SUMBA+
Accessibility of relevant transfer points in Quiet Areas in the central area of Altona

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SUMBA

Imprint

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Introduction

The Free and Hanseatic City of Hamburg was a project partner in the European Interreg project SUMBA (Sustainable Urban Mobility and Commuting in Baltic Cities), which was funded under the EU program "Interreg BSR-Baltic Sea Region". As part of the project, participating BSR partner cities developed commuting master plans between 2017 and 2021. These address the challenges and problems caused by car-based commuting and identify measures to reduce them. In the city of Hamburg, the focus was on making commuting more environmentally friendly between Hamburg-Altona and the suburbs. The follow-up project SUMBA+ now focuses on the implementation of the strategies and measures developed in the SUMBA project and concentrates on a local level in the district of Altona. At this local context one major challenge is the connection between public transport hubs and quiet areas with environmentally friendly and low-noise mobility.

In the past, motor vehicle-oriented streetscape design has led to little attention being paid to the needs of pedestrians and cyclists in particular, as well as to residential and recreational quality. This has resulted in reduced space for pedestrians and cyclists as well as increased noise pollution of streetscapes and residential neighborhoods due to high speeds. Furthermore there are poor accessibility and high levels of noise from public transport stops[1]. In recent years, the issue of noise has become increasingly important in urban and traffic planning. Particularly in densely populated areas, noise has a high relevance, as the subjective perception of noise increases with the number and density of inhabitants[2]. Road traffic noise causes the largest share of noise pollution in residential areas[3]. The main factors in reducing road traffic noise are the mode of transport and the accessibility of public transport stops. In neighborhoods the choice of transportation must take into account socio-demographic characteristics and the demands of different user groups for mobility services, as well as urban structures.

In addition to road traffic noise, other noise sources such as leisure or urban production also play a role in the pollution of residential areas[4]. Part of the SUMBA+ task in Altona is investigating which noise sources and factors contribute to high levels of noises in urban areas and how these can be adapted in the long term to promote a lower noise level in neighborhoods. The objective is to define "quiet areas", which have already been developed in the local concept for climate protection in Altona. A key component is the identification of climate-friendly and traffic-calming mobility options that respond to the different mobility needs of the neighborhood citizens.

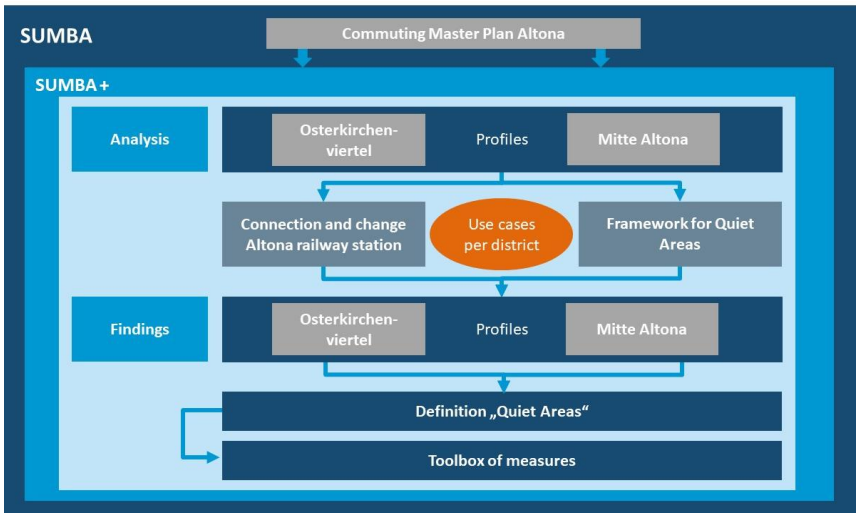
Methods

Figure 1 shows the methodological approach in the SUMBA+ project. The district of Altona is already pursuing many approaches to promote climate-friendly mobility, and SUMBA+ is embedded in this context. In the first step of the project, these approaches were documented. In the further course, it was investigated to what extent different spatial and socio-demographic structures exert an influence on high levels of noises as well as traffic and mobility requirements. For this reason, a study of different urban space types in newly built and existing neighborhoods was carried out. In these, different initial situation, preconditions for "quiet areas" and climate-friendly mobility become apparent. These are, for example, longer distances to the city centre, to work and

[1] Umweltbundesamt (2017)
[2] Umweltbundesamt 2020a, S. 10
[3] ebd., S. 5
[4] ebd., S. 5

infrastructure facilities, but also different mobility behaviours due to social or financial conditions or the urban environment. In addition to the neighborhoods, the Altona transport hub “Altona station” as a central transfer point and its connecting corridors to the neighborhoods were examined as a further area of consideration.

Figure 1 Process scheme of SUMBA+



Source: Planersocietät

Spatial and socio-demographic factors were first identified to describe the two urban districts Mitte Altona (new building area) and Osterkirchenviertel (existing area) in order to create a profile for the neighborhoods. In addition, the traffic situation in the areas was analysed. The results were recorded in profiles (see Appendix). The profiles are the basis for analysing the connection between the neighborhoods and the train station and for deriving the necessary framework conditions for a "quiet area”. Based on the analysis and the profiles, two use cases were developed for each neighborhood. Use cases are used to find out how a person uses a system to achieve a certain goal[5]. These differ according to their age, generation, occupation, lifestyle, household size and the predominantly used modes of transport. By looking at these different types of residents, it was possible to identify opportunities and challenges in everyday mobile life and to derive a variety of needs and expectations for public transport hubs and traffic-calmed zones. Then suitable short-, medium- and long-term measures, to reduce noise, are identified, as well as an estimate of the costs to implement them. Finally, a definition of the term "quiet area" is derived.

Analysis

Noise development and perception

Sound is used for daily communication via the auditory system. The human ear can perceive sound in a very wide frequency range. Continuous and excessive sound can develop into noise and have adverse health effects such as cardiovascular diseases or sleep disorders[6]. People perceive the exposure to sound or noise subjectively due to their individual sensitivity to noise or the way they deal with it. In addition, urban structures such as the arrangement of buildings can amplify the background noise, e.g. by reflecting sound. A measurement of noise is therefore only possible from

[5] Bittner/Spence 2003, S. xiii
[6] Umweltbundesamt 2021

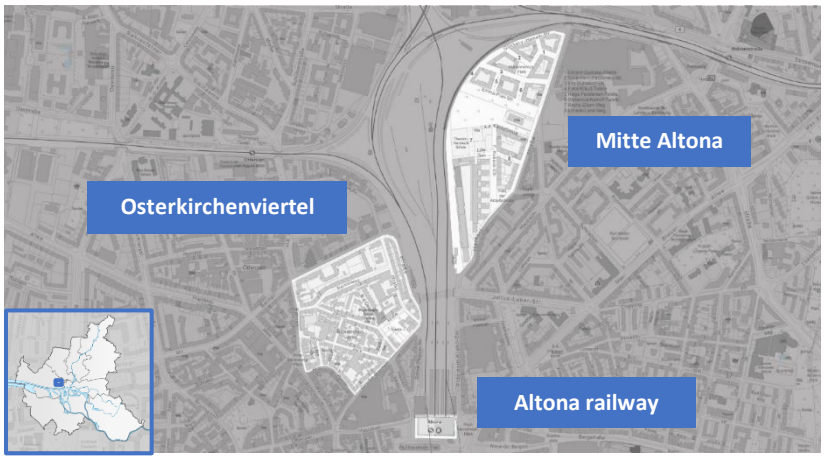
the physically describable noise[7]. Noise levels around 60 dB(A) are still perceived as pleasant, while 120 dB(A) are perceived as extremely painful. In practice, one assumes a health hazard from already 65 dB(A) during the day and 55 dB(A) at night[8]. The change in noise level is not linear to the change in decibel value. An increase of 10 dB(A), for example, is perceived as a doubling of the noise level[9].

Noise conflicts arise when noise-sensitive uses - such as housing - are adjacent to noise-intensive uses - for example, traffic, industry, restaurants, playgrounds. However, the main noise impact is generated by road traffic noise[10]. Vehicles generate noise, for example, through the engine and the contact of the tires with the road surface. The higher the speed of a vehicle, the louder the noise it generates. For example, a car traveling at 50 km/h can be perceived as twice as loud as a car traveling at 30 km/h[11]. In addition, high levels of noises are generally perceived as more burdensome in dense and larger cities[12].

The challenge is how to avoid noise conflicts in new and existing urban districts. In this respect, five fields of action for noise mitigation can be derived. Settlement and district planning, urban development, noise abatement and securing and developing quiet areas are especially suitable to new residential areas (that are to be developed). In existing neighborhoods, traffic avoidance and modal shift, is particularly relevant[13]. On the one hand, it is important to limit traffic through restrictions such as speed regulations, spatial redistribution or parking space management. On the other hand, it is important to promote low-noise modes of transport and intermodality. This includes walking, cycling and public transport. The spatial and use-oriented interconnection (e.g., mobility stations) of these modes of transport with the addition of other mobility services, such as sharing services, can additionally promote a modal shift away from private cars.

Selected areas in Altona

Figure 2 Selected areas in Altona



Source: Planersocietät, Data basis: Landesbetrieb Geoinformation und Vermessung 2021

[7] Umweltbundesamt 2020a, S. 5
[8] Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit 2017
[9] Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit 2014
[10] Umweltbundesamt 2020b, S. 34
[11] Umweltbundesamt 2020c
[12] Umweltbundesamt 2020a, S. 10
[13] Umweltbundesamt2020b, S. 45ff

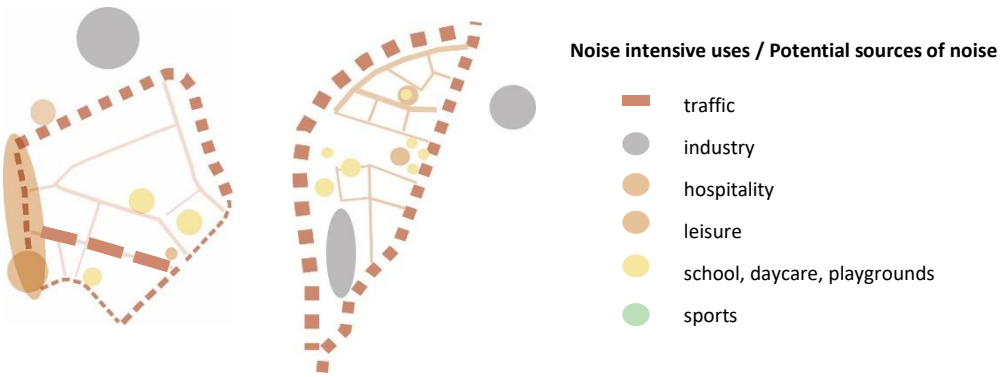
The urban district “Osterkirchenviertel” is a former working-class neighborhood from the 20th century and is located west of the railroad tracks of Altona station. To the northeast of the tracks is the new urban district “Mitte Altona”, which is still partly under construction. The first phase is scheduled for completion in 2022 (see Figure 2).

Comparison of Mitte Altona und Osterkirchenviertel

The existing Osterkirchenviertel and the Mitte Altona neighborhood show differences both in terms of socio-demographic structure and traffic situation. The Osterkirchenviertel is much more densely populated, so that the residents' perception of noise is higher and the physical level of noise is higher. Although both neighborhoods are largely made up of speed-30 zones. The higher car ownership rate and the presence of cobblestones in the Osterkirchenviertel also indicate a higher exposure to road traffic noise than in Mitte Altona. Due to the more pronounced mix of uses in and around the Osterkirchenviertel, noise-sensitive-uses are more often located near noise-intensive-uses (see Figure 3). In Mitte Altona, compatible zoning and separation of different uses was considered from the beginning of planning. A large proportion of stationary car traffic is accommodated in underground garages, so that traffic generated by the search for parking spots is reduced in addition to the designation as a residents' parking area (likewise the Osterkirchenviertel). The main noise sources here are leisure, due to the high proportion of small children and daycare centres, as well as the district school, which is currently under construction (see Figure 3). In addition, there is the strong enclosure by the railroad tracks and the associated rail traffic noise. The accessibility of the Altona train station by modes of environmentally friendly transport from the centre of Altona is significantly worse than from the Osterkirchenviertel, since there is only one connection for pedestrians and cyclists via Präsident-Krahn-Strasse, which has not yet been optimally designed. Especially residents from the northern residential area could orientate themselves more in the direction of the Holstenstraße S-Bahn station. However, the low level of accessibility and the restrictions on bicycle traffic also limits the accessibility of the Altona train station from the Osterkirchenviertel. The importance of bus transportation is rated rather low for connecting the station to the neighborhoods due to moderate distances and low time savings compared to walking and bicycling.

Due to the different socio-demographic structures and traffic conditions, different use cases have emerged for the two urban district. The use cases for Mitte Altona clearly show that there is a distinct neighborhood in Mitte Altona and that it is possible to play and stay safely in the neighborhood. In addition, there is already a good range of alternative mobility options.

Figure 3 Sources of noise in Mitte Altona and Osterkirchenviertel



Source: Planersocietät, Data basis: Landesbetrieb Geoinformation und Vermessung 2021

Nevertheless, it is also evident that there is no safe and comfortable route connection to Altona station for all target groups. Particularly in the area of Präsident-Krahn-Strasse, there is a need for improvement in the pedestrian and bicycle infrastructure. In the past, the Osterkirchenviertel has already developed into a very lively neighborhood in which neighbourly interaction could be expanded even more in the future. In order to strengthen all modes of transport that support climate friendly traffic like public transport, cycling, walking and micro mobility in the neighborhood, there is a particular need for barrier-free pedestrian and bicycle traffic infrastructure. In addition there is also a need for the expansion of bicycle traffic infrastructure and parking facilities for stationary bicycle traffic.

Conceptional work and measures

This concept for quiet areas in urban districts is the result of a spatial analysis of the two neighborhoods Osterkirchenviertel and Mitte Altona and their different socio-demographic, traffic and urban planning conditions. The consideration of noise aspects, especially road traffic noise, were the main focus of the concept development.

On this basis, a toolbox with 15 different measures (see Table 1) was developed, which can be applied in different neighborhoods depending on the framework conditions in order to promote quietness in these neighborhoods and reduce road traffic noise in particular. The toolbox can be supplemented depending on future developments and spatial typological characteristics. Detailed profiles of the individual measures can be found in the appendix.

Table 1 Tool-Box Quiet Areas

high Priority	**medium Priority**	**low Priority**
M1 Establishing a bicycle zone	M6 Neighborhood garage	M2 Noise-reducing road surface
M3 Bicycle parking	M7 Designation of strategic delivery zones and neighborhood boxes	M11 Qualitative upgrading of bus stops
M4 Strengthen neighborhood entrances	M9 Encounter zones	M 15 Modal filters
M5 Conversion to one-way street	M12 Crossing concept	
M8 Parklets and Pocket Parks	M13 School route plans	
M10 Neighborhood mentors		
M14 Cycling axis		

Based on different framework conditions in urban districts, measures can be applied differently and quiet areas can be equipped differently (see Conclusions for the definition of urban quiet areas). Accordingly various measures are recommended for the Osterkirchenviertel and Mitte Altona neighborhoods (see Appendix). In the Osterkirchenviertel, the establishing of a bicycle zone and a change in the use of parking spaces are primarily aimed at prioritizing environmentally friendly mobility and increasing the quality of stay. Neighborhood parking outside the urban district, the establishing of delivery zones, and the use of noise-reducing road surfaces should primarily lead to a reduction in road traffic noise as well as a shift to the outer skin of the neighborhood away from the noise. The visualization of the quiet area is aimed at for both urban districts via a concise design and strengthening of the quiet areas entrances. With the help of a crossing concept and the expansion of

the cycling infrastructure, including a modal filter, the linking of the urban district Mitte Altona with the neighborhoods via low-noise modes of transport that support climate friendly traffic will be strengthened.

Conclusions for the definition of urban quiet areas

Noise can have very different sources, such as leisure, urban production or traffic. In this context, noise is perceived by the individual as very subjective, which means that noise-reducing measures can deliver a quick subjective effect and at the same time promote sustainable mobility behaviour.

Due to the different structures and the spatial typology in the neighborhoods, quiet areas can be characterized differently. In practice, it is a matter of carefully dealing with the existing structures (infrastructure and local people) and developing them. This is what distinguishes the two studied neighbourhoods from each other. In the existing Osterkirchenviertel, the focus was on noise-reduced inner development (developing from the inside out) whereas in the Mitte Altona, the focus was on the radiance and rooting of quiet areas in other neighborhoods. In this context, prioritisation of measures supports the selection of appropriate and cautious options (e.g., markings).

Quiet areas concentrate road traffic noise at the outer boundaries of the neighborhood, the outer skin away from noise, and also concentrate existing noise-intensive uses in separation from noise-sensitive uses where possible. In doing so, a (traffic) noise reduction is achieved in the interior of the urban district in different fields of action such as infrastructure, design, service and communication. With the help of different push and pull strategies, the modes of transport that support climate friendly traffic are prioritized in the neighborhood and motorized individual traffic (e.g., traffic generated by the search for parking spots, land use) is reduced in a targeted manner. With the individually applied strategies, traffic is reduced and slowed within the neighborhood and structured through clear rules. In addition to pure noise reduction, quiet areas also strengthen traffic safety for pedestrians and cyclists, create recreational areas and have an identity-forming effect. Quietly designed local mobility axes also strengthen networking with other neighborhoods.

In summary, a quiet area stands on the following three columns:

- Quiet inside, noisy outside
- strengthening modes of transport that support climate friendly traffic and low-noise mobility
- integrated approach: balanced mix of push and pull measures, as well as soft and hard (infrastructural) measures

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Appendix

Figure 4 Measures in the Osterkirchenviertel

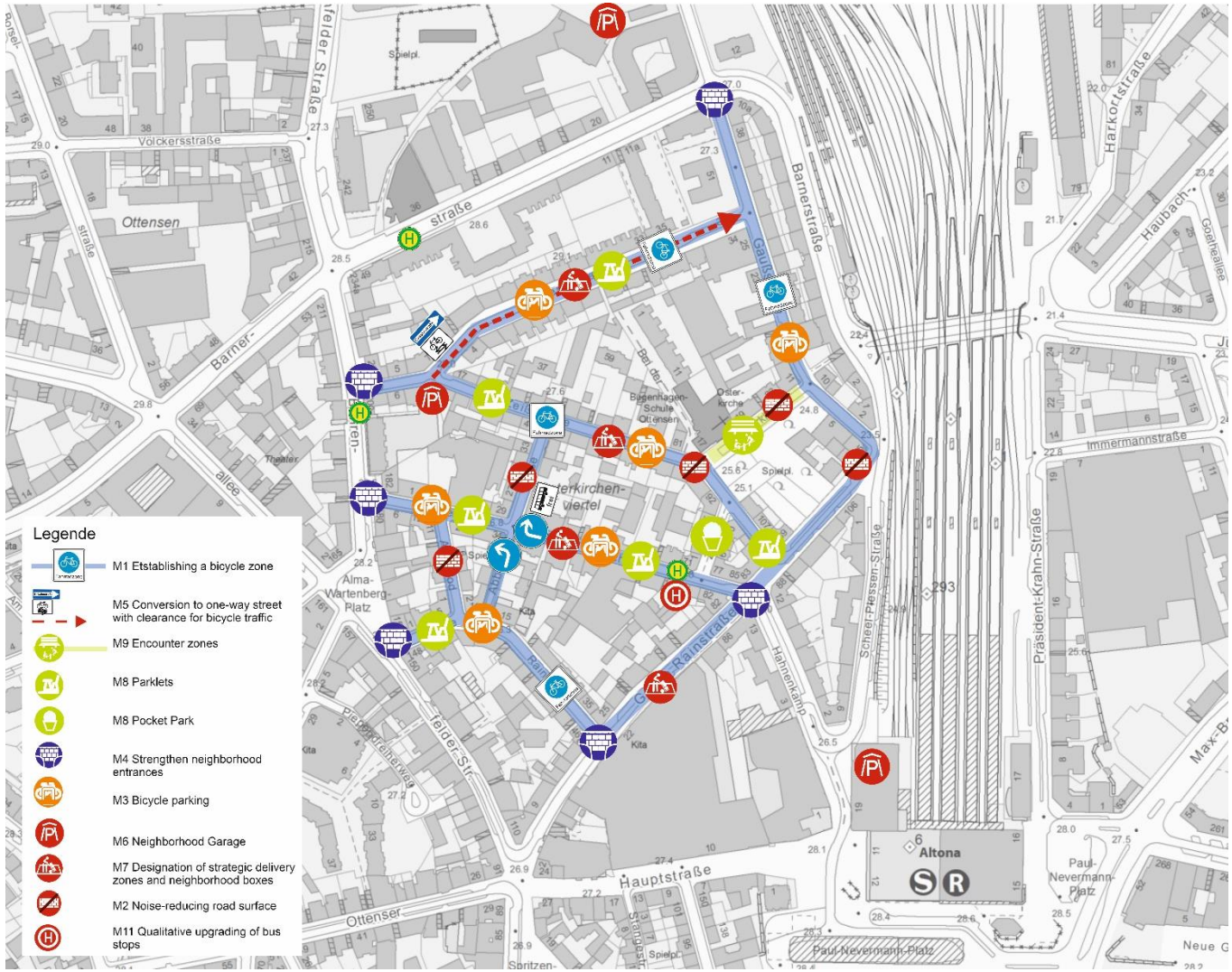

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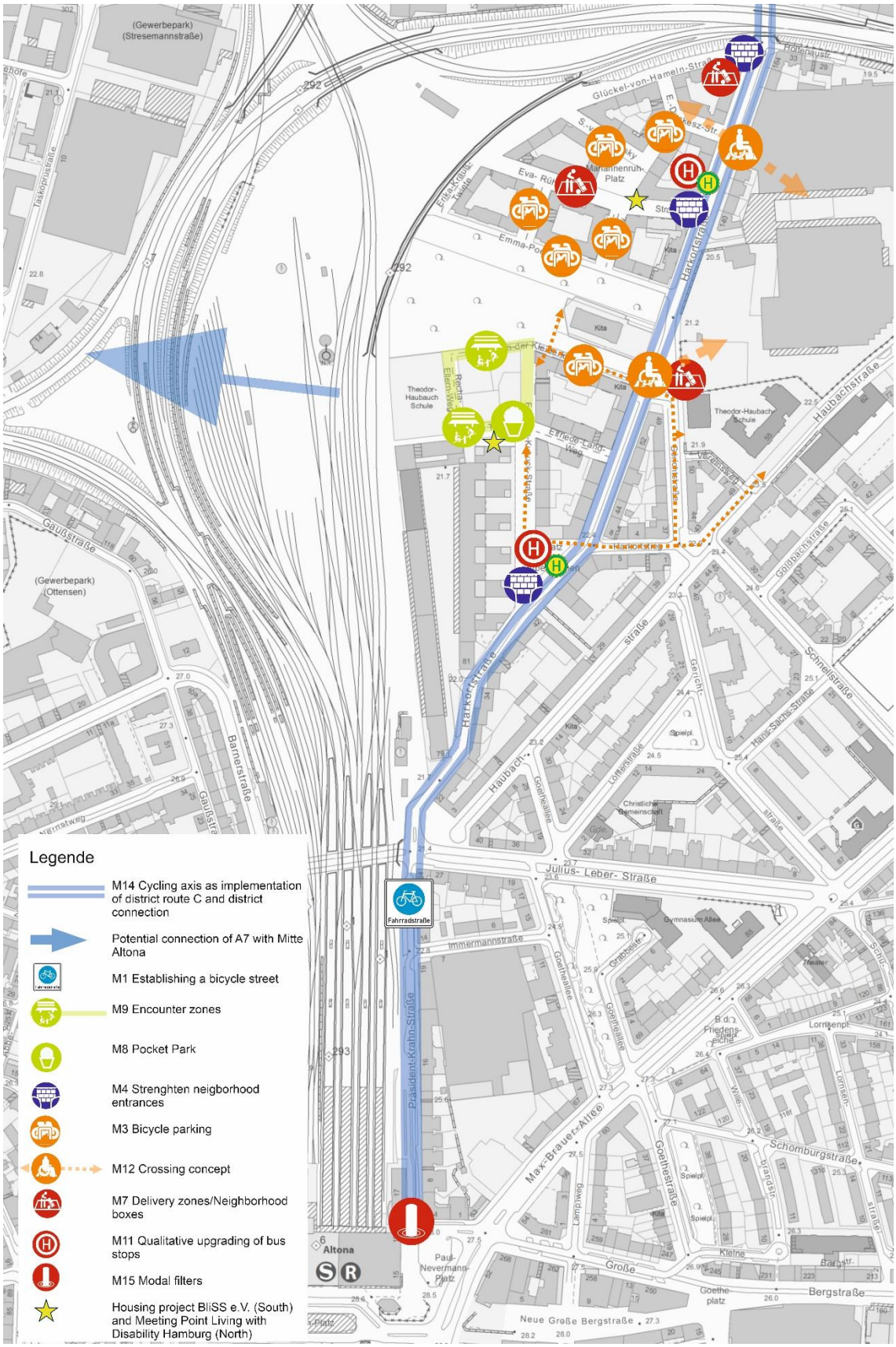
Figure 5 Measures in Mitte Altona



M1 Establishing a bicycle zone

Short discription

Bicycle zones can make a significant contribution to the promotion of cycling (increasing acceptance of cycling, considerate coexistence between motor vehicle drivers and cyclists) and can be implemented with comparatively little effort, since the establishment of a coherent network of bicycle lanes with signs and road markings is usually sufficient. With the avoidance of detours for bicycle traffic, more bicycle parking facilities and easily passable road surfaces, even more citizens should be encouraged to use bicycles and at the same time a reduction in noise levels should be achieved. In the long term, the (partial) conversion of cobblestones (e.g. only in the middle of the road) into a smooth noise-reducing road surface should also be aimed for (M2 noise-reducing road surface). In practice, many bicycle lanes are found to be compatible with allowing motor vehicle traffic, especially since a 30 km/h speed limit automatically applies. Separating bicycle and pedestrian traffic also resolves conflicts of use on sidewalks. Translated with www.DeepL.com/Translator (free version)

Steps for action

- Signposting with mark 244.1 StVO, exceptions for other vehicle traffic with additional signs
- Installation of (colored) ground markings and pictograms
- Opening for motor vehicle traffic in both directions or also in only one direction
- Supporting the maximum permitted speed of 30 km/h by strengthening neighborhood entrances (see M4 Strengthening neighborhood entrances)

Summary

Type of measure: Push and pull

Neighborhood: Osterkirchenviertel

Reference Local concept for climate protection: A4 Pedestrian-friendly crossings and intersections, B1.1 District route network - closing gaps, E1.1 Establishment of (further) time-reducing measures in the district area, F3 Quiet Areas / Silent Quarters

Time frame:

Costs: € € €

Prioritization: high

Interfaces: M2 Noise-reducing road surface, M3 Bicycle parking, M4 Strengthen neighborhood entrances, M5 Conversion to one-way street.

Good Practice: Bremen, bicycle model district

The district of Alte Neustadt in Bremen is Germany's first model bicycle district. An interconnected network of bicycle lanes has created a bicycle zone, which is accompanied by numerous facilitations (side-by-side riding, sufficient parking facilities) for both bicycle and pedestrian traffic. The goal is to shift more of the traffic volume to an environmentally friendly mode of transport. Ninety percent of the costs were funded by the National Climate Initiative (NKI) of the German Federal Ministry of the Environment.

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M2 Noise-reducing road surface

Short discription

From an average speed of 30km/h, dominant tire-road noise is generated. Compared to normal asphalt pavements, cobblestones cause significantly higher noise emissions, as also shown in the review and update of the noise action plan for Hamburg in 2013. Replacing cobblestones with a noise-reducing road surface would reduce noise by around 8 db(A) and thus significantly improve the noise situation of the neighborhood residents.

Steps for action

Further use of noise-optimized asphalt in rehabilitation/redesign measures.

Examination of the pavement and, if necessary, replacement in the case of high noise emissions (e.g. Am Sood)

Summary

Type of measure: -

Neighborhood: Osterkirchenviertel

Reference Local concept for climate protection: F3 Quiet Areas / Silent Quarters

Time frame:

Costs: € € €

Prioritization: low

Interfaces: M1 Establishing a bicycle zone

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M3 Bicycle parking

Short discription

A sufficient and high-quality supply of bicycle parking facilities is another essential framework condition for increasing the attractiveness of cycling in the neighborhoods. In dense neighborhoods, the installation of small bicycle garages or bicycle houses is a good way to create secure parking facilities and orderly conditions (reduction of obstructions caused by wildly parked bicycles).

A favorable solution in terms of traffic planning is the conversion of a car parking space - or several - into two-bike parking facilities. Benefits include urban design integration, relief for pedestrian traffic, promotion of land-saving modes of transportation, and more effective use of space. Alternatively, temporary conversion of individual parking stalls to bicycle parking areas by installing mobile bicycle parking facilities as a demand test would be conceivable, and these would be installed permanently when they are used to capacity. In addition, bicycle racks can also be used as a barrier against illegal parking.

In addition to the basic expansion of high-quality bicycle parking facilities (e.g., incl. roofing) in the neighborhood, the focus will continue to be on public transport stops and mobility stations. Furthermore, the expansion refers to public facilities, in particular to the qualitative upgrading of bicycle parking facilities at schools and daycare centers, in order to meet the demands of younger generations for bicycle use and to support them in this.

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Steps for action

- Successive expansion and upgrading of bicycle parking facilities
- Identification of first potential spaces and parking stands
- Determination of concrete locations depending on measures M8 and M11
- Definition of the type of bicycle parking facility, e.g. lockable
  - Access medium (e.g. key, key card, chip)
  - Number of bicycles to be parked
  - If necessary, integration of further service aspects (e.g. charging possibility for pedelec batteries)
  - External appearance/design specifications

Summary

Type of measure: Pull

Neighborhood: Osterkirchenviertel

Reference Local concept for climate protection: B2 Qualification and expansion of bicycle parking facilities + parking facilities for cargo bicycles and special forms

Time frame:

Costs: € € €

Prioritization: high

Interfaces: M8 Parklets and Pocket Parks, M11 Qualitative upgrading of bus stops

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M4 Strengthen neighborhood entrances

Short discription

For the neighborhood entrances, measures should be used, if not already in place, to reinforce the entrance situation and make it clear that a person is entering a "quiet area." For example, offsets, sidewalk crossings or narrowing of the roadway can be used. Junctions to subordinate streets, for example, can be structurally designed in such a way that sidewalks must be crossed. Such measures have a positive effect on the speed behavior of Drivers, since the speed is adjusted due to the visual changes. On the one hand, this makes it clear to motor vehicle traffic that pedestrian traffic has priority, and on the other hand, it makes it possible to cross the junction without barriers at the same level, so that walking comfort and traffic safety at the entrances to the neighborhood are significantly increased.

Summary

Primasens

Tübingen

Steps for action

- Analysis of the status quo of the neighborhood entrances
- Examination of different possibilities for design and implementation
- Determination of uniform design of the neighborhood entrances

- Type of measure: Push and Pull
- Neighborhood: Osterkirchenviertel, Mitte Altona
- Reference Local concept for climate protection: A4 Pedestrian-friendly crossings and intersections, E1.1 Establishment of (further) time-reducing measures in the district area
- Time frame:
- Costs: € € €
- Prioritization: high
- Interfaces : M1 Establishing a bicycle zone

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M5 Conversion to one-way street

Short discription

Converting streets that are currently two-way into one-way streets shifts passing and park search traffic in dense neighborhoods to surrounding streetscapes. For example, the conversion of Nernstweg to a one-way street in the direction of Gaußstraße is recommended. By creating a one-way street, current passing and park search traffic will be shifted to Barner Street (noise-facing outer area). By 2024, the goal is to reduce the speed limit on Barner Strasse to 30 km/h at night, so that noise will also be reduced here in the long term. In addition, it is recommended that a drive regulation be established at the intersection of Hohenesch and Abbestraße to prevent drive-through traffic in the long term.

This will result in more space for an attractive, situation-adapted streetscape design with sufficient consideration of the needs of pedestrians, cyclists and residents. The Nernstweg will be opened for bicycle traffic in the opposite direction, so that good accessibility of the neighborhood by bicycle is ensured.

Steps for action

Designation of the new traffic routing and, if necessary, structural road space adaptation.

Summary


Darmstadt


Bremen

Type of measure: Push

Neighborhood: Osterkirchenviertel

Reference Local concept for climate protection: B1.1 District route network - closing gaps, E1.1 Establishment of (further) time-reducing measures in the district area

Time frame:

Costs: € € €

Prioritization: high

Interfaces: M1 Establishing a bicycle zone, M8 Parklets and Pocket Parks

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M6 Neighborhood garage

Short discription

In the neighborhoods, there are sometimes conflicts between stationary motor vehicle traffic and other street space demands. The dense areas have a high potential for conflict due to the overlapping of uses. Relieving public space by shifting parking pressure to neighborhood garages at the edge of the neighborhoods creates a permanent opportunity to rededicate parking spaces for pedestrian and bicycle traffic and for recreational activities. In addition, park search traffic in the neighborhoods is avoided, so that a reduction in noise pollution from road traffic can also be expected. Neighborhood garages offer further opportunities for clustering uses, such as neighborhood boxes that reduce delivery traffic in the neighborhoods.

Summary

Type of measure: Pull

Neighborhood: Osterkirchenviertel, Mitte Altona

Reference Local concept for climate protection in Altona: E2.2 Conceptual further development of parking management, F4 Integration of neighborhood boxes at central public locations

Time frame:

Costs: € € €

Prioritization: medium

Interfaces: M7 Designation of strategic delivery zones and neighborhood boxes, M8 Parklets and pocket parks

Steps for action

- Examination of the availability of space in and around the neighborhood (e.g. on Gaußstraße)
- Examination of the possibilities for neighborhood garages
- Negotiations with parking garage operators for increased designation of permanent resident parking spaces in parking garages/on parking lots with reduced rates for residents
- Promote these parking spaces actively and create an easily accessible internet portal for renting parking spaces
- Expansion of the charging infrastructure for e-vehicles in the parking garages (parking garage operator as operator of the charging infrastructure)

Frankfurt

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M7 Designation of strategic delivery zones and neighborhood boxes

Short discription

Frequently, delivery traffic in dense neighborhoods causes obstructions for other road users due to vehicles being parked incorrectly on sidewalks and bike paths. The "last mile" in particular plays a decisive role here. Delivery traffic requires stopping facilities as close as possible to the delivery destinations, and parking and stopping times tend to be short. With the designation of delivery zones, traffic and a constant "stop and go" in the neighborhoods could be avoided. The fine distribution of the goods then takes place from the delivery zones to the customers on foot. The implementation of neighborhood boxes in residential areas is another approach to reduce delivery traffic in the neighborhoods. Clustering noisy uses by installing neighborhood boxes at retail locations, mobility stations, and neighborhood garages results in reducing road traffic noise from delivery traffic in noise-sensitive areas. A mobility hub will be built at the corner of Harkortstraße and Gerichstraße close to the urban district Mitte Altona.

Steps for action

- Identification of suitable areas in combination with neighborhood parking
- Addressing potential cooperation partners

Summary

- Type of Measure: Pull
- Neighborhood: Osterkirchenviertel, Mitte Altona
- Reference Local concept for climate protection in Altona: E2.2 Conceptual further development of parking management, F4 Integration of neighborhood boxes at central public locations.
- Time frame:
- Costs: € € €
- Prioritization: medium
- Interfaces: M6 Neighborhood garages

Good Practice: München Quartier Neuaubing-Westkreuz

In Munich's Smarter Together development district Neuaubing-West-Kreuz, two neighborhood boxes have been on trial since 2020. The boxes take on a wide variety of functions, including delivery, shopping and exchange services. Among other things, they can be used by residents as a classic locker or as a shared depot shared by several residents, allowing them to share goods such as tools. With refrigeration, freezer and room temperature compartments, goods for daily use from local businesses or the cooperating online supermarket can also be deposited in the neighborhood boxes.

Munich

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M8 Parklets and Pocket Parks

Short discription

In addition to their function as traffic streets - this includes motor vehicle, pedestrian and bicycle traffic - residential streets have a particularly socializing, communicative and integrating function. Selective conversions of parking stands to parklets can loosen up the streetscape and lead to a higher quality of stay. This contributes significantly to the revitalization and increased attractiveness of the public space. The summer months in particular lend themselves to temporary changes of use of parking stalls in order to promote the public function of the street space. These changes of use are possible with simple means and, depending on the season, are also easy to remove or install. They offer great potential for outdoor dining, especially for the restaurant industry. Through positive experiences with temporary conversions of parking stalls and the participation of residents as neighborhood mentors (M10 Neighborhood mentors), valuable persuasion can be achieved on site.

The smaller neighborhood-related facilities also have important functions as places for children to stop and play. Some areas have so far been used below their actual potential, for example as parking areas for scooters and bicycles (e.g. Zeißtwiete) and could be put to new use as pocket parks.

Steps for action

Identification of suitable street spaces for temporary changes of use/special use permits for (individual) parking stalls.

Reduction of land consumption for parked cars

Initiating and coordinating with residents on options for rezoning and, if possible, adopting installed furniture

Provision of new elements of street space design and use that invite people to linger (seating, recreational areas such as small playgrounds, outdoor catering)

Conversion of individual parking spaces into bicycle parking areas through the installation of mobile bicycle parking facilities.

Greening, e.g. through flower beds and trees

Summary

Type of measure: Push and Pull

Neighborhood: Osterkirchenviertel

Reference Local concept for climate protection in Altona: E1.2 Integrated redesign/optimization of intersections, F1.1 Land redesignation

Time frame:

Costs: € € €

Prioritization: high

Interfaces: M3 Bicycle parking, M10 Neighborhood mentors

Good Practice: Rotterdam, Hoogkwartier

In 2019, the Mobility Challenge was carried out in Rotterdam's Hoogkwartier neighborhood. For two months, electric cars and electric bicycles were available to residents who parked their own cars in a parking garage. As a result, the freed-up parking spaces were then equipped with mobile green spaces, gardens and playground equipment, which were repeatedly moved by the residents during the time.

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M9 Encounter zones

Short discription

Due to a largely mono-functional orientation towards motor vehicle traffic, residential streets are often unattractive both visually and functionally. In addition to selective seating and play facilities, specially established encounter zones make a significant contribution to increasing the quality of stay in public space and its use. They enable activities outside the home by providing places to rest and linger ("Mobility always needs places of immobility"), but also space to communicate, move and try things out. In addition to the quality of stay, encounter zones aim to improve traffic safety and accessibility while reducing road traffic noise. Encounter zones should be established in already noisy areas (recreational noise, e.g. in the vicinity of schools or playgrounds) in order to bundle noisier uses at this point.
The concept of pedestrian zones originates from Switzerland and is even legally regulated there in the signalization ordinance. Here, pedestrian traffic has priority, the maximum speed is 20 km/h, and parking is prohibited outside marked areas.

Steps for action

- Identification of suitable street spaces
- Analysis of the status quo of the street to be transformed
- Development of an implementation concept with the participation of the neighborhood residents

Summary

- Type of measure: Push
- Neighborhood: Osterkirchenviertel, Mitte Altona
- Reference Local concept for climate protection in Altona: F1.1 Land redesignation
- Time frame:
- Costs: € € €
- Prioritization: medium
- Interfaces: M8 Parklets and Pocket Parks

Good Practice: Frankfurt am Main„Encounter zones“

In Frankfurt am Main, traffic-calmed areas were created in the inner-city residential district of Nordend according to the design principle of pedestrian zones. Through marking solutions and selective construction measures (sidewalk noses, creation of separated recreational areas, ...), attractive and livable residential streets could be created at relatively low cost and with the participation of the residents.

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M10 Neighborhood mentors

Short discription

In addition to infra-structural approaches, "soft" measures to raise awareness among the population are also necessary to promote the targeted measures. In addition to measures such as image building and information (maps and plans), neighborhood sponsorships for parklets or encounter zones in the neighborhoods are recommended. Taking over sponsorships for parklets and installed furniture stimulates public and private commitment in the neighborhood. This not only relieves the public sector, but also gives residents the opportunity to individually design their street space and increases identification with the residential environment (e.g. planting/care of tree grates, green beds by residents). In the long term, this can improve the existing mobility culture and change traffic behavior in favor of a sustainable means of transport.

Steps for action

Initiation and coordination with the residents

Summary

Type of measure: Pull

Neighborhood: Osterkirchenviertel, Mitte Altona

Reference Local concept for climate protection in Altona: H Communication and mobility management

Time frame:

Costs: € € €

Prioritization: high

Interfaces: M8 Parklets and Pocket Parks, M9 Encounter zones

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M11 Qualitative upgrading of bus stops

Short discription

The creation of barrier-free accessibility, especially in public transport, is intended to enable and facilitate people's participation in the daily life, regardless of their impairment. In this context, barrier-free public transport should also be seen as an alternative to the car. In this context, the stops should also have a high quality of stay, such as the presence of a bus shelter with seating and adequate lighting. It should be noted here that accessibility refers not only to the vehicles and the stop itself, but also to the accessibility to it. For example, sufficiently wide sidewalks must be available. In the case of narrow streets, sidewalk widening or alternative measures may be required (e.g., mixed surfaces).

Summary

Steps for action

- Tactile elements and removal of obstacles/edges in the bus stop area and in the access area
- If possible, equipment with seating and bus shelters
- Lighting and large font size of timetable, fare and route network information

- Type of measure: Pull
- Neighborhood: Osterkirchenviertel, Mitte Altona
- Reference Local concept for climate protection in Altona: C3.4 Barrier-free expansion of public transport stops
- Time frame:
- Costs: € € €
- Prioritization: low
- Interfaces: M3 Bicycle parking

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M12 Crossing concept

Short discription

Crossings of roadways are often the biggest obstacles for pedestrians in everyday life. Safe and barrier-free crossings are of great importance, as they, together with adequate sidewalks, are the elements that create continuous path networks and enable connections between neighborhoods. To simplify street crossings for pedestrians, there are different crossing facilities. The selection of a particular crossing facility depends, among other things, on the number of pedestrians crossing and whether they cross the roadway in a punctual or linear fashion, the strength and speed of motor vehicle traffic at the crossing point, the width of the roadway, the number of lanes, and the surrounding land use. Regardless of the load, however, crossing facilities are appropriate if people in need of protection are to be expected on a regular basis; this is the case, for example, with school routes marked in school route plans (M13 School route plans).

Possible crossing facilities are:

- Crosswalk
- Sidewalk nose
- Center island
- median strip
- color marking
- (partial) paving
- traffic lights

Steps for action

Inventory analysis and identification of relevant crossing situations

Selection of suitable crossing facilities

Summary

Schweinfurt

Arnsberg

Type of measure: Pull

Neighborhood: Mitte Altona

Reference Local concept for climate protection in Altona: A2 Barrier-free design of public spaces, A4 Pedestrian-friendly crossings and intersections

Time frame:

Costs: € € €

Prioritization: medium

Interfaces: M11 Qualitative upgrading of bus stops, M13 School route plans

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M13 School route plans

Short discription

School route plans are documented recommendations of reviewed and suitable school routes and thus the basis for effective school route safety. They contain route recommendations and are mostly aimed at parents of children newly enrolled in school, but they are important for all parents and should show how to deal with problem areas. A child-friendly school route plan should include a letter to parents with general information about school route safety, a school route map with information about school routes, crossing points and problem areas on the way to school, and recommendations on how to deal with these areas. Furthermore, School route plans can include destinations for children, play opportunities, and school mobility management measures. Safe routes to school raise awareness among children, young people and their parents at an early stage to complete everyday journeys without a car.

Steps for action

- Designate coordinating body in the administration
- Address schools and determine responsibilities
- Provision of materials
- Joint development of the school route plan
- Making the school route plan available to parents and children

Summary

Type of measure: Pull

Neighborhood: Osterkirchenviertel, Mitte Altona

Reference Climate Local concept for climate protection in Altona: A3.2 Develop themed routes/ Near-mobility routes/ pathways (play routes, sports routes, seating routes...), A4 Pedestrian-friendly crossings and intersections

Time frame:

Costs: € € €

Prioritization: medium

Interfaces: M9 Pedestrian zones, M12 Crossing concept

Good Practice: Baden-Württemberg, School route plans

The Safe Routes to School decree from Baden-Württemberg stipulates that schools, if necessary in cooperation with the road traffic authorities and the police, survey routes and problem areas of the pupils. It is the task of the administration to provide the schools with the necessary maps, to evaluate the results and to create online and print school route plans. The state of Baden-Württemberg provides a web-based geo-information system "Schulwegplaner" for the creation of school route plans. This system supports the implementation of the most important steps, from the survey in the classrooms, to the provision of the routes and problem areas to the municipalities, to the analysis and designation of the safest routes to school by the municipality.

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M14 Cycling axis

Short discription

Bicycle routes take on important functions such as the connection of city districts or the connection and development of neighborhoods and significant transfer points. The long-term developments in the district, such as the relocation of the long-distance train station to Diebsteich and the bicycle route expansion or the identified potentials for connecting the Mittel Altona with the lid of the A7, must be taken into account when developing the bicycle infrastructure. The long-term elimination of the car train along President-Krahn-Strasse will result in new potential for moving and stationary bicycle traffic. In the long term, improvements can also result from a bicycle lane if the axis is more heavily used by bicycle traffic. If bicycle traffic axes run along one-way streets, these should be opened for bicycle traffic (e.g., Präsident-Krahn-Straße).

Steps for action

- Check route guidance and cycling infrastructure in the further planning/implementation process.
- Review connection and development function of the route and consider bicycle lane if necessary
- Review use of modal filters
- Opening of one-way streets in the opposite direction
- If necessary, reorganization of stationary traffic

Summary

- Type of measure: Pull
- Neighborhood: Mitte Altona
- Reference Local concept for climate protection in Altona: B1.1 District route network - closing gaps, B1.4 Traffic-safe intersection design
- Time frame:
- Costs: € € €
- Prioritization: high
- Interfaces: M3 Bicycle parking

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M15 Modal filters

Short discription

With modal filters, it is possible to prevent selected routes from being used by motor vehicle traffic in particular, while still allowing bicycle and pedestrian traffic to pass through. This reduces motor vehicle pass-through traffic, thus reducing pressure on neighborhood streets, and at the same time strengthens the travel time ratio in favor of local mobility over car traffic. Bollards are usually used as a structural instrument (in rare cases, they can also be lowered to clear the way for rescue or garbage trucks, for example). Modal filters can also be used on public transport axes, provided that there are passage options for these (e.g. by means of barriers).

Possible use of a modal filter:
End of President-Krahn-Strasse to strengthen the bicycle connection between Altona station and Mitte Altona.

Steps for action

- Examination of the possibilities for use/ general conditions on site
- Examination of further locations, e.g. in the Osterkirchen district
- Traffic trials with accompanying evaluation/controlling possible at selected locations
- Implementation

Summary

- Type of measure: Push and Pull
- Neighborhood: Osterkirchenviertel, connection to Mitte Altona
- Reference Local concept for climate protection in Altona: F3 Quiet Areas / Silent Quarters
- Time frame:
- Costs: € € €
- Prioritization: low
- Interfaces: M14 Cycling axis

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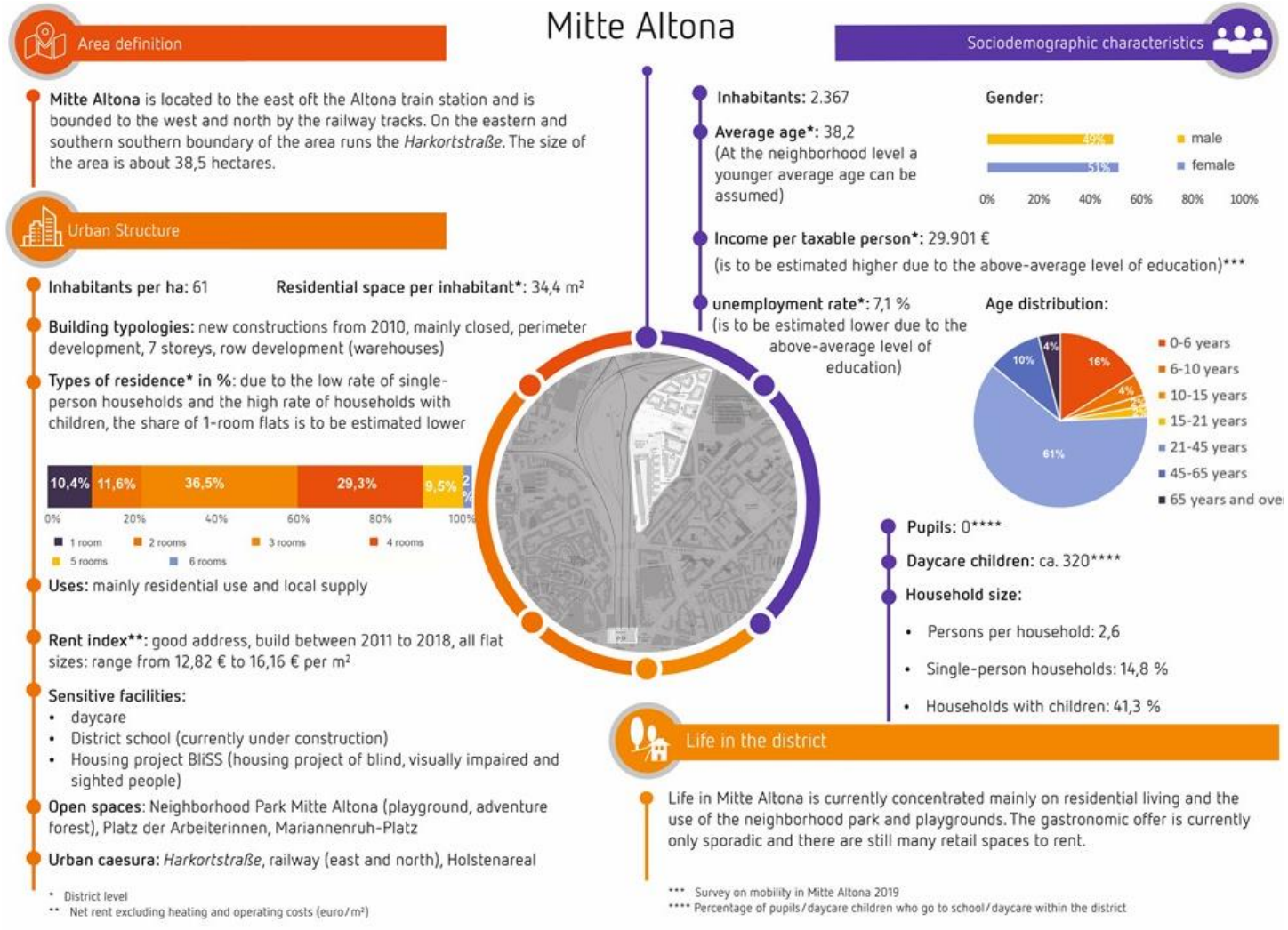
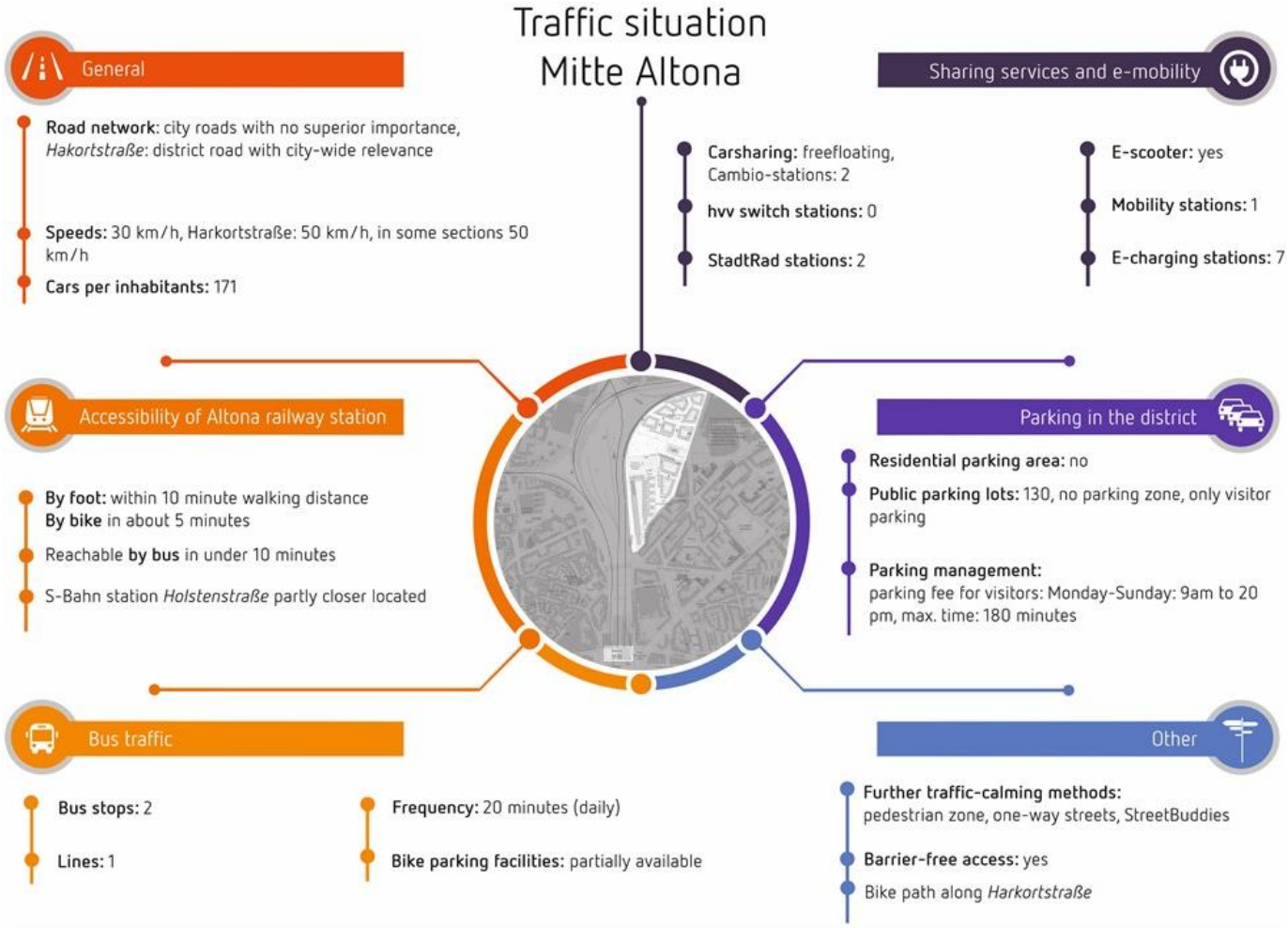
Figure 6 Sociodemographic characteristics of Mitte Altona



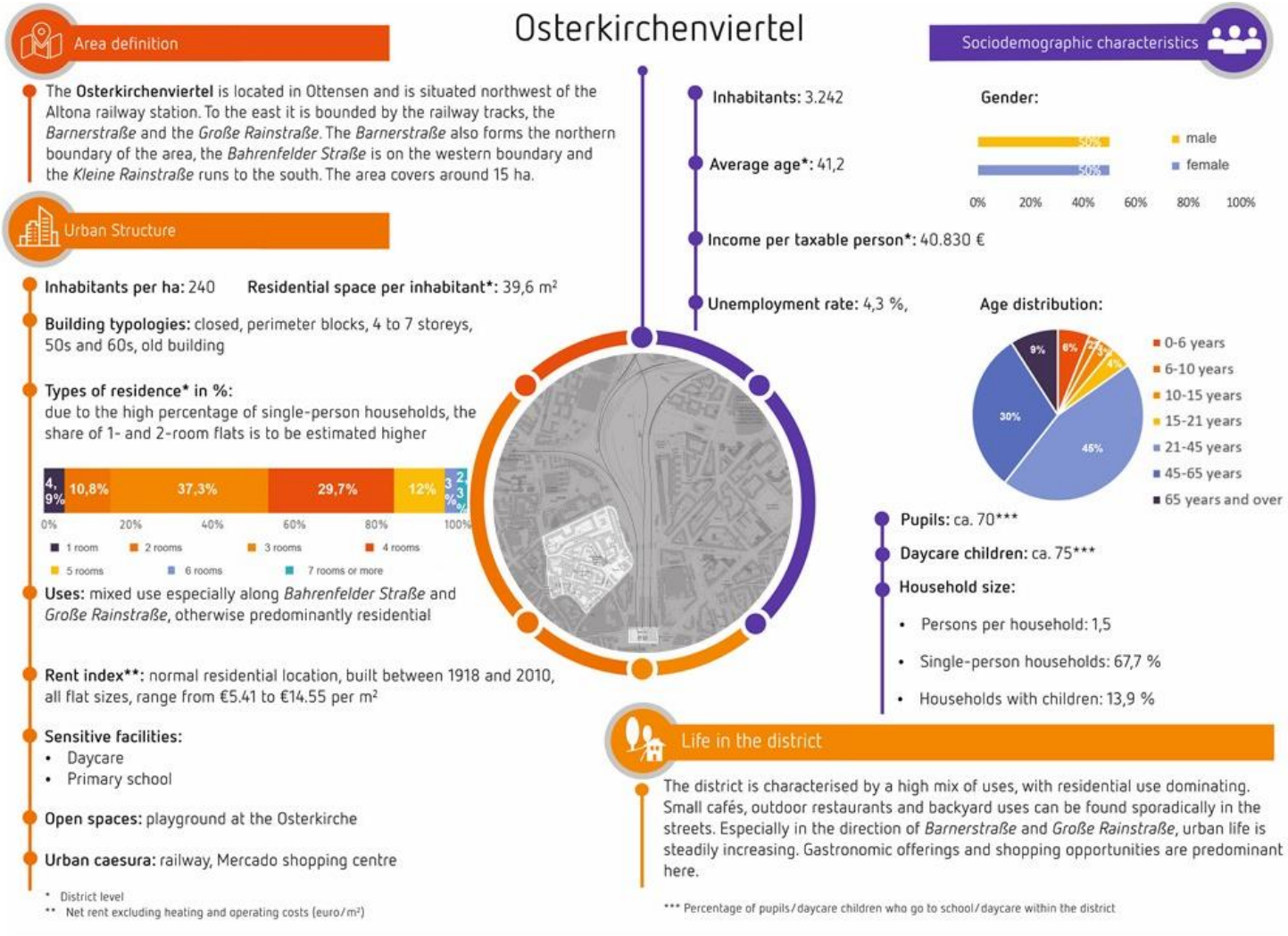
Source: Planersocietät, Data basis: Sources of the profiles

Figure 7 Traffic Situation in Mitte Altona



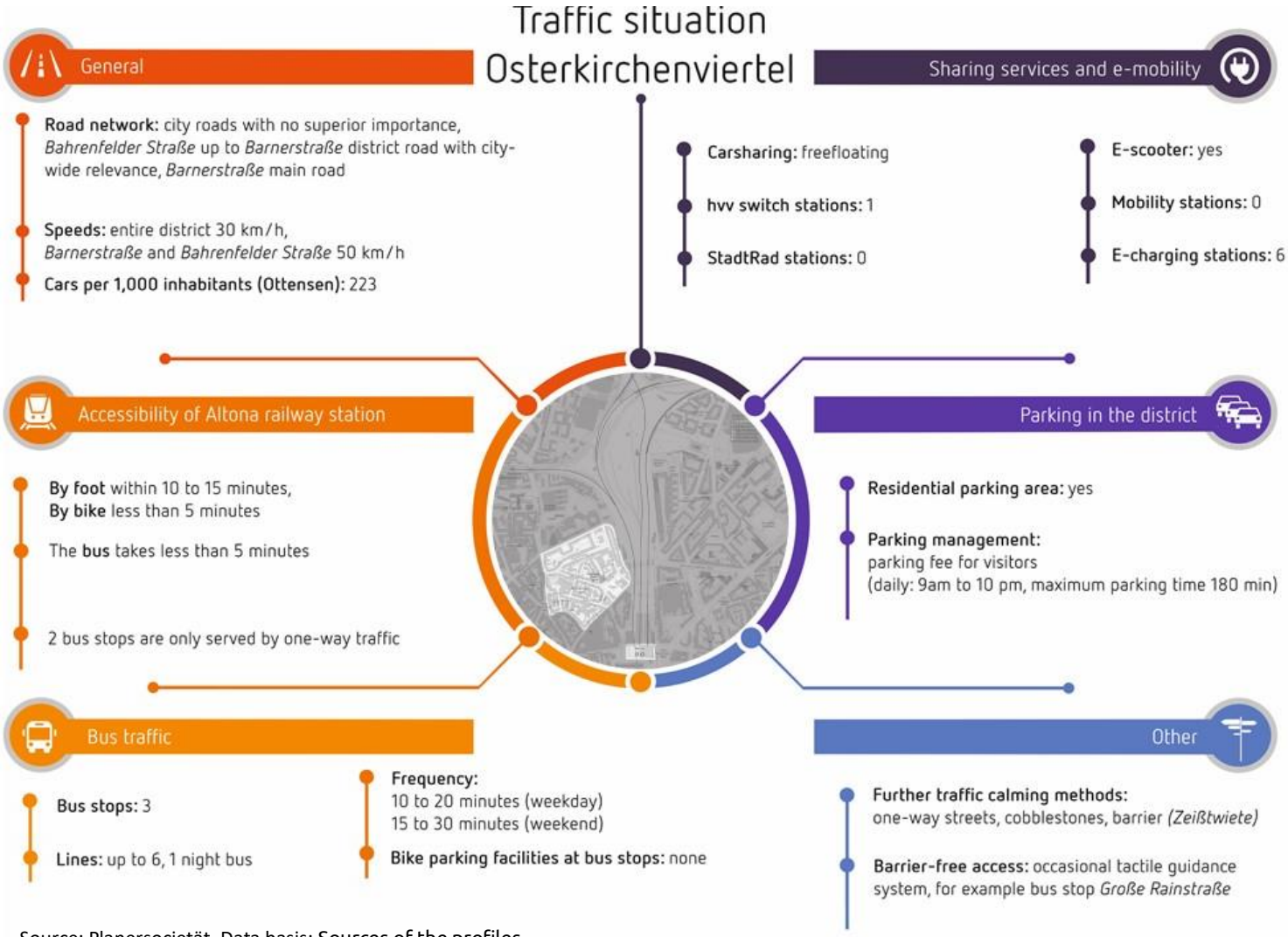
Source: Planersocietät, Data basis: Sources of the profiles

Figure 8 Sociodemographic characteristics of Osterkirchenviertel



Source: Planersocietät, Data basis: Sources of the profiles

Figure 9 Traffic situation in Osterkirchenviertel



Source: Planersocietät, Data basis: Sources of the profiles