 | 0 | 0 | 0 |
| has less imp | npact on the mobility of poact on the mobility of pople in vulnerable situation my region with suffici | people in vulnerable secople in vulnerable sit | ? A LEZ ituations than of other po- uations than of other po- e else in the population protect people in vulner | opulation groups. (2) |
| | rvey has questions abou | | onments, and social isso d on the knowledge you | |



Q1 Social Belgium

| The risk-of-poverty threshold is set at 60 % of the national median equalised disposable income. To which monthly disposable income for a single person does this threshold correspond in Belgium? source: SILC AROP, 2023 |
|--|
| O 876 EUR (1) |
| O 1.257 EUR (2) |
| O 1.776 EUR (3) |
| O 2.112 EUR (4) |
| O I have no idea (5) |
| Q1 Environment Belgium Which type of car is still allowed in the LEZ of \${Q2.4/ChoiceGroup/SelectedChoices}? |
| O Euronorm 2 Diesel (1) |
| Euronorm 3 Diesel (2) |
| O Euronorm 4 petrol (3) |
| O Euronorm 4 Diesel (4) |
| O I have no idea (5) |
| Q2 Social Belgium How big is the share of people that do not have basic digital skills among the population with a low level of education (age 17-64) in Belgium? source: Statbel, 2023 |
| 18% of the population with a low level of education (1) |
| 28% of the population with a low level of education (2) |
| 41% of the population with a low level of education (3) |
| 68% of the population with a low level of education (4) |
| O I have no idea (5) |



| Q1 Mobility Belgium How high is the availability of passenger cars in Belgium? Source: Eurostat, 2023 | | | | |
|---|--|--|--|--|
| O 178 ca | ars per 1000 inhabitants (1) | | | |
| 357 ca | ars per 1000 inhabitants (2) | | | |
| O 511 ca | 511 cars per 1000 inhabitants (3) | | | |
| O 630 ca | ars per 1000 inhabitants (4) | | | |
| O I have | no idea (5) | | | |
| Q4 Environment What is unders | nt stood by the concept 'green gentrification'? Only one answer is correct. | | | |
| property v | green or better air quality in a neighborhood attracts wealthier new residents and drives up alue and cost of living. Lower income residents who originally lived in the area can no longer afford d are forced to move out. (1) | | | |
| | egative impact of environmental interventions on older people. For example the risk of injury due to ent, limiting visibility through vegetation or limiting mobility through restrictions in car use, such as | | | |
| OImple | O Implementation of actions that lever the power of nature to address societal challenges. (3) | | | |
| O I have | no idea (4) | | | |
| Q3 Social Which three fa Living Conditio | ctors contribute to the risk of poverty or social exclusion as defined by EU Statistics on Income and ns? | | | |
| | level of education (1) | | | |
| | disposable income (2) | | | |
| | digital literacy (3) | | | |
| | working time (4) | | | |
| | social contact (5) | | | |
| | material deprivation (6) | | | |



| | unmet needs for health care (7) Note: The proof of the state of the s | | | | |
|--|--|--|--|--|--|
| _ | Belgium s (people or vehicles) can count on a year-round exception from LEZ regulation in oup/SelectedChoices}? (multiple answers possible) | | | | |
| | Caregivers with social security rights (1) | | | | |
| | All types of motorbikes (2) | | | | |
| | Vehicle owned by a person with a disability (3) | | | | |
| | Households with low income (4) | | | | |
| | Busses for public transport (5) | | | | |
| | People working in shifts (6) | | | | |
| | Professionals approaching retirement age (7) | | | | |
| | None of the above (8) | | | | |
| | N have no idea (9) | | | | |
| Q4 Mobility What is induced | traffic? Only one answer is correct. | | | | |
| Trips made for unnecessary or recreational purposes (1) | | | | | |
| Traffic made by zero-emission vehicles (2) | | | | | |
| O Necessa | Necessary trips made by members of vulnerable groups (3) | | | | |
| Traffic generated by the provision of new infrastructure (4) | | | | | |
| O I have no idea (5) | | | | | |



Q4 Social

| What is understood | What is understood by the concept 'non-take-up issues'? Only one answer is correct. | | | | |
|---|---|--|--|--|--|
| | O Situations where people do not use the options they have in a system where power and positions are allocated based on merit. (1) | | | | |
| | O Situations where individuals do not recognise their personal role in creating the outcomes of their life, both good and bad. (2) | | | | |
| credit, do not | O Situations where individuals who are eligible for a particular benefit, such as a welfare program or tax credit, do not actually receive it. Due to of lack of awareness, complex application process, stigma or administrative barriers. (3) | | | | |
| O I have no | idea (4) | | | | |
| Q4 Environment Which pollutants g | enerated by traffic have the most negative health impact in urban areas? | | | | |
| | Carbon dioxide CO2 (1) | | | | |
| | litrogen dioxide NO2 (2) | | | | |
| P | Particulate matter PM (3) | | | | |
| В | slack Carbon BC (4) | | | | |
| | litrogen oxides NOx (5) | | | | |
| A | ammonia NH3 (6) | | | | |
| | I have no idea (7) | | | | |
| Q2 Mobility What is understood | d by the concept 'mobility poverty'? Only one answer is correct. | | | | |
| O Not having sufficient income to pay for mobility-related expenses. (3) | | | | | |
| The lack of movement of individuals, families or groups between different social positions, often in terms of occupation, income, or social status. (2) | | | | | |
| O The lack of sufficient access of people to transportation options to meet their basic needs and participate fully in society. (1) | | | | | |
| I have no idea (4) | | | | | |



| · | m neasures are part of the LEZ regulations to mitigate negative impact for people with low income in roup/SelectedChoices}? (multiple answers possible) | | | |
|-----------------|---|--|--|--|
| | Free public transport pass (1) | | | |
| socio-cultur | Dedicated point of contact (phone / in-person) to help people experiencing barriers (financial of al) on mobility issues (2) | | | |
| | Scrappage premium, based on income level (3) | | | |
| | Day pass for entrance with vehicle, fee based on income level (4) | | | |
| | Grace period for replacement of vehicle (5) | | | |
| | Taxi check for people in vulnerable social position (6) | | | |
| | I have no idea (7) | | | |
| | gium ercentage of electric and hybrid cars in the total of newly registered passenger cars in 2023 in e: Eurostat, 2023 | | | |
| O 83% (1 | | | | |
| O 59% (2 | O 59% (2) | | | |
| O 43% (3 | | | | |
| O 25% (4 | O 25% (4) | | | |
| O I have n | no idea (5) | | | |
| End of Block: K | Knowledge Belgium | | | |
| Start of Block: | Knowledge Spain | | | |
| | the survey has questions about mobility, urban environments, and social issues. Some questions or you, and others might be harder. Just answer based on the knowledge you have. | | | |
| | | | | |



Q1 Social Spain

| disposable income for a single person does this threshold correspond in Spain? source: SILC AROP, 2023 |
|---|
| 951 EUR (1) |
| O 1094 EUR (2) |
| 1257 EUR (3) |
| 1400 EUR (4) |
| I have no idea (5) |
| Q1 Environment Spain Which type of car is still allowed in the LEZ of \${Q2.4/ChoiceGroup/SelectedChoices}? |
| Euronorm 2 diesel (1) |
| Euronorm 3 diesel (2) |
| Euronorm 4 petrol (3) |
| Euronorm 4 diesel (4) |
| O I have no idea (5) |
| Q2 Social Spain How big is the share of people that do not have basic digital skills among the population with a low level of education (age 17-64) in Spain in 2023? source: Eurostat, digital skills, 2024 |
| 28% of the population with a low level of education (4) |
| 42% of the population with a low level of education (1) |
| 57% of the population with a low level of education (2) |
| 75% of the population with a low level of education (3) |
| I have no idea (5) |
| |

The risk-of-poverty threshold is set at 60 % of the national median equalised disposable income. To which monthly



| Q1 Mobility Spai | | | | | | | |
|---------------------------------------|--|--|--|--|--|--|--|
| | availability of passenger cars in Spain? | | | | | | |
| Source: Eurostat | :, 2023 | | | | | | |
| O 178 car | s per 1000 inhabitants (1) | | | | | | |
| 357 car | s per 1000 inhabitants (2) | | | | | | |
| O 551 car | s per 1000 inhabitants (3) | | | | | | |
| O 630 car | s per 1000 inhabitants (4) | | | | | | |
| O I have r | no idea (5) | | | | | | |
| Q4 Environment What is understo | ood by the concept 'green gentrification'? Only one answer is correct. | | | | | | |
| | | | | | | | |
| property va | reen or better air quality in a neighborhood attracts wealthier new residents and drives up lue and cost of living. Lower income residents who originally lived in the area can no longer afford are forced to move out. (1) | | | | | | |
| | The negative impact of environmental interventions on older people. For example the risk of injury due to depayement, limiting visibility through vegetation or limiting mobility through restrictions in car use, such as LEZ (2) | | | | | | |
| O Implem | entation of actions that lever the power of nature to address societal challenges. (3) | | | | | | |
| O I have r | no idea (4) | | | | | | |
| Q3 Social | | | | | | | |
| Which three fact Living Conditions | tors contribute to the risk of poverty or social exclusion as defined by EU Statistics on Income and s? | | | | | | |
| | level of education (1) | | | | | | |
| | disposable income (2) | | | | | | |
| | digital literacy (3) | | | | | | |
| | working time (4) | | | | | | |
| | social contact (5) | | | | | | |
| | material denrivation (6) | | | | | | |



| | unmet needs for health care (7) |
|-------------------------|---|
| | I have no idea (8) |
| Which cat | nment Spain egories (people or vehicles) can count on a year-round exception from LEZ regulation in oiceGroup/SelectedChoices}? (multiple answers possible) |
| | Caregivers with social security rights (1) |
| | All types of motorbikes (2) |
| | Vehicle owned by a person with a disability (3) |
| | Households with low income (4) |
| | Busses for public transport (5) |
| | People working in shifts (6) |
| | Professionals approaching retirement age (7) |
| | None of the above (8) |
| | I have no idea (9) |
| Q4 Mobili What is in | ty duced traffic? Only one answer is correct. |
| От | rips made for unnecessary or recreational purposes (1) |
| От | raffic made by zero-emission vehicles (2) |
| O 1 | lecessary trips made by members of vulnerable groups (3) |
| | raffic generated by the provision of new infrastructure (4) |
| Οı | have no idea (5) |



Q4 Social

What is understood by the concept 'non-take-up issues'? Only one answer is correct. O Situations where people do not use the options they have in a system where power and positions are allocated based on merit. (1) O Situations where individuals do not recognise their personal role in creating the outcomes of their life, both good and bad. (2) O Situations where individuals who are eligible for a particular benefit, such as a welfare program or tax credit, do not actually receive it. Due to of lack of awareness, complex application process, stigma or administrative barriers. (3)) I have no idea (4) Q4 Environment Spain Which pollutants generated by traffic have the most negative health impact in urban areas? Carbon dioxide CO2 (1) Nitrogen dioxide NO2 (2) Particulate matter PM (3) Black Carbon BC (4) Nitrogen oxides NOx (5) Ammonia NH3 (6) I have no idea (7)



Q2 Mobility What is understood by the concept 'mobility poverty'? Only one answer is correct. O Not having sufficient income to pay for mobility-related expenses. (3) The lack of movement of individuals, families or groups between different social positions, often in terms of occupation, income, or social status. (2) The lack of sufficient access of people to transportation options to meet their basic needs and participate fully in society. (1) I have no idea (4) Q5 Social Spain Which specific measures are part of the LEZ regulations to mitigate negative impact for people with low income in \${Q2.4/ChoiceGroup/SelectedChoices}? Free public transport pass (1) Dedicated point of contact (phone / in-person) to help people experiencing barriers (financial of socio-cultural) on mobility issues (2) Scrappage premium, based on income level (3) Day pass for entrance with vehicle, fee based on income level (4) Grace period for replacement of vehicle (5) Taxi check for people in vulnerable social position (6)

I have no idea (7)



| Q3 Mobility Spain What was the percentage of electric and hybrid cars in the total of newly registered passenger cars in 2023 in |
|---|
| Spain? |
| Source: Eurostat, 2023 |
| O 83% (1) |
| O 59% (2) |
| O 43% (3) |
| O 25% (4) |
| I have no idea (5) |
| End of Block: Knowledge Spain |
| Start of Block: Knowledge France |
| Q6.1 2. Knowledge The next part of the survey has questions about mobility, urban environments, and social issues. Some questions might be easy for you, and others might be harder. Just answer based on the knowledge you have. |
| Q1 Social France |
| The risk-of-poverty threshold is set at 60 % of the national median equalised disposable income. To which monthly disposable income for a single person does this threshold correspond in France? source: SILC AROP, 2023 |
| O 850 EUR (1) |
| 951 EUR (2) |
| O 1094 EUR (3) |
| 1250 EUR (4) |
| I have no idea (5) |
| |
| Display this question: |



| Q1 Environment France Which type of car is still allowed in the LEZ of \${Q2.4/ChoiceGroup/SelectedChoices}? | | | | | | |
|--|--|--|--|--|--|--|
| O Euronorm 2 diesel (1) | | | | | | |
| O Euronorm 3 diesel (2) | | | | | | |
| O Euronorm 4 petrol (3) | | | | | | |
| O Euronorm 4 diesel (4) | | | | | | |
| O I have no idea (5) | | | | | | |
| Q2 Social France | | | | | | |
| How big is the share of people that do not have basic digital skills among the population with a low level of education (age 17-64) in France in 2023? source: Eurostat, digital skills, 2024 | | | | | | |
| 28% of the population with a low level of education (4) | | | | | | |
| 42% of the population with a low level of education (1) | | | | | | |
| O 65% of the population with a low level of education (2) | | | | | | |
| 75% of the population with a low level of education (3) | | | | | | |
| O I have no idea (5) | | | | | | |
| Q1 Mobility France How high is the availability of passenger cars in France? Source: Eurostat, 2023 | | | | | | |
| 178 cars per 1000 inhabitants (1) | | | | | | |
| 357 cars per 1000 inhabitants (2) | | | | | | |
| O 578 cars per 1000 inhabitants (3) | | | | | | |
| O 630 cars per 1000 inhabitants (4) | | | | | | |
| O I have no idea (5) | | | | | | |
| | | | | | | |

Q4 Environment

What is understood by the concept 'green gentrification'? Only one answer is correct.



| property v | More green or better air quality in a neighborhood attracts wealthier new residents and drives up property value and cost of living. Lower income residents who originally lived in the area can no longer afford to stay and are forced to move out. (1) | | | | | | | |
|--|---|--|--|--|--|--|--|--|
| | The negative impact of environmental interventions on older people. For example the risk of injury due to depayement, limiting visibility through vegetation or limiting mobility through restrictions in car use, such as LEZ (2) | | | | | | | |
| O Implei | O Implementation of actions that lever the power of nature to address societal challenges. (3) | | | | | | | |
| O I have | no idea (4) | | | | | | | |
| Q3 Social Which three fa Living Conditio | ctors contribute to the risk of poverty or social exclusion as defined by EU Statistics on Income and ns? | | | | | | | |
| | level of education (1) | | | | | | | |
| | disposable income (2) | | | | | | | |
| | digital literacy (3) | | | | | | | |
| | working time (4) | | | | | | | |
| | social contact (5) | | | | | | | |
| | material deprivation (6) | | | | | | | |
| | unmet needs for health care (7) | | | | | | | |
| | ◯ I have no idea (8) | | | | | | | |
| _ | h urban region are you working? != Limoges | | | | | | | |
| Q2 Environmer Which categori | nt France les (people or vehicles) can count on a year-round exception from LEZ regulation in | | | | | | | |
| \${Q2.4/Choice | Group/SelectedChoices}? (multiple answers possible) | | | | | | | |
| | Caregivers with social security rights (1) | | | | | | | |
| | All types of motorbikes (2) | | | | | | | |



| | Vehicle owned by a person with a disability (3) | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | Households with low income (4) | | | | | | | | |
| Busses for public transport (5) | | | | | | | | | |
| | People working in shifts (6) | | | | | | | | |
| | Professionals approaching retirement age (7) | | | | | | | | |
| None of the above (8) | | | | | | | | | |
| | Nave no idea (9) | | | | | | | | |
| Mobility at is induced | traffic? Only one answer is correct. | | | | | | | | |
| O Trips ma | ade for unnecessary or recreational purposes (1) | | | | | | | | |
| Traffic made by zero-emission vehicles (2) | | | | | | | | | |
| O Necessary trips made by members of vulnerable groups (3) | | | | | | | | | |
| Traffic generated by the provision of new infrastructure (4) | | | | | | | | | |
| O I have no idea (5) | | | | | | | | | |
| Social at is understo | ood by the concept 'non-take-up issues'? Only one answer is correct. | | | | | | | | |
| | ns where people do not use the options they have in a system where power and positions are sed on merit. (1) | | | | | | | | |
| Osituations where individuals do not recognise their personal role in creating the outcomes of their life, both good and bad. (2) | | | | | | | | | |
| Osituations where individuals who are eligible for a particular benefit, such as a welfare program or tax credit, do not actually receive it. Due to of lack of awareness, complex application process, stigma or administrative barriers. (3) | | | | | | | | | |
| O I have n | o idea (4) | | | | | | | | |



| Q4 Environment Which pollutants | France generated by traffic have the most negative health impact in urban areas? | | | | | |
|------------------------------------|---|--|--|--|--|--|
| | Carbon dioxide CO2 (1) | | | | | |
| | Nitrogen dioxide NO2 (2) | | | | | |
| | Particulate matter PM (3) | | | | | |
| | Black Carbon BC (4) | | | | | |
| | Nitrogen oxides NOx (5) | | | | | |
| | Ammonia NH3 (6) | | | | | |
| | Nave no idea (7) | | | | | |
| Q4 Mobility What is understo | ood by the concept 'mobility poverty'? Only one answer is correct. | | | | | |
| O Not hav | ring sufficient income to pay for mobility-related expenses. (3) | | | | | |
| | The lack of movement of individuals, families or groups between different social positions, often in terms of occupation, income, or social status. (2) | | | | | |
| | The lack of sufficient access of people to transportation options to meet their basic needs and participate fully in society. (1) | | | | | |
| O I have n | o idea (4) | | | | | |



Display this question:

| | urban region are you working? != Limoges |
|--|---|
| Q5 Social France | |
| | neasures are part of the LEZ regulations to mitigate negative impact for people with low income in roup/SelectedChoices}? (multiple answers possible) |
| \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | oup/selectedchoices]: (multiple aliswers possible) |
| | Free public transport pass (1) |
| | |
| socio-cultura | Dedicated point of contact (phone / in-person) to help people experiencing barriers (financial of al) on mobility issues (2) |
| | Scrappage premium, based on income level (3) |
| | Day pass for entrance with vehicle, fee based on income level (4) |
| | Grace period for replacement of vehicle (5) |
| | Taxi check for people in vulnerable social position (6) |
| | I have no idea (7) |
| Q3 Mobility Fran What was the pe France? Source: | ercentage of electric and hybrid cars in the total of newly registered passenger cars in 2023 in |
| O 83% (1) |) |
| O 59% (2) | |
| O 49% (3) | |
| 25% (4) | |
| O I have n | no idea (5) |
| End of Block: K | Knowledge France |
| Start of Block: | Skills - Social Empathy Index |
| Q7.1 3. Professional sl | kills |
| This next part of | the survey tests a number of skills related to responding to the effects of LEZ rules in a |

26

professional context.



Q7.2 Please respond to the following questions by selecting the choice that most closely reflects your feelings or beliefs:

| | | (3) | (4) | Almost always 5 (5) | Always 6 (6) |
|---------|---------|-----|---------|------------------------|--------------|
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 |
| \circ | \circ | 0 | \circ | 0 | \circ |
| \circ | \circ | 0 | 0 | 0 | \circ |
| 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | |

Q7.3 Please respond to the following questions by selecting the choice that most closely reflects your feelings or beliefs:

| | | Comptimes 2 | Fraguantly 4 | Almost always | |
|-------------|--------------|--------------------|---------------------|------------------------|--------------|
| Never 1 (1) | Rarely 2 (2) | Sometimes 3 (3) | Frequently 4 (4) | Almost always 5 (5) | Always 6 (6) |



| I think the government needs to be a part of leveling the playing field for people from different racial groups. (16) | 0 | 0 | 0 | 0 | 0 | 0 |
|--|---|---|---|---|---|---|
| I believe it is necessary to participate in community service. (17) | 0 | 0 | 0 | 0 | 0 | 0 |
| I believe that people who face discrimination have added stress that negatively impacts their lives. (18) | 0 | 0 | 0 | 0 | 0 | 0 |
| I am comfortable helping a person of a different race or ethnicity than my own. (19) | 0 | 0 | 0 | 0 | 0 | 0 |
| I take action to help others even if it does not personally benefit me. (20) | 0 | 0 | 0 | 0 | 0 | 0 |
| I can best understand people who are different from me by learning from them directly. (21) | 0 | 0 | 0 | 0 | 0 | 0 |
| I believe government should protect the rights of minorities. (22) | 0 | 0 | 0 | 0 | 0 | 0 |



| I believe that each of us should participate in political activities. (23) | 0 | 0 | 0 | 0 | 0 | 0 |
|---|---|---|---|---|---|---|
| | | | | | | |

Q7.4 Please respond to the following questions by selecting the choice that most closely reflects your feelings or beliefs:

| | Never 1 (1) | Rarely 2 (2) | Sometimes 3 (3) | Frequently 4 (4) | Almost always 5 (5) | Always 6 (6) |
|---|-------------|--------------|-----------------|---------------------|------------------------|--------------|
| I believe people born into poverty have more barriers to achieving economic well- being than people who were not born into poverty. (24) | 0 | | | 0 | 0 | 0 |
| I feel it is important to understand the political perspectives of people I don't agree with. (25) | 0 | 0 | 0 | 0 | 0 | 0 |
| I think it is the right of all citizens to have their basic needs met. (26) | 0 | 0 | 0 | 0 | 0 | 0 |
| I believe the role of government is to act as a referee, making decisions that promote the quality of life and well-being of the people. (27) | 0 | | | | | |



| why people are poor. (28) | O | \circ | \circ | \circ | \circ | \bigcirc |
|---|---|---------|---------|---------|---------|------------|
| I believe that by working together, people can change society to be more just and fair for everyone. (29) | 0 | 0 | 0 | 0 | 0 | 0 |
| I believe my actions will affect future generations. (30) | 0 | 0 | 0 | 0 | 0 | \circ |
| I believe there are barriers in the national educational system that prevent some groups of people from having economic success. (31) | | 0 | 0 | 0 | 0 | 0 |

Start of Block: Skills - Network assessment front office

Display this question:

If In which urban region are you working? = Limoges

Or In which urban region are you working? = Lyon

Or In which urban region are you working? = Paris

Q8.1 The exercise and questions on the next pages are a quick assessment of your professional network. How do you connect with the following organizations and institutions in your work? By 'knowing' someone, we mean you have their contact information and can reach out to them for work.

| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation, their work hos NO influence on mine. | I don't know people in this type of organisation. Their work has an influence on mine. | I don't know people in this type of organisation. Their work has NO influence on mine |
|--|--|---|--|
| DREAL of the region (1) | DREAL of the region (1) | DREAL of the region (1) | DREAL of the region (1) |
| La Métropole DGS Mobilités (2) | La Métropole DGS Mobilités (2) | La Métropole DGS Mobilités (2) | La Métropole DGS Mobilités (2) |



| La Métropole DGS | La Métropole DGS | La Métropole DGS | La Métropole DGS |
|---|---|---|---|
| Solidarités (4) | Solidarités (4) | Solidarités (4) | Solidarités (4) |
| Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (5) | Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (5) | Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (5) | Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (5) |
| commune administrations (6) | commune administrations (6) | commune administrations (6) | commune administrations (6) |
| Maison | Maison | Maison | Maison |
| métropolitaine d'insertion | métropolitaine d'insertion | métropolitaine d'insertion | métropolitaine d'insertion |
| pour l'emploi (8) | pour l'emploi (8) | pour l'emploi (8) | pour l'emploi (8) |
| L'Agence des | L'Agence des | L'Agence des | L'Agence des |
| Mobilités (9) | Mobilités (9) | Mobilités (9) | Mobilités (9) |

If In which urban region are you working? = Barcelona
Or In which urban region are you working? = Madrid

Q8.2 The exercise and questions on the next pages are a quick assessment of your professional network. How do you connect with the following organizations and institutions in your work? By 'knowing' someone, we mean you have their contact information and can reach out to them for work.

| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation. Their work has NO influence on mine. | I don't know people in this type of organisation. Their work does have an influence on mine. | I don't know people in this type of organisation. Their work has NO influence on mine. |
|--|--|---|---|
| Metropolitan | Metropolitan | Metropolitan | Metropolitan |
| Department of | Department of | Department of | Department of |
| Environmental Assessment | Environmental Assessment | Environmental Assessment | Environmental Assessment |
| and Management (1) | and Management (1) | and Management (1) | and Management (1) |
| Metropolitan | Metropolitan | Metropolitan | Metropolitan |
| Transport Authority (2) | Transport Authority (2) | Transport Authority (2) | Transport Authority (2) |
| | | | , |
| Metropolitan | Metropolitan | Metropolitan | Metropolitan |
| Department of | Department of | Department of | Department of |
| Socioeconomic | Socioeconomic | Socioeconomic | Socioeconomic |
| development (3) | development (3) | development (3) | development (3) |
| Civil society | Civil society | Civil society | Civil society |
| | | | |
| organisations working on | organisations working on | organisations working on | organisations working on |
| social vulnerability or | social vulnerability or | social vulnerability or | social vulnerability or |
| clean/safe urban | clean/safe urban | clean/safe urban | clean/safe urban |
| environments, such as ONCE | environments, such as ONCE | environments, such as ONCE | environments, such as ONCE |
| (6) | (6) | (6) | (6) |
| commune | commune | commune | commune |
| administrations (4) | administrations (4) | administrations (4) | administrations (4) |
| / | / | / | / |



| Metropolitan citizen assistance telephone (5) |
|---|---|---|---|
| Regional public employment service (7) |

If In which urban region are you working? = Antwerp

Q8.3 The exercise and questions on the next pages are a quick assessment of your professional network. How do you connect with the following organizations and institutions in your work? By 'knowing' someone, we mean you have their contact information and can reach out to them for work.

| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation. Their work has NO influence on mine. | type of organisation. Their work does have an influence on mine. | type of organisation. Their work has NO influence on mine. |
|--|--|--|--|
| Department | Department | Department | Department |
| Environment (1) | Environment (1) | Environment (1) | Environment (1) |
| Department | Department | Department | Department |
| Mobility (3) | Mobility (3) | Mobility (3) | Mobility (3) |
| Department Social | Department Social | Department Social | Department Social |
| Services (4) | Services (4) | Services (4) | Services (4) |
| Civil society | Civil society | Civil society | Civil society |
| organisations working on | organisations working on | organisations working on | organisations working on |
| social vulnerability or | social vulnerability or | social vulnerability or | social vulnerability or |
| clean/safe urban | clean/safe urban | clean/safe urban | clean/safe urban |
| environments, such as CAW | environments, such as CAW | environments, such as CAW | environments, such as CAW |
| (7) | (7) | (7) | (7) |
| stadsloketten (10) | stadsloketten (10) | stadsloketten (10) | stadsloketten (10) |
| Slim naar | Slim naar | Slim naar | Slim naar |
| Antwerpen (11) | Antwerpen (11) | Antwerpen (11) | Antwerpen (11) |
| VDAB (12) | VDAB (12) | VDAB (12) | VDAB (12) |



If In which urban region are you working? = Brussels

Q8.4 The exercise and questions on the next pages are a quick assessment of your professional network. How do you connect with the following organizations and institutions in your work? By 'knowing' someone, we mean you have their contact information and can reach out to them for work.

| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation. Their work has NO influence on mine. | I don't know people in this type of organisation. Their work does have an influence on mine. | I don't know people in this type of organisation. Their work has NO influence on mine. |
|--|--|---|---|
| Departement | Departement | Departement | Departement |
| Environnement (1) | Environnement (1) | Environnement (1) | Environnement (1) |
| Departement | Departement | Departement | Departement |
| Mobilité (3) | Mobilité (3) | Mobilité (3) | Mobilité (3) |
| Brulocalis (4) | Brulocalis (4) | Brulocalis (4) | Brulocalis (4) |
| Civil society | Civil society | Civil society | Civil society |
| organisations working on | organisations working on | organisations working on | organisations working on |
| social vulnerability or | social vulnerability or | social vulnerability or | social vulnerability or |
| clean/safe urban | clean/safe urban | clean/safe urban | clean/safe urban |
| environments, such as | environments, such as | environments, such as | environments, such as |
| CAWab (7) | CAWab (7) | CAWab (7) | CAWab (7) |
| municipal | municipal | municipal | municipal |
| administrations (8) | administrations (8) | administrations (8) | administrations (8) |
| Mobility Coach (9) | Mobility Coach (9) | Mobility Coach (9) | Mobility Coach (9) |
| Actiris (10) | Actiris (10) | Actiris (10) | Actiris (10) |
| urban environment)? | borate with professionals out | tside of your own core domain | n (e.g. social services or |
| O Daily (1) | | | |
| Regularly: more tha | n twice a month (2) | | |
| C Limited: once a mor | oth to once a year (3) | | |
| O Never or less than o | nce a year (4) | | |
| | | | |



| shops or social activities? |
|---|
| O Yes, I have this information available (1) |
| O Yes, in many cases this comes up during the interaction (2) |
| O Sometimes, the interaction makes it possible for me to assess whether this is the case (3) |
| O Sometimes, in exceptional cases it is clear that someone is experiencing difficulties (4) |
| O No, the type of interaction does not allow me to know this (5) |
| O No, I don't need to know this (6) |
| Other (7) |
| |
| Skip To: End of Block If You have indicated you regularly come into contact with citizens during your work. Is it clear to = No, the type of interaction does not allow me to know this |
| Skip To: End of Block If You have indicated you regularly come into contact with citizens during your work. Is it clear to = No, I don't need to know this |
| Q8.7 Do you employ specific strategies to work with vulnerable population groups experiencing such restricted mobility? |
| O Yes (1) |
| O No, I don't work on restricted mobility issues (2) |
| No, I employ the same approach as I do with other population groups (3) |
| Display this question: |
| If Do you employ specific strategies to work with vulnerable population groups experiencing such res = Yes |
| Q8.8 Can you describe a strategy you employ? |
| |
| |
| |
| |
| |

Q8.6 You have indicated you regularly come into contact with citizens during your work. Is it clear to you when a person may experience limitations in reaching destinations such as a (potential) place of work, a hospital, school,



| | ve methods to relay feedback on the mobility limitations people encounter, for example because of to policymakers? |
|-----------------------------------|---|
| O Yes, the | ere is a procedure for this (1) |
| O Yes, I h | ave contacts I can relay this to directly (2) |
| Someti | mes, this depends on the situation (3) |
| O No, but | I would like to be able to do this (4) |
| O No, this | s is not part of my job (5) |
| Other | (6) |
| particular, alterr | now where to find up-to-date information on LEZ eligibility conditions, possible exceptions and, in natives, benefits or other measures for vulnerable population groups in roup/SelectedChoicesTextEntry}? |
| O Yes, it is | s easy to find a complete and up-to-date overview of this information (1) |
| O I have a | an idea where to start, but am not sure if I will find all information (2) |
| O No, this | s information is difficult to find for me (3) |
| it is easy to find Or Do you l | stion: now where to find up-to-date information on LEZ eligibility conditions, possible exceptio = Yes, a complete and up-to-date overview of this information know where to find up-to-date information on LEZ eligibility conditions, possible exceptio = I here to start, but am not sure if I will find all information |
| Q8.11 Which so | urces would you use to find this information? (multiple answers possible) |
| | Generic search engine like Google (1) |
| | A webpage of the public authority on LEZ (2) |
| | A webpage of an organisation that is not the public administration on LEZ (3) |
| | Consult a colleague in my department (4) |
| | Consult a colleague in a different department (5) |
| | Consult someone not working for public authorities (7) |
| | Other (6) |



End of Block: Skills - Network assessment front office Start of Block: Learning opportunities - front office Q9.14. Learning opportunities In this last and shortest part of the survey, we'd like to understand the possibilities for training you consider useful. Q9.2 LEZ4ALL will develop a number of training modules to equip professionals with relevant competences to deal with the social implications of car restrictive policies and more general mobility policies. Training topics can range from communication with people in vulnerable situations to feedback loops for policy evaluation. Could such trainings be relevant? I do not see the relevance of training on this subject. Neither for me nor for other professionals. (4) Trainings can be relevant to me. (5) Trainings can be relevant to people with a different position in my professional domain. (6) Trainings can be relevant to people working in other professional domains than mine. (7) Skip To: End of Block If LEZ4ALL will develop a number of training modules to equip professionals with relevant competence... = I do not see the relevance of training on this subject. Neither for me nor for other professionals. Display this question: If LEZ4ALL will develop a number of training modules to equip professionals with relevant competence... = Trainings can be relevant to people with a different position in my professional domain. Or LEZ4ALL will develop a number of training modules to equip professionals with relevant competence... = Trainings can be relevant to people working in other professional domains than mine. Q9.3 For which type of professionals do you think such training is relevant? (multiple answers possible) People working on mobility and transport (1) People working on social welfare (2) People working on environment and healthy living environments (3) People working on public space, housing or spatial planning (4) Social workers (5)



| | Policymakers (6) |
|-------------------|---|
| | People who are working specifically with (a) vulnerable population group(s) (7) |
| | Other (8) |
| Trainings can be | will develop a number of training modules to equip professionals with relevant competence = |
| | ng would you like to take to feel better prepared to work on social effects of mobility policies? find relevant to learn? |
| | |
| | |
| | |
| Trainings can be | will develop a number of training modules to equip professionals with relevant competence = |
| Q9.5 What amou | nt of time would you be willing to spend on training? |
| Singular | training moment (not recurring) of 2 hours (1) |
| 3 sessio | ns of 1-2 hours (2) |
| O 1 hour/ | week for a number of weeks (3) |
| End of Block: L | earning opportunities - front office |
| Start of Block: | Skills - Network assessment back office |
| Display this ques | tion: |
| | urban region are you working? = Limoges |
| | urban region are you working? = Paris |
| Or In which | urban region are you working? = Lyon |

Q10.1 The exercise and questions on the next pages are a quick assessment of your professional network. How do you connect with the following organizations and institutions in your work? By 'knowing' someone, we mean you have their contact information and can reach out to them for work.



| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation. Their work has NO influence on mine. | I don't know people in this type of organisation. Their work does have an influence on mine. | I don't know people in this type of organisation. Their work has NO influence on mine. |
|---|---|--|---|
| La Métropole DGS Mobilités (2) | La Métropole DGS Mobilités (2) | La Métropole DGS Mobilités (2) | La Métropole DGS Mobilités (2) |
| DREAL of the region (3) | DREAL of the region (3) | DREAL of the region (3) | DREAL of the region (3) |
| La Métropole DGS Solidarités (4) | La Métropole DGS Solidarités (4) | La Métropole DGS Solidarités (4) | La Métropole DGS Solidarités (4) |
| Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (7) Commune | Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (7) Commune | Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (7)Commune | Civil society organisations working on social vulnerability or clean/safe urban environments, such as Secours Populaire (7) Commune |
| administrations (9) | administrations (9) | administrations (9) | administrations (9) |
| Social workers (8) | Social workers (8) | Social workers (8) | Social workers (8) |
| Economic organisations such as trade unions or employer organisations (11) | Economic organisations such as trade unions or employer organisations (11) | Economic organisations such as trade unions or employer organisations (11) | Economic organisations such as trade unions or employer organisations (11) |
| Research institute(s) working on social impact of mobility such as Laboratoire de la Mobilité Inclusive (12) | Research institute(s) working on social impact of mobility such as Laboratoire de la Mobilité Inclusive (12) | Research institute(s) working on social impact of mobility such as Laboratoire de la Mobilité Inclusive (12) | Research institute(s) working on social impact of mobility such as Laboratoire de la Mobilité Inclusive (12) |
| Display this question: | | | |
| | n are you working? = Barcel | | |
| Or In which urban regio | on are you working? = Madr | id | |
| Q10.2 The exercise and ques you connect with the following have their contact information. Please pick the items on the | ng organizations and instituti on and can reach out to them | for work. | |
| | | I don't know people in this | I don't know people in this |
| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation. Their work has NO influence on mine. | type of organisation. Their work does have an influence on mine. | type of organisation. Their work has NO influence on mine. |
| Metropolitan Department of Environmental Assessment and Management (1) | Metropolitan Department of Environmental Assessment and Management (1) | Metropolitan Department of Environmental Assessment and Management (1) | Metropolitan Department of Environmental Assessment and Management (1) |
| Metropolitan Transport Authority (2) | Metropolitan Transport Authority (2) | Metropolitan Transport Authority (2) | Metropolitan Transport Authority (2) |



| Metropolitan | Metropolitan | Metropolitan | Metropolitan |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Department of | Department of | Department of | Department of |
| Socioeconomic | Socioeconomic | Socioeconomic | Socioeconomic |
| development (3) | development (3) | development (3) | development (3) |
| Social workers (4) | Social workers (4) | Social workers (4) | Social workers (4) |
| Civil society | Civil society | Civil society | Civil society |
| organisation(s) working on | organisation(s) working on | organisation(s) working on | organisation(s) working on |
| social vulnerability or | social vulnerability or | social vulnerability or | social vulnerability or |
| clean/safe urban | clean/safe urban | clean/safe urban | clean/safe urban |
| environments such as | environments such as | environments such as | environments such as |
| ECODES (9) | ECODES (9) | ECODES (9) | ECODES (9) |
| Municipal | Municipal | Municipal | Municipal |
| administrations (8) | administrations (8) | administrations (8) | administrations (8) |
| Economic | Economic | Economic | Economic |
| organisations such as trade |
| unions or employer | unions or employer | unions or employer | unions or employer |
| organisations (10) | organisations (10) | organisations (10) | organisations (10) |
| Research institute(s) | Research institute(s) | Research institute(s) | Research institute(s) |
| working on social impact of |
| mobility such as Institut |
| NA - t 1: /4.4\ | | | |
| Metropoli (11) | Metropoli (11) | Metropoli (11) | Metropoli (11) |

If In which urban region are you working? = Antwerp

Q10.3 The exercise and questions on the next pages are a quick assessment of your professional network. How do you connect with the following organizations and institutions in your work? By 'knowing' someone, we mean you have their contact information and can reach out to them for work.

| · | | , , | |
|---|---|---|---|
| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation. Their work has NO influence on mine. | I don't know people in this type of organisation. Their work does have an influence on mine. | I don't know people in this type of organisation. Their work has NO influence on mine. |
| Afdeling Leefmilieu (1) | Afdeling Leefmilieu (1) | Afdeling Leefmilieu (1) | Afdeling Leefmilieu (1) |
| Afdeling Mobiliteit (3) | Afdeling Mobiliteit (3) | Afdeling Mobiliteit (3) | Afdeling Mobiliteit (3) |
| Afdeling Sociaal beleid (4) | Afdeling Sociaal beleid (4) | Afdeling Sociaal beleid (4) | Afdeling Sociaal beleid (4) |
| Stadsloketten (14) | Stadsloketten (14) | Stadsloketten (14) | Stadsloketten (14) |
| Social workers (15) | Social workers (15) | Social workers (15) | Social workers (15) |
| Middenveldsorganisaties die werken rond sociale kwetsbaarheid of duurzame en veilige leefomgevingen zoals bijvoorbeeld CAW (10) | Middenveldsorganisaties die werken rond sociale kwetsbaarheid of duurzame en veilige leefomgevingen zoals bijvoorbeeld CAW (10) | Middenveldsorganisaties die werken rond sociale kwetsbaarheid of duurzame en veilige leefomgevingen zoals bijvoorbeeld CAW (10) | Middenveldsorganisaties die werken rond sociale kwetsbaarheid of duurzame en veilige leefomgevingen zoals bijvoorbeeld CAW (10) |



Belangenorganisaties in het Belangenorganisaties in het Belangenorganisaties in het Belangenorganisaties in het bedrijfsleven zoals bedrijfsleven zoals bedrijfsleven zoals bedrijfsleven zoals vakbonden en vakbonden en vakbonden en vakbonden en werkgeversorganisaties (11) werkgeversorganisaties (11) werkgeversorganisaties (11) werkgeversorganisaties (11) Onderzoeksinstellingen die Onderzoeksinstellingen die Onderzoeksinstellingen die Onderzoeksinstellingen die werken op de sociale impact van mobiliteit zoals van mobiliteit zoals van mobiliteit zoals van mobiliteit zoals Universiteit Antwerpen (12) Universiteit Antwerpen (12) Universiteit Antwerpen (12) Universiteit Antwerpen (12)

Display this question:

If In which urban region are you working? = Brussels

Q10.4 The exercise and questions on the next pages are a quick assessment of your professional network. How do you connect with the following organizations and institutions in your work? By 'knowing' someone, we mean you have their contact information and can reach out to them for work.

| · | | • • | |
|--|--|---|---|
| I know people in this type of organisation. Their work has an influence on mine. | I know people in this type of organisation. Their work has NO influence on mine. | I don't know people in this type of organisation. Their work does have an influence on mine. | I don't know people in this type of organisation. Their work has NO influence on mine. |
| Departement | Departement | Departement | Departement |
| Environnement (1) | Environnement (1) | Environnement (1) | Environnement (1) |
| Livii Oliliciiicii (1) | Liivii Oilii Cili Cili (1) | Liviloimement (1) | Environmente (1) |
| Departement | Departement | Departement | Departement |
| Mobilité (3) | Mobilité (3) | Mobilité (3) | Mobilité (3) |
| | (2) | (0) | (0) |
| Brulocalis (4) | Brulocalis (4) | Brulocalis (4) | Brulocalis (4) |
| | | | |
| Municipal | Municipal | Municipal | Municipal |
| administrations (5) | administrations (5) | administrations (5) | administrations (5) |
| Civil society | Civil society | Civil society | Civil society |
| organisation(s) working on | organisation(s) working on | organisation(s) working on | organisation(s) working on |
| | | | |
| social vulnerability or | social vulnerability or | social vulnerability or | social vulnerability or |
| clean/safe urban | clean/safe urban | clean/safe urban | clean/safe urban |
| environments such as | environments such as | environments such as | environments such as |
| CAWab (10) | CAWab (10) | CAWab (10) | CAWab (10) |
| Economic | Economic | Economic | Economic |
| organisations such as trade | organisations such as trade | organisations such as trade | organisations such as trade |
| • | • | • | • |
| unions or employer | unions or employer | unions or employer | unions or employer |
| organisations (11) | organisations (11) | organisations (11) | organisations (11) |
| Research institute(s) | Research institute(s) | Research institute(s) | Research institute(s) |
| working on social impact of | working on social impact of | working on social impact of | working on social impact of |
| mobility such as Brussels | mobility such as Brussels | mobility such as Brussels | mobility such as Brussels |
| Studies Institute (12) | Studies Institute (12) | Studies Institute (12) | Studies Institute (12) |
| Studies mistitute (12) | Stadies institute (12) | Stadies Histitute (12) | Stadies institute (12) |



| Q10.5 How often do you collaborate with professionals outside of your own core domain (e.g. social services or urban environment)? |
|--|
| Opaily (1) |
| Regularly: more than twice a month (2) |
| Limited: once a month to once a year (3) |
| Never or less than once a year (4) |
| Skip To: Q140 If How often do you collaborate with professionals outside of your own core domain (e.g. social serv = Never or less than once a year |
| Display this question: |
| If Which theme(s) are you working on? (multiple answers possible) = Mobility and transport |
| Or Which theme(s) are you working on? (multiple answers possible) = Environment and healthy living environments |
| Or Which theme(s) are you working on? (multiple answers possible) = Public space, housing or spatial planning |
| Q10.6 To develop your work, do you consult expertise on social issues? |
| Yes, this is part of our job (1) |
| Yes, I find this personally important (2) |
| O Sometimes, I would like to include this more (3) |
| Occasionally, I don't mind when it happens (4) |
| No, I don't know how to do this (5) |
| O No, I find this irrelevant (6) |
| Display this question: If Which theme(s) are you working on? (multiple answers possible) = Social welfare Or Which theme(s) are you working on? (multiple answers possible) = Community work Q10.7 In your line of work, do you consult expertise on mobility issues? |
| Yes, this is part of our job (1) |
| Yes, I find this personally important (2) |
| O Sometimes, I would like to include this more (3) |
| Occasionally, I don't mind when it happens (4) |



| O No, I don't know how to do this (5) |
|--|
| O No, I find this irrelevant (6) |
| Display this question: |
| If Which theme(s) are you working on? (multiple answers possible) = Mobility and transport |
| Or Which theme(s) are you working on? (multiple answers possible) = Environment and healthy living environments |
| Or Which theme(s) are you working on? (multiple answers possible) = Public space, housing or spatial planning |
| And If |
| Which description applies most accurately to you? = I work in the public sector, as a civil servant |
| Or Which description applies most accurately to you? = I work in the public sector, as political staff |
| Q10.8 When assessing impact of your work, such as the implementation of a new policy, do you consult expertise on social issues? |
| Yes, this is part of our job (1) |
| Yes, I find this personally important (2) |
| O Sometimes, I would like to include this more (3) |
| Occasionally, I don't mind when it happens (4) |
| No, I don't know how to do this (5) |
| No, I find this irrelevant (6) |
| Display this question: If Which theme(s) are you working on? (multiple answers possible) = Social welfare Or Which theme(s) are you working on? (multiple answers possible) = Community work Q10.9 Are mobility and car restrictive regulations issues you take into account in the development of your work? |
| Yes, I notice a clear impact (1) |
| O To a certain extent, there's a connection (2) |
| O Very little, there are other priorities (3) |
| O No, there is no connection (4) |



If Which theme(s) are you working on? (multiple answers possible) = Mobility and transport

Or Which theme(s) are you working on? (multiple answers possible) = Environment and healthy living environments

Or Which theme(s) are you working on? (multiple answers possible) = Public space, housing or spatial planning

And If

Which description applies most accurately to you? = I work in the private sector

Q10.10 You indicated to work in private sector, without regular contact with citizens. Is sustainability, and specifically pollution, an indicator when developing a service or product? And is social justice an indicator? Please indicate one answer in each column.

| Yes, sustainability is part of our core values (1) |
|--|
| To some extent, sustainbility is taken into account if it does not hamper profitability (2) |
| To some extent, sustainability can be a bonus but it's not a priority (3) |
| No, there is little attention for sustainbility in my work environment (4) |
| Yes, social justice is part of our core values (5) |
| To some extent, social justice is taken into account if it does not hamper profitability (6) |
| To some extent, social justice can be a bonus but it's not a priority (7) |
| No, there is little attention for social justice in my work environment (8) |



| measures? (mult | tiple answers possible) |
|-------------------------------------|---|
| | We don't monitor the social impact of policy. I don't see the importance or usefulness. (1) |
| | There are no sources available. (2) |
| | We receive spontaneous feedback from citizens or organisations. (8) |
| | This happens occassionaly, for example by ordering an external study. (9) |
| | Through a dedicated methodology or instrument. (3) |
| | Other (7) |
| End of Block: S | kills - Network assessment back office |
| Start of Block: | Learning opportunities - back office |
| Q11.1 4. Learning oppo | ortunities |
| In this last and sl useful. | hortest part of the survey, we'd like to understand the possibilities for training you consider |
| social implication adopting strateg | will develop training modules to equip professionals with relevant competences to deal with the ons of car restrictive policies and more general mobility policies. Training topics can range from gies for ensuring social justice when developing a policy to opportunities for intersectoral bould such trainings be relevant? |
| | I don't see the relevance of training on this subject. (1) |
| | Trainings can be relevant to me. (2) |
| | Trainings can be relevant to people with a different position in my professional domain. (3) |
| | Trainings can be relevant to people working in other professional domains than mine. (4) |

Q10.11 When policies are implemented, which sources do you use monitor the (un)intended social impact of

Skip To: End of Block If LEZ4ALL will develop training modules to equip professionals with relevant competences to deal wi... = I don't see the relevance of training on this subject.



If LEZ4ALL will develop training modules to equip professionals with relevant competences to deal wi... = Trainings can be relevant to people with a different position in my professional domain.

| Trainings can be r | elevant to people with a different position in my professional domain. |
|---------------------|---|
| | vill develop training modules to equip professionals with relevant competences to deal wi = elevant to people working in other professional domains than mine. |
| Q11.3 For which ty | pe of professionals do you think such training is relevant? (multiple answers possible) |
| F | People working on mobility and transport (1) |
| F | People working on social welfare (2) |
| F | People working on environment and healthy living environments (3) |
| F | People working on public space, housing or spatial planning (4) |
| | Social workers (5) |
| F | Policymakers (6) |
| F | People who are working specifically with (a) vulnerable population group(s) (7) |
| | Other (8) |
| Display this questi | on: |
| | ill develop training modules to equip professionals with relevant competences to deal wi = |
| | ng would you like to take to feel better prepared to work on social effects of mobility policies? nd relevant to learn? |
| | |
| | |
| | |
| | |

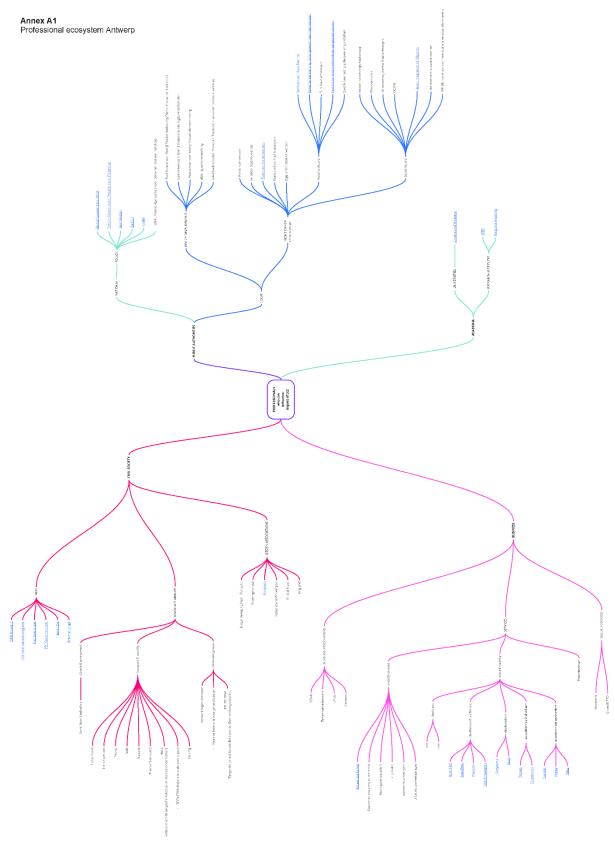


If LEZ4ALL will develop training modules to equip professionals with relevant competences to deal wi... =
Trainings can be relevant to me.

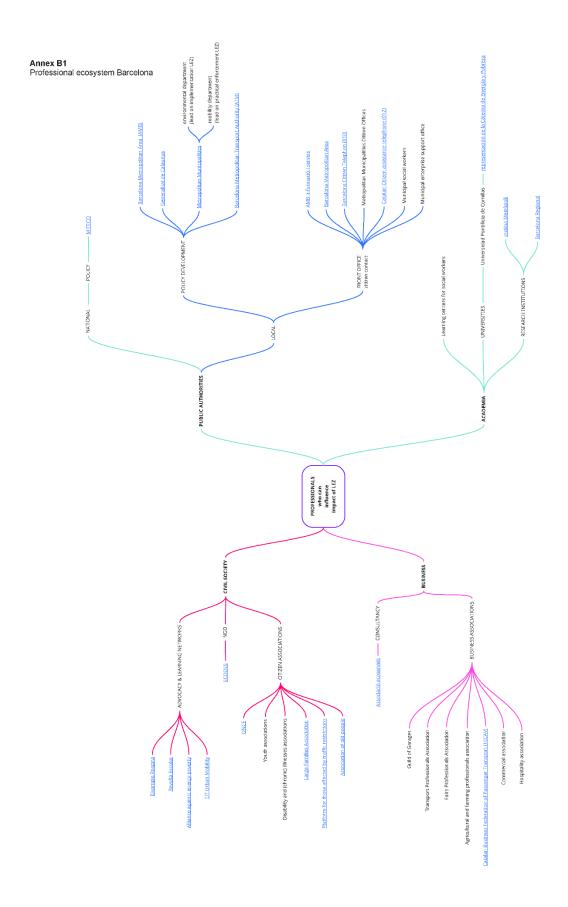
| Q11.5 What amount of time would you be willing to spend on training? |
|--|
| osingular training moment (not recurring) of 2 hours (1) |
| 3 sessions of 1-2 hours (2) |
| 1 hour/week for a number of weeks (3) |
| End of Block: Learning opportunities - back office |
| Start of Block: Next Steps |
| Q12.1 Would you like to learn more on the topic of this survey? |
| I'd like to receive news on project results (1) |
| I'd like to receive invitations to training modules and learning exchanges with other professionals (2) |
| I do not want to be contacted (3) |
| Display this question: |
| If Would you like to learn more on the topic of this survey? = I'd like to receive news on project results |
| Or Would you like to learn more on the topic of this survey? = I'd like to receive invitations to training modules and learning exchanges with other professionals |
| Q12.2 Please leave your email address here to be contacted about LEZ4ALL: |
| |
| Q13.3 Thank you for completing this questionnaire! |
| End of Block: Next Steps |



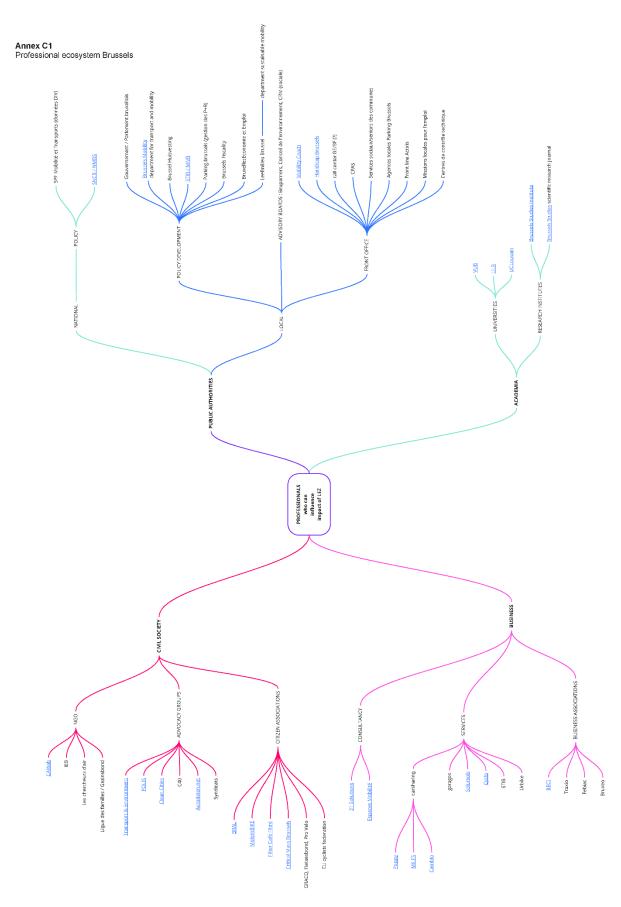
C. Mapping of regional professional ecosystems



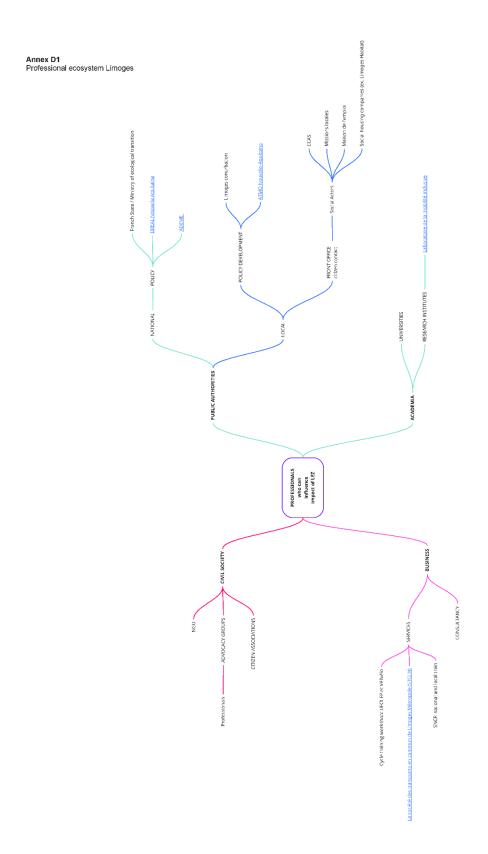




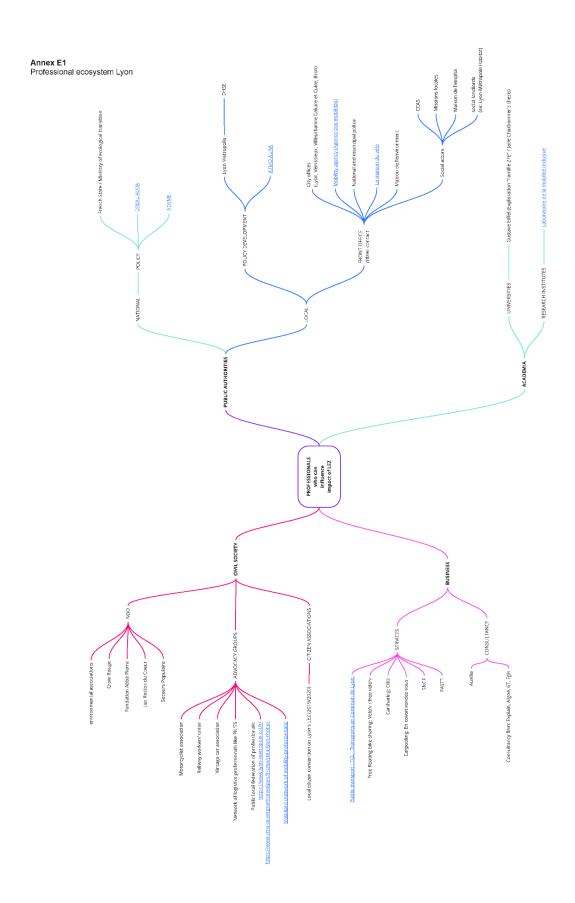














D. Cluster Analysis

A cluster analysis was carried out to discern different groups of respondents. After data cleaning, 231 observations were retained for this analysis. Besides 4 numeric variables, 34 dummy variables were included in the cluster analysis, most of them based on Likert-scale questions of which answer categories were aggregated. The R package clustMixType was used (Szepannek, 2018) and a model with three clusters was selected. Clusters sizes were respectively 64, 58 and 109. Following table gives the median or share in each of the clusters of the 38 variables.

| | Cluster | | |
|--|---------|------|----|
| variable | 1 | 2 | 3 |
| age (median) | 42 | 48.5 | 42 |
| Perspective.Taking (median) | 23 | 24 | 23 |
| Contextual.Understanding.of.Systemic.Barriers (median) | 49 | 46.5 | 48 |
| Macro.Self.Other.Awareness.Perspective.Taking (median) | 47 | 47 | 46 |
| male (%) | 38 | 22 | 40 |
| Graduateprofessional.degree (%) | 72 | 29 | 77 |
| Publiccivil.servant (%) | 75 | 74 | 67 |
| Private.sector (%) | 8 | 16 | 12 |
| CivilSociety (%) | 8 | 9 | 10 |
| DailyRegularContactCitizens (%) | 33 | 88 | 33 |
| mobilitytransport (%) | 78 | 28 | 71 |
| environment (%) | 25 | 12 | 27 |
| housingspatial.planning (%) | 8 | 53 | 19 |
| SocialCommunityTheme (%) | 8 | 53 | 19 |
| has.impact.on.travel.behaviour (%) | 11 | 19 | 14 |
| car.dependency (%) | 17 | 40 | 18 |
| St1St5 (%) | 88 | 41 | 83 |
| St3St6 (%) | 53 | 79 | 58 |
| St2Agree2 (%) | 16 | 62 | 11 |
| St4Agree2 (%) | 69 | 85 | 71 |
| Impact.sufficient.support.measures (%) | 23 | 3 | 11 |
| KnowledgeSocial (%) | 86 | 43 | 68 |
| KnowledgeEnvironment (%) | 81 | 22 | 63 |
| KnowledgeMobility (%) | 55 | 26 | 38 |
| Env.Dpt.knowimpact (%) | 66 | 14 | 55 |
| Mob.Dpt.knowimpact (%) | 72 | 24 | 64 |
| Soc.Dpt.knowimpact (%) | 64 | 19 | 59 |
| CSO.knowimpact (%) | 55 | 22 | 56 |
| LocAdm.KnowImpact (%) | 55 | 36 | 69 |
| collab (%) | 55 | 60 | 51 |
| Intrst.Train.relevant.for.me (%) | 83 | 55 | 58 |
| Intrst.Train.relevant.in.my.domain (%) | 72 | 26 | 69 |
| Intrst.Train.relevant.for.other.domains (%) | 5 | 14 | 83 |



| Train.mobilitytransport (%) | 6 | 28 | 96 |
|---------------------------------------|---|----|----|
| Train.environment (%) | 0 | 19 | 84 |
| Train.housingplanning (%) | 5 | 22 | 87 |
| TrainSocialWelfare.Policy (%) | 9 | 21 | 99 |
| TrainSocialWork.ContactVulnerable (%) | 9 | 16 | 84 |