



Sustainable Neighbourhood Mobility Planning

Synergies between city-wide SUMP and neighbourhood-based planning



Imprint

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Authors:
Ralf Brand (Rupprecht Consult) and Michael Koucky (Koucky & Partners)


Contributors:
Morgane Juliat (Rupprecht Consult) and Alex Spielhaupter (Koucky & Partners)

Reviewers:
European Commission: DG MOVE
Bonnie Fenton (Rupprecht Consult)

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Design and Layout:
Pitch Black Graphic Design, The Hague / Berlin

Contacts
European Commission
Directorate-General for Mobility and Transport
Unit B.3 – Innovation, Research & Urban Mobility
Rue Jean-Andre de Mot 28
B-1049 Brussels

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Executive summary

This SUMP topic guide highlights ways in which planning efforts at the neighbourhood level and at the city-wide level can complement one another. It is based on the experience of the CIVITAS project SUNRISE and its 'sister projects' (<https://civitas-sunrise.eu/resources/sister-projects>).

The document presents the specific advantages of planning for sustainable mobility at the neighbourhood level. The neighbourhood is where people's everyday life unfolds, where our children play, where we know the neighbours, do our daily shopping, raise our offspring, visit friends, look after our ageing parents, etc. This spatial level has, by definition, certain features that can and should be utilised for a more sustainable mobility system. This includes short distances that are conducive to active modes of transport, but also a shared sense of identity, detailed local knowledge, established communication channels, etc.

Another key advantage of working at the neighbourhood-level is the opportunity to involve residents and stakeholders very intensively in all steps of the innovation chain – much more than is typically possible within city-wide (SUMP) planning processes: the identification of problems, the development of measures, their implementation and their evaluation. The starting point of this

topic guide is, therefore, the nexus between 'co-creation' as a procedural approach and the neighbourhood as a spatial / social unit.

However, there is usually a lack of power at the neighbourhood level, a lack of specialist expertise, of quality data, of paid staff capacity and of influence on infrastructure decisions that affect the neighbourhood. All this means that efforts at the neighbourhood level need to be 'joined-up' with efforts at the city-wide level. It also means that if a city's high-level mobility planning ignores the daily reality of its many neighbourhoods, it runs the risk of 'structural arrogance' and/or ignorance and limited effectiveness. In other words, if mobility does not work within the various neighbourhoods it is unlikely to work in the city as a whole.

Therefore, neighbourhood-based and city-wide planning must be aligned. This topic guide highlights situations where this alignment makes most sense and ways in which such an alignment can be achieved. If well coordinated, SUMP activities can support actions at the neighbourhood level in various ways and ensure that decentralised efforts are compatible with city-wide goals and measures. Similarly, initiatives for sustainable mobility in a neighbourhood can spearhead specific measures for implementation throughout the entire city.



Figure 1: Meeting with residents in the Baka neighbourhood / Jerusalem.
© City of Jerusalem.

1. Introduction

1.1 Goals and target audiences

The neighbourhood is the geographical unit where most people experience their city first hand – they live there, walk, cycle and drive within, to and from their neighbourhood and are directly affected by the quality of their surroundings and infrastructure. At the neighbourhood level, inhabitants use the transport system actively but are also directly impacted by it – both enabled as well as limited because of barrier-effects, safety concerns, noise or air pollution.

However, the neighbourhood is rarely considered as a central unit for planning efforts – be it for mobility or other domains. The detailed local knowledge of people about their immediate surroundings is not typically utilised in mainstream planning processes, despite the fact that myriad very localised details determine the quality of life and the mobility choices of almost everyone. Clearly, a city-wide planning process cannot take into consideration and address all aspects at the micro level. Therefore, there is both a need and an opportunity to complement city-wide SUMP with neighbourhood-level planning.

This topic guide addresses neighbourhood-level mobility planning and the possibilities of co-creation it offers within the context of a city-wide SUMP-process. What are the opportunities and challenges in bringing transport planning to the neighbourhood level? Can neighbourhood-based planning support and strengthen the implementation of a SUMP and vice versa? Is there a risk of conflicting interests and to what extent can and should neighbourhood-based planning relate to city-wide planning and goals? What are the similarities and differences in the planning processes?

This document is intended to provide an introduction and insight into this topic. However, it will not provide detailed guidance on methods for neighbourhood mobility planning nor detailed descriptions of examples – these are covered by several other publications of the *Civitas-SUNRISE-project*.

The primary target audience of this topic guide are urban mobility professionals who work with transport planning, strategies and measures in or for cities or districts, e.g. with the development and implementation of a city-wide SUMP, mobility measures or transport strategies, and who are interested in what planning at the neighbourhood level can bring to the process. In addition, this guide is intended for all readers with an interest in urban mobility, regardless of their role as either employee in a city administration, member of a political decision-making body, neighbourhood organisation or as an active resident who wishes to improve the mobility situation in the neighbourhood.

Neighbourhood-based mobility planning stands in no contradiction or competition to a city-wide SUMP process. On the contrary, the processes and measures at these different geographical scales can and should complement each other and measures should be developed and implemented at the most suitable level in the spirit of subsidiarity. Like this, detailed local knowledge can be utilised to develop solutions that are well adapted to the local situation and, at the same time, are complementary to the city-wide SUMP process.

1.2 The neighbourhood – key to changing mobility

A growing number of cities are beginning to realise the neighbourhood level has inherent potential for mobility improvements that should be utilised as part of a comprehensive approach towards more sustainable mobility, as well as towards many 'co-benefits' like quality of life, inclusiveness, social cohesion, public health, etc. These cities are increasingly complementing their traditional central planning approach with decentralised but coordinated planning and action.

In other words, more and more cities acknowledge that important parts of the solution to their mobility challenges can consist of local intervention on the streets, parks and squares of their different neighbourhoods. Furthermore, it is easier to engage with residents and local stakeholders when the questions concern their neighbourhood. Many people who show little interest or might even shy away from city-wide planning processes are willing to contribute their views, ideas and time to activities in their immediate surroundings.

This might almost feel like going back in time to a period when actions were coordinated at a very local level within closely-knit communities, and (literally and mentally) within reach. Within such a limited area, complexity is often perceived as less daunting, communication is easier, the impact of actions can be felt directly and the motivation to tackle something together is tangible. This is not a romanticized plea for the good old days but an acknowledgement of how human beings typically 'function'. Yes, our (post)modern societies have developed into rather sophisticated constructs with amazing analytical capabilities and complex decision-making structures – and we should utilise this as much as possible. But we are also rooted in the places where we live, where our children play, where we know the neighbours, do our daily shopping, raise our offspring, visit friends, look after our ageing parents, etc. – our neighbourhood.

Within the patchwork of neighbourhoods that makes up a city, the differences in mobility behaviour or other

¹ Tagesschau, 2021

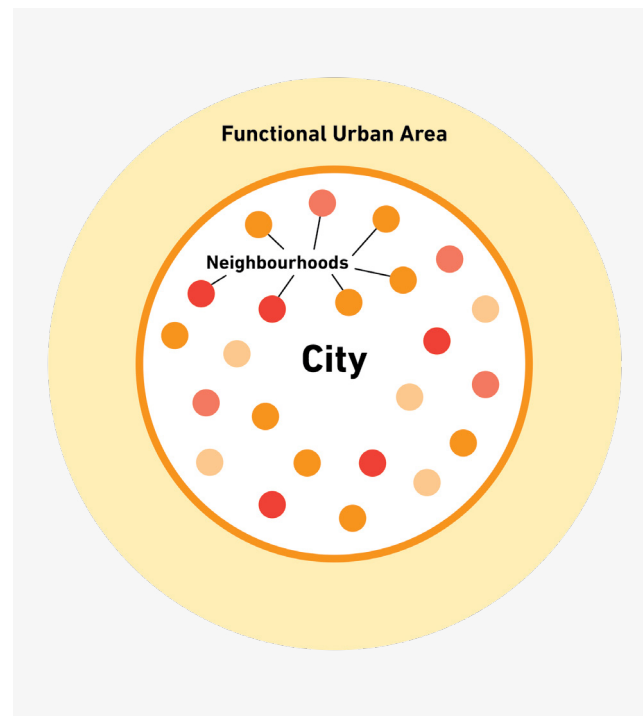


Figure 2: A city within a FUA as composite of many neighbourhoods.

parameters such as income levels, car ownership, obesity rates, accessibility by public transport and other aspects can be as big or even bigger than between cities. To illustrate this point, in spring 2021, the COVID-19 infection rate per 100,000 inhabitants ranged from 68 to 540 across different districts in Cologne¹. In the same city, there can be neighbourhoods that are progressive forerunners where sustainable mobility patterns are well established, as well as neighbourhood with few alternatives to cars.

Because of this diversity of neighbourhoods with their different characteristics, strengths and weaknesses, city-wide goals, measures, indicators, etc. are sometimes simply inappropriate to be applied directly to the neighbourhood level. This also illustrates the need to tailor plans and actions to specific neighbourhoods. Importantly, this is how a city's government can get closer to the people and their needs. The understanding of both differences and similarities between neighbourhoods also opens opportunities to learn and transfer good practice within a city, and not only between cities.

A prominent example of increasing attention being paid to the neighbourhood as a central unit of our urban reality relates to the 'Low Traffic Neighbourhoods' in London. In this case, abstract ideas and concepts of mobility become tangible in the form of small-scale street interventions, such as flower planters, modal filters (= essentially bollards) and other, sometimes rather mundane, measures which improve liveability in a relatively small area. Similarly, the 'Superblocks' (Superilles in Catalan) in Barcelona, Vitoria Gasteiz and a number of other cities clearly illustrate how high-level ideas about a better mobility system can eventually become transformative and manifest themselves as specific changes in people's neighbourhoods, in the form of trees, sun chairs, new traffic signs, the conversion of parking places into a play area, etc. The widely-discussed '15-minute city' concept is a clear manifestation of this mode of thinking.

The transformative power can go both ways. In some cases, small scale changes are initiated at the local level, for example by a group of active residents who wish to improve the quality of life in their immediate living environment, with measures that are later replicated all over the city. Grassroots initiatives at the neighbourhood level can spread and can contribute to the achievement of city-wide SUMP goals in line with the motto 'improving the city's mobility system, one neighbourhood at a time'. In other cases, a SUMP process at the central city level can spark decentralised initiatives in several neighbourhoods. Regardless of which spatial and organisational level (central or decentralised) leads the way, synergies can and should be taken into account through good coordination. This document aims to facilitate such situations.



Figure 3: 'What do you think about bike planning?' Involving residents works best at convenient locations and with fun activities. Lindängen neighbourhood / Malmö. © Emmy Linde.

1.3 Participation and co-creation

One of the eight principles of sustainable urban mobility planning is to involve residents and stakeholders and allow them to participate in the mobility planning process (see chapter 5.1). A large number of cases and studies show the benefits of participatory planning approaches, but also the difficulties of doing it well. Very often, there is a risk that *involvement* merely translates into *consultation*; that the ambition to facilitate genuine participation might end up as not much more than information. A further risk is that well-meant resident-involvement processes become dominated by certain demographic groups, often outspoken and socioeconomically privileged, rather than representing the population as a whole.



To involve and engage a wide range of residents and stakeholders is often difficult. The more abstract and the more remote the topics are from everyday reality, and the larger the area in question, the more challenging it gets to mobilise participants and to retain people's motivation and active participation.

At the neighbourhood level, however, everyone has opinions and hands-on experience of the transport system and its problems. The neighbourhood is the spatial level that most people know really well, that they care for and that matters to them in a literal, direct sense. It is also the level where people know each other, where even hard-to-reach groups can be consulted and where small-scale interventions can provide significant improvements that are immediately felt.

It is therefore at the neighbourhood level where the SUMP principle 'Involve citizens and stakeholders' becomes both most relevant and applicable.

This observation has been clearly confirmed by several projects on urban mobility that focused their activities on specific neighbourhoods. Four European-funded Horizon 2020 *Research and Innovation* projects deserve a special mention in this context: *Cities4People*, *MUV*, *METAMORPHOSIS* and *SUNRISE*. They ran from 2017 until 2020 / 2021 and provide most of the empirical basis for this document. These projects utilised the characteristics of the neighbourhood level to push the limits of participation towards an approach that is widely referred to as 'co-creation'.

The defining trait of co-creation is that residents and stakeholders are not only involved in the definition of problems or in the development of plans but that they are involved in all steps of the entire innovation chain. The co-creation approach and its use in neighbourhood mobility planning is further described in chapter 3.

Figure 4: Discussing neighbourhood issues on site in the Lindängen neighbourhood / Malmö.
© Emmy Linde.

Attention to neighbourhoods in other SUMP topic guides

Although this document is the first SUMP topic guide to focus explicitly and entirely on neighbourhood-based planning, it is certainly not the first and only one to address this issue as such. Other SUMP topic guides have indeed touched upon the need for neighbourhood-based planning by exploring the relevance of decentralised actions to their own main topic. They have also highlighted the interdependence between neighbourhoods and the rest of the city when implementing SUMP.

For example, the topic guide '*Sustainable urban mobility planning in metropolitan regions*' acknowledges the need to coordinate metropolitan mobility planning with local neighbourhoods. For successful implementation, planners need to ensure cooperation and regular exchange throughout the entire implementation, which also includes neighbourhoods impacted by the measures. The development of a SUMP would allow for setting common targets at the metropolitan level and for breaking them down into sub-targets at the neighbourhood level, thus ensuring their consistent implementation.

The topic guide '*Integration of Shared Mobility Approaches in Sustainable Urban Mobility Planning*' makes the dual point that a) the integration of shared mobility is highly dependent on activities at the neighbourhood level and b) that the integration of car-sharing services has an impact on neighbourhoods. To illustrate the latter point, users of car-sharing schemes tend to shop more in their neighbourhood, thereby strengthening the local economy but also promoting less car-oriented multimodal mobility behaviour and infrastructure. The former point is explained by the fact that conveniently located car-sharing stations have to be near people's residences, i.e. in the heart of neighbourhoods.

Another SUMP topic guide ('*Linking transport and health in SUMPs: How health supports SUMPs*') argues that neighbourhood-based mobility planning can contribute to better public health levels by promoting walking and cycling as the main means of transportation in the neighbourhood. There is evidence that people living in more walkable neighbourhoods typically walk and cycle more, they tend to enjoy better health, they drive less and produce less air pollution than people living in car-oriented areas.

The neighbourhood level is even important when it comes to the electrification of mobility. This relationship is explained in the topic guide '*Electrification: Planning for electric road transport in the SUMP context*'. A key reason for this is the necessity for close cooperation within and between neighbourhoods to plan and implement an extensive and regional charging network. For example, owners of home electric vehicle (EV) chargers could be encouraged to make this infrastructure accessible to other people in the neighbourhood. This can be stimulated through a platform where owners of home EV rechargers can indicate when their home EV-recharger is available to others.

The topic guide '*Addressing gender equity and vulnerable groups in SUMPs*' highlights the importance of the neighbourhood as a spatial unit where almost all people make the 'first mile' of their daily trips. This determines whether social groups, whose mobility needs are often not well catered for by mainstream mobility systems, can move around conveniently or not. For example, whilst women often have complex travel patterns (jobs, care, health, education, shopping, etc.), men tend to commute on more linear routes. Much contemporary transport planning favours the latter type of trips, which amounts to a problematic gender bias. More polycentric and mixed-use spatial planning would improve this situation and have direct consequences on the shape and structure of every neighbourhood.

Lastly, the topic guide '*UVAR and SUMPs: Regulating vehicle access to cities as part of integrated mobility policies*' points out that most Urban Vehicle Access Regulation (UVAR) schemes cover the most dense, congested and polluted central urban areas of a city. The guide also draws attention to other types of UVAR at the neighbourhood level. Superblocks may be among the most prominent examples of such an approach, but this could also lead to a tighter LEZ (Low Emission Zone) within a less strict LEZ. And, of course, measures such as pedestrianisation, traffic circulation plans and road space reallocation can positively impact on people's life within their neighbourhood. In this and all other cases, the neighbourhood with its typically well-developed communication channels can and should be used for the development and implementation of UVARs.

All existing SUMP Topic Guides are available at <https://www.eltis.org/mobility-plans/topic-guides>.

2. Neighbourhood-based planning

2.1 What characterises a neighbourhood?

The term 'neighbourhood' is not easily defined by a given geographical size, population number or measurable feature. For instance, the action neighbourhoods which were part of the SUNRISE project varied from 0.1 to 1.84 km² in area and from 2,900 to 13,000 inhabitants. Some of these were congruent with administrative boundaries, whereas others were primarily areas with a shared sense of identity but without any formal structures of their own.

The Encyclopedia Britannica describes a neighbourhood as an 'immediate geographical area surrounding a family's place of residence, bounded by physical features of the environment such as streets, rivers, train tracks, and political divisions. Neighbourhoods also typically involve a strong social component, characterized by social interaction between neighbours, a sense of shared identity, and similar demographic characteristics such as life stage and socioeconomic status' (Encyclopedia Britannica, n.d.)

'Neighbourhood' is therefore understood in terms of its proximity as well as through its function as a social space, defined by the experience and understanding of the people living in it or referring to it. It is the spatial unit in which face-to-face social interaction occurs, where residents share local resources such as pavements, parks, parking areas, etc., where they socialise but also where social control occurs.

The perceived qualities of a neighbourhood have immediate impact on people's quality of life and well-being. Traffic and mobility infrastructure can be an important quality of a neighbourhood. Local streets and pavements can provide safe and pleasant ways to access work, daily needs, school, etc. but can also act as a place for social interaction, spontaneous meetings and children's play. However, the impact can also be negative, by creating barriers, traffic safety issues that limit the accessibility and freedom of movement for children, noise and air pollution or pavements clogged with parked cars. Changes in the traffic environment, e.g. changes in traffic speed, crossing design or street parking, have immediate impact on the perceived qualities of the neighbourhood. As famously illustrated by D. Appleyard, traffic volume and speed influence the frequency of social interaction between neighbours, both across and along streets (Appleyard, 1981).



Figure 5: Identifying strengths and weaknesses of one's everyday life environment. Zugló neighbourhood / Budapest.
© Municipality of Zugló.

Characteristics of the neighbourhood level that are relevant for mobility planning and co-creation processes are:

- **Shared infrastructure:** Residents of a neighbourhood share and use the same traffic infrastructure and are also affected by its functionality and use. This includes pavements, local streets but also parking infrastructure and local mobility services. Not all residents use the infrastructure the same way, but all are affected by it in some way.
- **Common interests:** Even residents who don't know each other share common interests in their neighbourhood, e.g. the accessibility of shops, the walkability of the area, security or the traffic safety of local streets.
- **Social networks and personal interaction:** A neighbourhood contains a multitude of social networks and interactions: neighbours that know each other, school-friends, acquaintances from shops, playgrounds, sport clubs, etc. These social networks can create a sense of community and represent social capital. This can facilitate the recruitment of participants for co-creation processes, the dialogue between local interest groups and the identification of key stakeholders and multipliers.

- **Local expertise:** The residents of a neighbourhood are all experts in their surroundings – they know the quality and problems of the local transport system first hand. Their perspectives can, however, differ substantially – a child will have a different focus than a car-commuter, a cyclist, an older person or a person with a disability. They can have very detailed knowledge – from where there are cracks in the bicycle lane to where streets are used as shortcuts for transit, where illegal parking is common or where speeding often occurs.
- **Local engagement:** Many residents are personally interested in improving their neighbourhood; local engagement is easy to get if the residents perceive something as a problem.

2.2 Formal power and stakeholder involvement

A further important aspect is that almost all neighbourhoods lack a formal link with the authority for transport or mobility planning, which is usually a city-level competence. For this reason, it is a precondition for neighbourhood-level mobility planning that the responsible department/departments at the city level engage(s) in the process. The formal responsibility for mobility and traffic planning remains with the city administration. However, the city administration can choose to involve the residents and local stakeholders of a neighbourhood in the planning process. The goals can be to tap into

local knowledge, to develop locally adapted solutions or simply to increase local understanding and acceptance for proposed measures. In such a case, stakeholders from the neighbourhood, mainly residents but also businesses or other relevant stakeholders, are invited to participate in the decision-making process. Which stakeholders should be involved is case-specific. As a rule of thumb, all parties that are affected by or can affect the issue at hand or suggested measures should be considered as relevant stakeholders.

The neighbourhood as a spatial unit with inherent resilience benefits

The importance of the neighbourhood for the mitigation of and the adaptation to a crisis became apparent during the Covid-19 pandemic. These qualities and characteristics were highlighted as general resilience benefits in the SUMP topic guide on 'Planning for More Resilient and Robust Urban Mobility' (Polis and Rupprecht Consult, 2021). Therefore, the related passage is quoted here at length:

The importance of people's immediate surroundings has massively increased during the COVID-19 pandemic. Many did not commute to work at all because of home office routines or furlough arrangements. People went for more walks in their neighbourhood. Google statistics on mobility in residential areas increased up to 30% (Google, 2021) and usage statistics of local parks has gone up dramatically in most countries (e.g. in Denmark by 143%) (ibid). A significant number of people chose to walk or cycle to work and thus often discovered paths and areas in their neighbourhood they might otherwise have never explored. Errands for daily goods were more frequently done in the nearest retail areas rather than in large shopping centres at the outskirts of town – due to fear of infection or because of lockdown restrictions. On the downside, retailers of nonessential goods (including cafés, pubs, and restaurants) were hit hard by pandemic-related restrictions. However, in many cities, voucher systems and other acts of solidarity were organised by civic groups as an attempt to keep the local community intact. The importance of social networks in people's neighbourhoods has also risen. For example, many voluntary services, also called mutual aid groups, to help with shopping, walking the dog, etc. were offered on lampposts or in locally-based online communities. Such social capital is a key ingredient of a robust society. In other words, a stable, socially cohesive neighbourhood is a firm foundation for resilience in times of crisis. The social and spatial qualities of a neighbourhood even have an impact on aspects of resilience, which were on few people's radars before the COVID-19 pandemic: designing neighbourhoods with open public spaces allowed for people to spend time outdoors while staying distanced and providing safe areas for children to play outside while their parents work from home. The neighbourhood scale has another inherent resilience feature, which is simply due to the spatial proximity of most

destinations. This makes it conducive for active mobility on foot or by bike, that is, independent of the functioning of large technical infrastructure or high-tech systems. In short, there is hardly anything that can break down with pedals and shoes. The natural resilience of neighbourhoods is also a result of face-to-face encounters in convivial spaces (Brömmelstroet et al., 2017) Such characteristics of a healthy neighbourhood do not grow automatically; they must be facilitated through good planning and design. A diverse structure of interesting retailers, for example, is – to a large degree – the result of good planning. This is also true for the existence of safe, direct and pleasant footpaths, bike lanes, high streets with areas for sojourning, seating, shade, play and social interaction. Specifically related to the threat of infectious diseases is the need to provide sufficient space for social distancing. In most cases, this requires a bold reallocation of space from cars, as has happened in Berlin, Milan, Paris and Brussels. This reallocation has to go hand in hand with a push in the development of alternative, sustainable mobility solutions (such as improved regional rail services, public transport or cycling infrastructure). It is important to enable the neighbourhood level to take such related decisions and to implement them with the necessary staff and funds. However, it is clear that many such decisions are the prerogative of central city administrations and policy-makers. This is the hierarchical level of SUMP, which necessitates excellent communication, mutual understanding and complementary actions between efforts and actors at the neighbourhood and city level.

3. Co-Creation

3.1 Origin and application

The concept of **participatory planning** – to involve local stakeholders and residents in the planning process – goes back several decades. Among the many influential books in this tradition, Jane Jacobs' 'The Death and Life of Great American Cities' (1961) and Sherry Arnstein's seminal 'Ladder of Citizen Participation' (1969) deserve special mention. Very influential for participatory planning were also the works of John Friedmann (1970s) and Patsy Healey with her approach of 'Collaborative Planning' (1997). SUMP principle number three 'Involve citizens and stakeholders' (see chapter 5.1) is clearly rooted in this mode of thinking. It is intended to ensure that a SUMP corresponds to the real needs and concerns of people, to spark a sense of ownership among the population and to facilitate their acceptance and adoption of SUMP-related measures.²

Co-creation goes further than that. The concept as such originated in business contexts and captures the idea of involving customers in ideation, generation, testing and fine-tuning new product ideas. The underlying purpose is to increase customer satisfaction and thereby generate revenue. In recent years, co-creation has

spread widely into non-commercial areas and has gained traction also in the public sector. In this realm, co-creation is essentially about the public sector, residents and other stakeholders joining forces, pooling their creativity, energy and resources (whether revenue, labour, contacts, space or other).

Although different authors and organisations operate on slightly different terms (typically co-creation or co-production), they tend to agree that the concept has significant potential, but also that co-creation requires careful preparation, neutral moderation and firm commitment by everyone involved.

The think tank 'Governance International' advises consideration of co-production in four phases: co-commission, co-design, co-deliver and co-assess (Governance International, n.d.). The prefix 'co' in all these phases denotes the combination, collaboration and co-ordination of the public sector and civil society in the widest sense.

Figure 6: Meeting with residents in the Zuglő neighbourhood / Budapest. © Municipality of Zuglő



² See also Rupprecht Consult (2016). Highly recommended is also a related online course: <https://www.mobility-academy.eu/course/view.php?id=53> A recent publication also articulates six interesting factors for successful participation: Kamlage and Bock (2020)

3.2 Co-creation in neighbourhood mobility planning

The neighbourhood level lends itself better than any other spatial scale to participatory mobility planning and co-creation due to its characteristics, as described in chapter 2.1.

Co-creation for neighbourhood mobility planning was thoroughly tested in the SUNRISE project, where the approach was applied to neighbourhoods in six cities. In SUNRISE, the same basic phases were used as suggested by 'Governance International', with slightly different terms: co-identification, co-development, co-implementation and co-evaluation. Each of them is briefly described in turn on the following pages.

1: Co-identification of problems:

In this initial phase, residents are encouraged to share their subjective views on what needs to be improved in their neighbourhood with regard to transport and mobility. Whatever point they raise, nothing is too big or too small an issue, nothing gets judged or immediately rejected because it does not fit into any pre-defined category. Examples of issues raised in SUNRISE neighbourhoods were e.g. the lack of public transport options, the absence of a shaded resting place for pedestrians, stray dogs on children's way to school, a sense of

insecurity when crossing an unlit area or blocked pavements that limit the accessibility of wheelchair-users or speeding on residential streets.

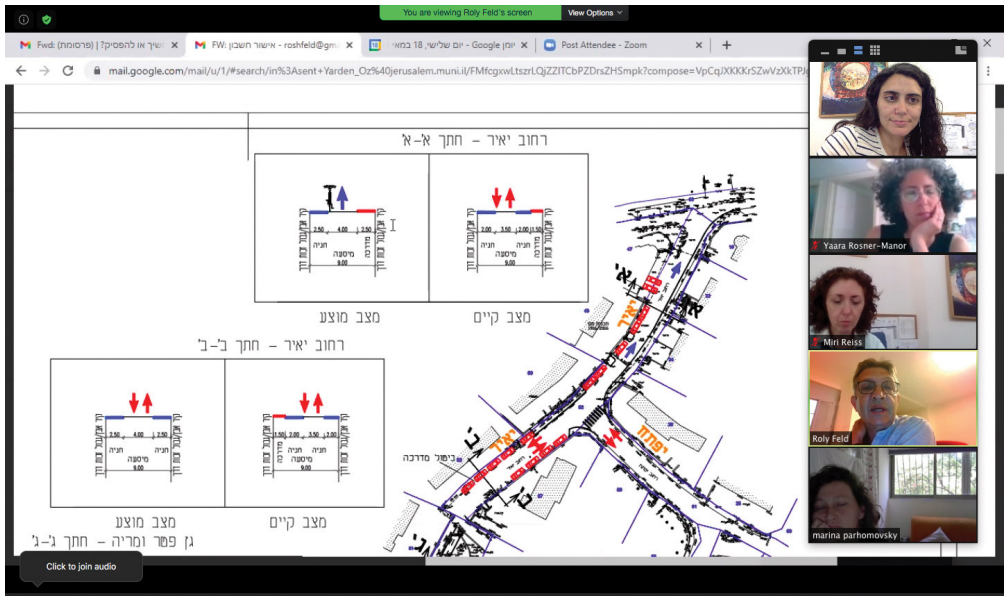
Once problem areas have been identified, this phase also includes an element of prioritisation and selection of the problems to be addressed.

2: Co-development of measures:

In this phase of a co-creation process, residents and other stakeholders should be enabled and encouraged to share and discuss any idea they may have about how to address the previously identified and selected problems. At first, no idea should be ruled out, no suggestion should be discredited as too wild, unfeasible, or unaffordable so that creativity is not stifled. City staff or external experts can be invited to add suggestions or examples from other cities.

The suggested measures should be widely discussed to finally lead to a collective selection and prioritisation. During these discussions, the feasibility of suggested measures also needs to be openly discussed, as well as whether they align with the overarching goals of the city or the SUMP. At this stage, it is important to manage expectations, to clearly communicate what is possible within the authority and budget of the city and that the final decision needs to be taken by democratically elected bodies.

Figure 7: During the COVID-19 pandemic, some planning meetings needed to be held online (Baka neighbourhood / Jerusalem). © Miri Reiss.



3: Co-implementation of measures:

Many mobility measures – probably even most of them – can only be implemented by public authorities or specialised companies that are contracted by the authorities. This is, for example, the case for any construction works or changes in speed limit. However, in some cases residents and local stakeholders can also get involved in the implementation of measures. Such local resources can come in different forms, e.g. time spent by volunteers, access to private land or financial contributions. Examples include the implementation of a walking school bus that relies on parent volunteers, the provision of better bicycle parking facilities by private property owners or the implementation of peer-to-peer vehicle sharing or ride-sharing schemes. Other examples include potholes or broken lamps reported by residents, to save maintenance crews' inspection rounds. Mobilising local resources for mobility measures can thus facilitate and strengthen a city's SUMP efforts. See the 'Co-implementation Guidelines' (Rupprecht Consult, 2019a) for more examples.

4: Co-monitoring and co-evaluation:

As with any innovation process, co-creation activities should be thoroughly assessed and evaluated. This should not be done solely by the city administration or an external organisation. No-one is in a better position to understand what aspects are important at the local level or to constantly monitor the impact of a measure than the residents of the neighbourhood in question.

Therefore, residents should be involved in the definition of key indicators for evaluation, possibly even in the collection of data and certainly in the qualitative appraisal of both the co-creation process and of its outcome. This can both facilitate evaluation and boost its quality and credibility.

The SUNRISE-project used co-creation as an umbrella term that covers all of these four separate phases.

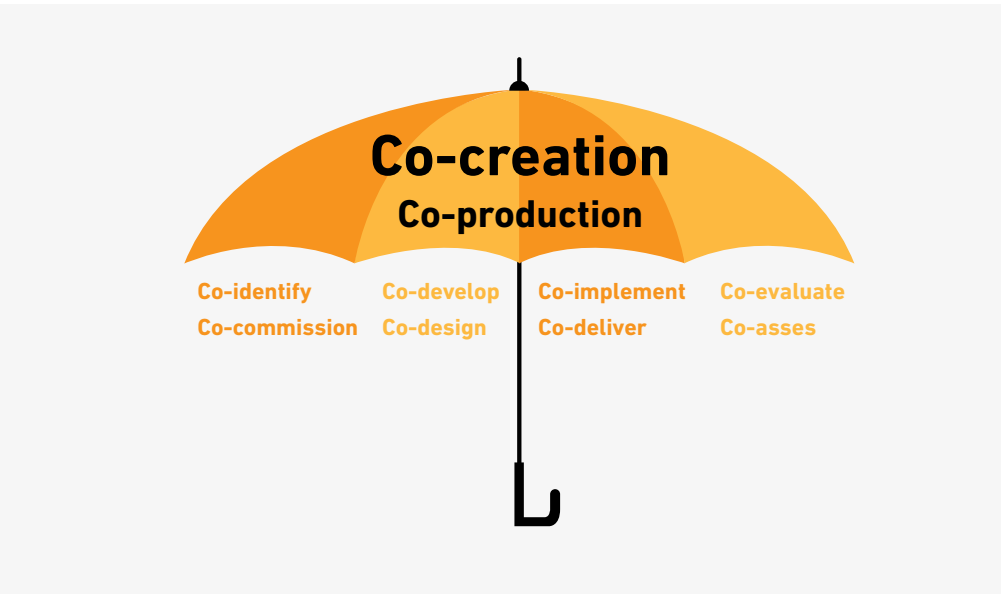
For each phase, the relevance of participation by residents depends on the specific local context and the challenge at hand, and not all phases necessarily need to be passed.

If, for instance, the local problem is crystal clear, co-identification efforts can be kept light. If the given solution to widely perceived problems is the construction of some heavy-duty infrastructure, there might not be much to co-implement.

Co-creation is not an end in itself and it should not be pursued for its own sake. But where co-creation does make sense, it should be pursued with vigour and commitment. Co-creation is appropriate when the problems are not already clearly defined and understood, when solutions with local acceptance need to be found or when local support is key for implementation.

For more detailed descriptions and guidelines on co-creation, see the resources produced by [SUNRISE](#).

Figure 8: Four different phases of defining the work within the neighbourhoods as part of the co-creation framework.



4. Benefits and drawbacks of neighbourhood-based co-creation

This chapter spells out a range of important benefits and opportunities of neighbourhood-based co-creation (4.1) but also draws the attention to several drawbacks and challenges (4.2).

4.1 Benefits and opportunities

Detailed local knowledge

Residents have detailed knowledge of the mobility situation and infrastructure in their neighbourhood, down to cracks in the asphalt or where streetlamps are out-of-order. In many aspects, they have far more detailed and up-to-date knowledge than the city administration. This knowledge can greatly facilitate the identification and localisation of problems and thus help to choose where intervention is most needed and should be prioritised.

Tapping into this local knowledge can quickly provide a detailed understanding of the situation in the neighbourhood in a better way than an inspection by city staff. In short, residents can act as 'living sensors'. This detailed knowledge also creates an opportunity for direct feedback on the impact and success of implemented measures.

Crowd-creativity and locally adapted solutions

Involving residents and local stakeholders in the process of developing and selecting appropriate solutions for local problems mobilises crowd-creativity and can lead to new solutions that city staff or experts might not have thought of – both technical and social innovations. Grassroots ideas may even be particularly refreshing, unconventional, low cost, etc. Furthermore, the combination of local knowledge and creativity together with the expertise from mobility specialists from the city or external partners can lead to solutions that are well adapted to local needs – both new ideas as well as local adaptations of proven concepts.

Greater acceptance and compliance

A deeper understanding, acceptance, and compliance with chosen measures can be expected of residents who have participated in discussions concerning problems to be tackled and appropriate measures to take. In many cases, some degree of conflict of interest is unavoidable, e.g. when parking space is restricted to free up space for pedestrians, when road speed is reduced to increase safety or when car access is regulated to provide safe passage for children. The opportunity to openly discuss these conflicts, the pros and cons of different solutions and the necessary

trade-offs can mobilise a better understanding of the constraints, complexities and inevitable compromises. This can be a crucial ingredient for acceptance of and compliance with the chosen measure, even if it is not one's own preference.

Democratic legitimacy

Mobility measures that have been co-created can generate a sense of ownership which would otherwise be unachievable. This creates democratic legitimacy because measures are not imposed by an external power (the city authority) without further explanation. Instead, the neighbourhood has some ownership of the decision and measures.

Broader mobilisation

Genuine co-creation has the potential to mobilise the interest of a much broader range of people than conventional participation formats, which are often seen as boring and sometimes even mere placation. If it is clear that *'my input really matters'*, more people – especially those who do not typically participate in formal meetings, etc. – bother to get involved. Further,

hard-to-reach groups that can be difficult to engage at the city level can often be more easily identified and involved locally. This effect is also due to issues being closer at heart to the residents and because existing social networks can be used.

Improved dialogue between residents and the city administration

Successful co-creation processes not only lead to the development of a solution to a specific problem, but they also create a positive experience of dialogue and communication that can facilitate future collaboration. Once trust has been built and the experience of co-creation is positive, future dialogue can be expected to become easier. When residents and representatives of the city administration with names and faces experience each other as human beings in intensive conversations, both sides might discover – and overcome – 'first mover paralysis'. This term denotes a situation where the administration and residents wait for each other to make the first move.³



Figure 9: Gathering residents' views about their neighbourhood can take place in various formats. Lindängen / Malmö. © Emmy Linde.

Figure 10: Bremen involving vulnerable groups in the Hulsberg neighbourhood / Bremen. © City of Bremen.



³ A cliché case would be the administration's argument 'Why should we build cycle lanes? There are hardly any cyclists' in combination with people's rationale 'I am afraid to cycle as long as there are no cycle lanes.'

Improved understanding within the neighbourhood

A co-creation process, where different groups of residents and stakeholders are involved and allowed to share their views and experience, can improve the mutual understanding of different social groups and their specific needs: wheelchair users, people who are

blind or partially sighted, car-dependent commuters, children, etc. It also allows for an open discussion on the qualities that are desirable in the neighbourhood and for whom and which compromises might be needed to achieve them.



Figure 11: Intense conversations in the Baka neighbourhood / Jerusalem. © City of Jerusalem.

4.2 Drawbacks and Challenges

Of course, neighbourhood-based planning and co-creation also has drawbacks and challenges that deserve attention. Many of these can be overcome with proper preparation, facilitation, and expectation management but they demand awareness and caution. Only known risks can be managed.

Not all mobility challenges are suitable. Not all mobility challenges are suitable to be addressed at the neighbourhood level and with a co-creation process. Only questions with a clear connection to the chosen neighbourhood, tangible impact on the residents or where

local involvement can facilitate the development and implementation process are suitable for a co-creation process at this level. See chapter 6.2 for further details.

Co-creation takes time. Residents and stakeholders who engage in a co-creation process usually do so voluntarily in their spare time and without reimbursement. Therefore, it can not be expected that they regularly attend extensive working meetings during the daytime and the process needs to allow for this. Time is also needed for discussions, to resolve conflicts and – very importantly – to build trust; maybe the most decisive ingredient of co-creation.

Therefore, a neighbourhood co-creation process demands a considerable length of time and should not be rushed. Therefore, it is less ideal for problems that need immediate attention and is more suitable for long-term development towards the goals of a SUMP. On the positive side, however, co-created measures typically require less convincing, advertisement and persuasion later on.

Skills and resources are needed. Neighbourhood-based planning also demands a considerable amount of staff time and resources, such as meeting venues. City staff also need the necessary personal skills to be able to organise and conduct co-creation processes professionally and with respect for all stakeholders. Diverging views and conflicts are to be expected and are part of the process but can be experienced as challenging. Obviously, not all mobility experts of the city administration possess these skills. Assistance may be necessary from other departments within the city organisation or by external experts.

Not all expectations can be met. Another challenge that can occur is that the process nourishes expectations that the city is not able to fulfil, for example because the necessary funds are not available or because the city lacks authority in a specific question. Not all wishes or suggestions of residents can be translated into action, not even all those that align with the goals of the city. Therefore, expectations need to be carefully managed by clearly describing what is possible or fundable, to avoid frustration and disillusion.

Conflict with SUMP goals. Local interests do not necessarily align with the best interests of the city as a whole. The suggestions or private interests of local stakeholders may in some cases be in conflict with overarching goals defined in the city's SUMP or other planning documents or even national goals. Imagine, for example, that a majority of residents in a neighbourhood demands more parking spaces; or that co-creation deteriorates into NIMBY-ism⁴.

The position developed in SUNRISE is to be forthright about the overarching goals and the framework given at the city level (e.g. by a SUMP) and that this might exclude

⁴ 'Not In My BackYard'

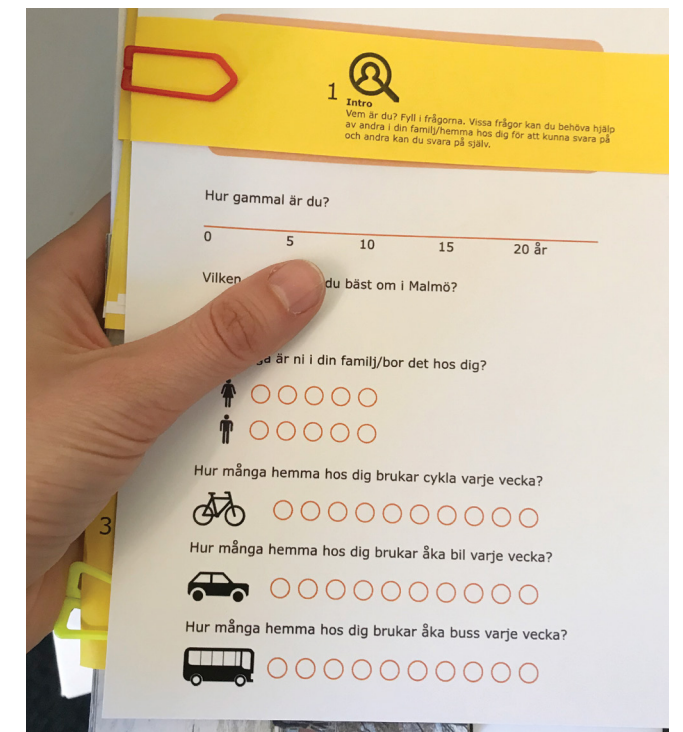


Figure 12: The SUNRISE team in the Lindängen neighbourhood / Malmö used 'cultural probes' to gather the views of the residents. © Emmy Linde.

certain options. However, within the given framework, the freedom to develop and choose solutions needs to be genuine.

City administrations feels challenged. In any genuine co-creation process, the outcomes are not fully predictable. Nobody knows at the outset which problems will be identified, which ideas will emerge or how much work will be involved. Therefore, it is a precondition that the city administration 'lets go' of a certain degree of control, which can be challenging. Proper preparation, expectation management and an explicitly communicated framework of what is possible or not possible, can ease this issue.

However, it can not be denied that co-creation requires flexibility and often a deviation from established routines. For city administrations new to co-creation, it is, therefore, recommended to gradually build experience and to start on a small scale.



Figure 13: Conversations 'on the spot' between residents and representatives of the municipality – whatever the weather. © City of Bremen.

Certain groups are excluded or not heard. As mentioned above, genuine co-creation has the potential to reach a truly representative cross-cutting section of the neighbourhood population. This, however, requires concerted efforts to counter the inherent risk that outspoken, well organised and resourceful groups or individuals with time and money overshadow the views of other groups. This can lead to an outcome that might seem democratically rooted but in reality, reflects a special interest.

Therefore, it is advisable to collect data on the representativeness of the active participants in comparison to the total population. Hard-to-reach groups or groups that are underrepresented might require special recruitment efforts or the use of alternative methods.

This can include children, wheelchair users, older people, care-givers but also professionals affected by the traffic situation, such as waste collectors or emergency services.

Amateurish results. Sometimes co-creation faces the criticism that it can lead to amateurish results because solutions are developed by laypeople rather than by professionals and experts. This can be countered by ensuring the support of professional expertise in all phases of the process as a means to inspire, to ensure quality and to guarantee certain standards. Well-organised co-creation utilises both the specialist knowledge of experts and the residents' in-depth knowledge of their neighbourhood.

Participation fatigue. In certain neighbourhoods, especially in 'problem areas', residents have been consulted time and again on all kinds of planned interventions and, in some cases, their views did not make any difference in the end, or so it may appear. This can lead to 'participation fatigue'. To counter this problem, the local SUNRISE teams articulated a clear 'participation promise', which spelled out what would happen with the views and ideas generated through the co-creation process. Certain involvement techniques, specific and tangible issues, convenient participation formats (locations, times, facilities) and a dose of fun proved effective in overcoming or at least mitigating any participation fatigue syndromes.

5. Relationship between city-wide and neighbourhood-based planning

5.1 How do the SUMP principles relate to neighbourhood-based planning?

The SUMP Guidelines (Rupprecht Consult, 2019b) spell out eight principles that build the core of every Sustainable Urban Mobility Plan. Some are equally and easily applicable to neighbourhood-based mobility planning; others not so much – at least not at first sight. Therefore, this section addresses each of the eight SUMP principles in turn and explores their compatibility with co-creative neighbourhood-based planning and, where relevant, any applicable consequences for either city-wide and/or neighbourhood activities.

- **Plan for sustainable mobility in the 'functional urban area':** This principle stresses the importance of a holistic view on the whole functional area of a city in the sustainable mobility plan rather than restricting it to narrow administrative boundaries. This could be seen as guiding the attention away from the neighbourhood towards the wider city region, chiefly to its commuter

catchment area. This principle remains of utmost importance for any SUMP, while bearing in mind the importance of the neighbourhoods of which any functional urban area consists, and the need for vertical integration at every level, from the broader urban area all the way to the level of individual streets. In fact, a future update of the SUMP guidelines should consider expanding this principle in this sense.

- **Involve citizens and stakeholders:** Neighbourhood-based sustainable mobility planning can and should fully exploit this principle to the highest degree in the form of truly 'co-creative' processes. Broadly understood, 'co-creation' is the generic word to describe any and all approaches where residents, stakeholders and representatives of the city administration work together throughout all phases of a change process: from the joint identification of problems, to the co-development and co-selection of ideas, to the co-implementation of jointly chosen measures and, wherever possible, all the way to the joint evaluation of impact and the co-reflection of the entire process. See also chapter 3.



Figure 14: Core group meeting in the Neo Rysio neighbourhood / Thessaloniki. © TheTA.

• **Cooperate across institutional boundaries:** Inter-institutional cooperation is equally relevant both at the neighbourhood and at the city level. For example, the department for social development may be instrumental in reaching certain demographic groups. In one SUNRISE neighbourhood, the maintenance department played an important role because the co-identification process revealed that travel behaviour and modal choice was partly influenced by a sense of insecurity caused by poor illumination due to damaged lamps; some people were afraid to cycle because of speeding 'showy' cars, which required police intervention. In one case cycle parking could only be improved with collaboration between private landlords, the housing department and the planning department.

To a certain extent, inter-institutional cooperation might actually be easier to establish at the neighbourhood level because the questions become more tangible and operational. For cities struggling with cross-departmental cooperation it might even be advisable to start at the smaller, more hands-on neighbourhood level.⁵

• **Assess current and future performance:** The foundation of a SUMP should be a comprehensive review of the existing situation as a baseline against which progress can be measured. Neighbourhood-based planning should also adopt this principle to make sure there are clear facts and a shared understanding of the status quo – and not only opinions. In SUNRISE, this logic led to the development of a 'dossier' in every action neighbourhood. Each dossier combined the assessments made by SUNRISE 'support partners' (i.e. external mobility experts), the city administration and the local community. As with a city-wide SUMP, a neighbourhood-based planning process should also clearly articulate a vision of the goals to achieve. In the SUNRISE action neighbourhoods, this manifested itself in the form of a written 'Neighbourhood Mobility Action Plan', which corresponded – as much as possible – with the preceding 'dossier'.

⁵ The SUNRISE project condensed its related insights into a special Factsheet: 'Cooperating across institutional boundaries' (Spielhaupter et al., 2021)

• **Develop all transport modes in an integrated manner:** Decisions about certain transport modes and the corresponding infrastructure simply fall outside the authority of the neighbourhood level. They are made in central city councils and related funding decisions are often made even higher up, at regional, national or European level. However, this must not prevent initiatives at the neighbourhood level to identify suggested improvements and file formal requests for higher-level decision-makers. Furthermore, the neighbourhood is exactly the right level to pay close attention to all kinds of transport modes and their integration, from motorised transport (including parking), to walking, cycling, kick-scooters, skateboards, formal and informal ride sharing, volunteer services, etc.

• **Arrange for monitoring and evaluation:** This principle is extremely important, regardless of whether it is being applied to a city-wide SUMP process or to measures in one neighbourhood or even one street. Only when measures are evaluated can robust lessons be learned for other cases. This is particularly important for initiatives in neighbourhoods because there are always other neighbourhoods, where measures that work well can be replicated and measures that work less well should be avoided or improved. Furthermore, it lies in the nature of change that certain people will applaud while others are sceptical or outright opposed. A systematic and credible evaluation can be the basis for healing and conciliation.

• **Assure quality:** This final SUMP principle refers to the quality of the overall planning process. This is fully applicable also for neighbourhood-based planning. At both levels, the planning process needs to be well-informed, systematic, organised, sufficiently staffed and funded. Otherwise, a neighbourhood-based co-creation process could lead to results that lack quality or legitimacy, e.g. measures that cannot be implemented because of lack of funding, that only gain the interest of certain groups or that simply lack acceptance. Poorly performed neighbourhood-planning processes might actually cause more harm than benefit, especially if expectations that were nourished during the process are not fulfilled. In such cases, residents may be less favourable towards future collaboration or suggestions by the city.

5.2 How does the SUMP cycle relate to neighbourhood planning?

The SUMP cycle, as illustrated in Figure 15, describes the different steps in the SUMP process and also indicates that the sustainable urban mobility planning process does not have a clear end but rather can be seen as a constant process of iteration and improvement.

The structure of the SUMP cycle corresponds to a very high degree with the key steps of the co-creation process as described in chapter 4 and as depicted in Figure 16:

- Steps 01 and 02 (*Set up working structures* and *Determine planning framework*) are crucial preparatory steps in both a SUMP process and in a neighbourhood co-creation process. They are not explicitly shown in the illustration of the SUNRISE co-creation process model in Figure 16, where they are implicitly assumed as foundation preparations.
- Step 03 (*Analyse mobility situation*) is the equivalent of the 'co-identification' phase, during which the status quo is documented and critically assessed.
- Steps 04 to 07 (mostly Phase 2, *Strategy development*) correspond to the 'co-development' phase of a neighbourhood-based co-creation approach, as pursued by SUNRISE. In both a SUMP process and a co-creation process, this is the phase where specific measures are developed and selected.

Figure 15: The SUMP cycle and its different phases (= four quadrants) and steps (12 = segments). © Rupprecht Consult.

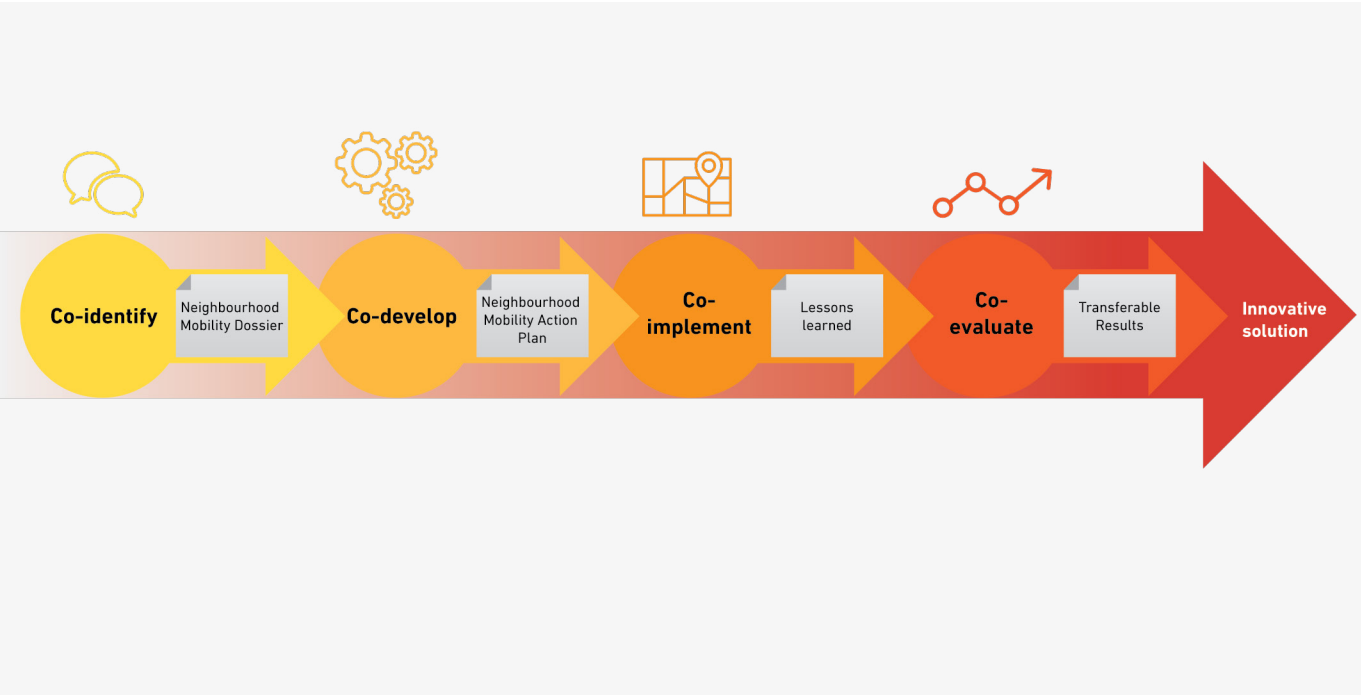


- Step 08 (*Agree actions and responsibilities*) represents the hinge between planning and implementation and, therefore, falls between the ‘co-development’ and ‘co-implementation’ stages of the co-creation model. However, this step is still in exactly the same sequential order in both process models.
- Steps 09 and 10 in the SUMP cycle (*Prepare for adoption and financing* and *Manage implementation*) mirror the ‘co-implementation’ stage of the co-creation model. Measures developed in a co-creation process can be seen as implicitly adopted by the involved stakeholders in the neighbourhood. However, in almost all cases, there is still a need for formal adoption by a democratically-elected body (e.g. District Council).
- Steps 11-12 (*Monitor, adapt and communicate* and *Review and learn lessons*) are included in the ‘co-evaluation’ stage of the co-creation model.

In short, the strategic rationale behind the SUMP cycle and the co-creation model, as pursued in SUNRISE, follow the same logic. Both follow a step-by-step approach, and both assume that the first iteration of these steps can lead to a second iteration during which goals and measures are updated, sharpened and adjusted in the interest of continual improvement. The latter aspect is made particularly clear through the circular depiction and the word SUMP *cycle*.

The complexity, scale, scope and duration of these two processes is, of course, rather different. Whereas one iteration of a city-wide SUMP process might require five to ten years, one iteration of a neighbourhood-based co-creation process can be completed much faster. Furthermore, a neighbourhood-based co-creation process might actually come to an end once the issue it focused on has been satisfactorily resolved. Whether a new ‘co-creation round’ is initiated for further improvements or to address other challenges in the neighbourhood depends on the local situation. At the city level, however, the processes described in the SUMP cycle never actually come to an end.

Figure 16: The timing logic of a neighbourhood co-creation process based on the SUNRISE Pert Chart.



5.3 Multiple constellations of the planning status at the city and neighbourhood level

In an ideal, but totally hypothetical situation, all sustainable mobility activities at the city level (SUMP) and within all of a city’s neighbourhoods are perfectly synchronised and ‘vertically integrated’. This would mean that all efforts and measures at both levels run in parallel, feed into one another and are 100% compatible. Such a situation is, of course, unrealistic for a number of reasons.

One reason is already explained above: the fact that a SUMP process takes longer than a neighbourhood-based co-creation process and is typically seen as an iterative process with multiple rounds of updates and adjustments.

The geographical conditions like topography, traffic situation, sense of urgency, availability of social energy and, therefore, the planning status all vary at the different spatial levels. In some neighbourhoods, a local planning process might not have started at all whereas other neighbourhoods might be well ahead of the city-level planning and implementation process. This leads to a range of situations where either the city or the neighbourhood level dashes ahead or lags behind. Common constellations are represented in Table 1.

Table 1: Timing constellations between city-wide and neighbourhood-based planning

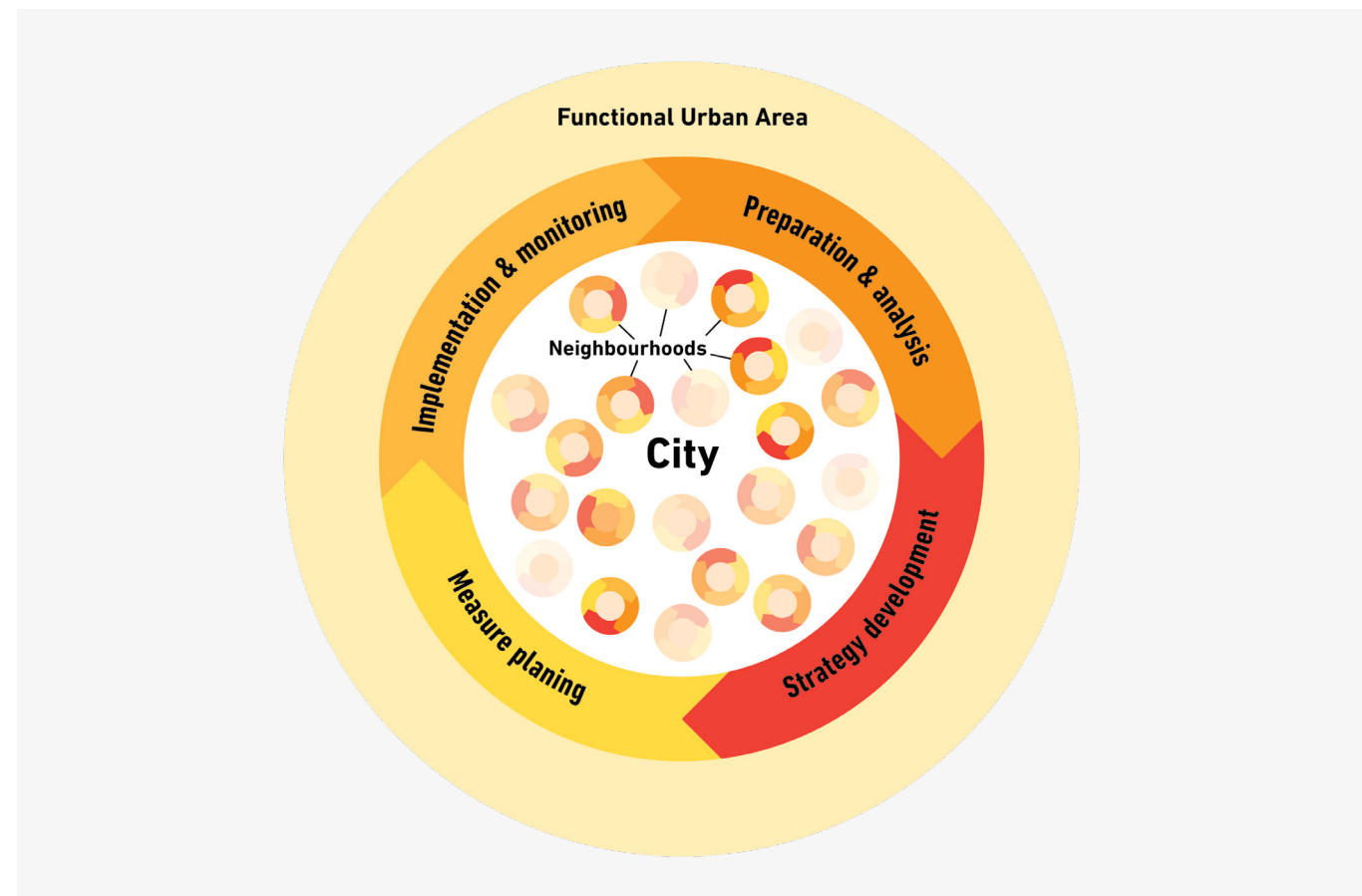
		City-wide level			
		No SUMP	SUMP in development	SUMP in place	SUMP update
Neighbourhood level	No activities	Action needed	Good opportunity to stimulate systematic planning activities at the neighbourhood level		
	Some activities underway	Neighbourhood level as first-mover; can motivate a similar process at the city level. Can also lead to uncoordinated activities across neighbourhoods, possibly even in conflict with city-wide goals and macro efficiency; risk of NIMBYism	Ideal, but rare case for SUMP process and neighbourhood level planning to feed into one another. Good opportunity for vertical integration	Neighbourhood activities can respond to and be synchronised with city-wide goals. However, risk of SUMP overlooking neighbourhood needs and opportunities	Good opportunity to inform / inspire neighbourhood level activities but also to include needs, concerns, ideas from the neighbourhood level within the update of the SUMP
	Full neighbourhood plan in place	Risk that neighbourhood level vision is not synchronised with city level needs. Implementation of measures at neighbourhood level can be difficult without support, data, staff, commitment and a city-level plan	Good opportunity for SUMP process to take on board lessons learned from neighbourhood planning process and to develop support for the implementation of a neighbourhood plan – as long as it does not stand in conflict with city-wide needs and the plans / ambitions / needs of other neighbourhoods	Ideal, but rare case	Good opportunity to update the SUMP in such a way that it supports and builds upon the neighbourhood plan(s) and measures
	Neighbourhood plan update	Unlikely scenario	Good opportunity to synchronise the processes at both spatial levels	Good opportunity to update the neighbourhood plan in such a way that it supports and utilises the city-wide SUMP plan and measures	Ideal, but rare case

In short: Perfect synchronicity between the different planning processes in a city is not possible. This should not be a source of frustration but can be used to facilitate and accelerate sustainable urban mobility planning. The repeated attention to 'opportunities' in Table 1 indicates this clearly. Two such opportunities deserve a special mention:

- 1) Progressive neighbourhoods can be used as 'test-beds' and to feed into the city level SUMP process and to facilitate the implementation of SUMP measures in other neighbourhoods.
- 2) Conversely, a widely endorsed SUMP can be a legitimate stimulus for decentralised discussions and planning processes in neighbourhoods that lag behind and impede the achievement of city-wide SUMP goals.

Figure 17 conveys a very similar message in a visual form. It signals not only the different status of the planning process in different neighbourhoods and in the city as a whole (indicated by the different rotation angles) but also the different levels of commitment, political endorsement, public participation, funding etc. (different colour intensity). The overall message, however, is clear: A city typically is a patchwork of neighbourhoods where processes can and do run in parallel with different starting positions, ambitions and speeds – in most cases, few of them are likely to be synchronised with the city-wide SUMP process.

Figure 17: Different status and intensities of different planning contexts at different spatial levels.



5.4 Aligning neighbourhood-based co-creation with the SUMP process

Although perfect congruence between neighbourhood-based co-creation and SUMP activities is inherently impossible, it is important to strive towards alignment, correspondence, compatibility and mutual awareness wherever possible – and to avoid outright contradiction between these different planning processes. Alignment does not happen automatically but requires constant dialogue and careful coordination – almost in the sense of 'meta-planning'. The following aspects deserve particular attention:

- **Compatibility of goals:** Just as there are multiple opinions within every neighbourhood, the positions, goals and ambitions also vary from one neighbourhood to the next. Similarly, the goals as articulated in a SUMP are not automatically synchronised with the (dominant) views in a city's neighbourhoods. This is not necessarily problematic because different contexts often require different solutions. However, when actions at one level / area influence another, coordination is needed. The central city administration, for example, might pursue an ambitious plan to promote electric vehicles, including the corresponding charging infrastructure for on-street parking spaces. A neighbourhood might, however, wish to reduce the number of on-street parking spaces altogether. There are, of course, clearly defined rules about whose decision trumps whose; but a dialogue-rich and coordinated approach is clearly better than reliance on sheer power gradients.

- **Avoiding contradictions:** Outright contradictions between different neighbourhoods and levels are a particularly severe form of incompatibility. An example of such a situation would be one neighbourhood that decides against the construction of a tram line through a green area, whereas such a connection would bring huge benefit to thousands of people outside the area and the city as a whole. Such situations often manifest as NIMBYism – and even the best dialogue does not make such phenomena disappear. However, a well-moderated dialogue offers at least the potential to explore creative solutions and a fair compromise, which protects the legitimate interests of especially the most vulnerable social groups.

- **Managing expectations:** Closely related to both of the above points is the importance of managing the expectations of all involved stakeholders. Everyone participating in a collaborative planning process should be made aware that there is only ever a certain 'corridor of options'. For neighbourhood-level actors it should be made clear that suggestions that contradict the SUMP goals are unlikely to be implemented. For example, if the residents of a certain area request more parking spaces while the city's SUMP aims to reduce the number of parking spaces, it will be important to solve the residents' problems through other means (e.g. better public transport, more car sharing, etc.). Likewise, those participating in a city-wide SUMP process should not be led to assume that all proposals can and should be imposed on neighbourhoods against their will.



Figure 18: SUNRISE public engagement in the Hulsberg neighbourhood / Bremen. © City of Bremen.

- **Endorsement and commitment:** A neighbourhood-level planning process can greatly benefit if policy makers and high-ranking representatives of the central city administration endorse the process. A positive public statement by the Lord Mayor, for example, can add credibility to a co-creation process in any neighbourhood. Likewise, people's interest in and willingness to actively participate in a SUMP process can be increased through a clear commitment made by public opinion leaders in as many neighbourhoods as possible.

- **Replication and upscaling:** Undoubtedly, a successful planning and implementation process in one neighbourhood is a reason to celebrate. What is even better is the replication of successful measures in other neighbourhoods. Organising such an upscaling effect is clearly beyond the scope of any single neighbourhood. The city administration, however, might well be in a position to facilitate such a process as the central hub of data and know-how. Close coordination between neighbourhood actors and the city as a whole can, therefore, greatly influence the likelihood of certain

successful measures percolating across the city and thus generating much larger impact – neighbourhood by neighbourhood. A SUMP process can spur this kind of replication particularly well.

Replication in Jerusalem: SUNRISE's co-creation approach in the Baka neighbourhood / Jerusalem mobilised the involvement of many people, especially including schoolchildren and their parents around the issue of 'walkability'. Information about this very positive experience spread across the city and sparked interest among several other neighbourhoods. This resulted in the direct transfer of SUNRISE's approach, to the creation of local training materials and even to a city-wide walkability programme, which is being rolled out to every interested neighbourhood in Jerusalem. There are even discussions about similar replication efforts at the national level.



Figure 19: The co-development process led to a proposal for more convivial infrastructure, to make walking along certain paths more pleasant. This led to the construction of this 'conversation bench' in the Baka neighbourhood / Jerusalem. © City of Jerusalem.

- **Letting go of control:** Whereas the coordination of planning processes across levels is highly desirable, this does not mean that the central city administration needs to be in control of everything. As long as certain contradictions and legal as well as financial problems are circumnavigated, the central city level should learn to 'let go' of what some might perceive as an obsession with micro-management. Instead, within the available corridor of options (see above), trust should be the guiding principle for the relationship between the central city administration and the neighbourhood actors. This is basically the manifestation of the subsidiarity principle: the neighbourhood knows best!

- **Sharing resources:** In most European cities, there is no neighbourhood-level decision-making body with the authority, financial means and personnel resources to implement significant mobility measures; let alone heavy infrastructure projects. Therefore, it is important to coordinate well with the respective departments in the central city administration to ensure that neighbourhood activities make best use of available data, and that proposed measures get planned well and in a timely manner and that enough funds can be mobilised for their implementation. This can also mean that the city administration applies for regional or national financial resources on behalf of the neighbourhood(s). Also, at a very practical level: the city often has resources such as meeting rooms, a press department or IT capacities that can greatly facilitate neighbourhood-level processes.

- **Learning and sharing:** Productive coordination between neighbourhoods and the city level can avoid reinventing the wheel many times over. A participative format, an evaluation approach, moderation technique, etc. that works well in one neighbourhood does not necessarily work in another – but it might! Exploring this transferability requires, first of all, the sharing and documentation of knowledge and experience. The city level is clearly best suited to play this role as knowledge broker across neighbourhoods; and it can also benefit from such know-how for the city-wide SUMP process.

- **Combined visibility:** All planning processes that are currently under way (at whatever spatial level and at whichever stage) can increase their visibility by referring to each other in their communication efforts. They can all benefit if they see and portray themselves as part of a bigger whole. Neighbourhood-level planning processes can refer to 'sister processes' in other parts of the city or, if applicable, to a city-wide SUMP process; and vice versa. Such joint communication could even go as far as creating a family visual identity or logo for the various processes. The SUMP process could be depicted as a kind of 'umbrella brand' with multiple sub-brands in the various neighbourhoods.

6. Neighbourhood planning to support a city-wide SUMP

6.1 How can neighbourhood-based mobility planning support a SUMP?

Co-creation at the neighbourhood level facilitates stakeholder engagement to an extent that is difficult to achieve at city-wide level. Therefore, when used strategically, this approach can greatly support and complement a city-wide SUMP process.

For beginner cities without prior experience of SUMP work, it may be appropriate to focus on one neighbourhood while city-wide SUMP structures are being established. Like this, a starter city can gain practical experience for the entire SUMP process, and build capacity for scaling up the process. In addition, the SUMP process can gain momentum and acceptance, because it can be shown that participatory and strategic planning is more than an abstract exercise, but addresses tangible problems and can lead to improvements in people's daily lives.

For cities that have come further in their SUMP process, neighbourhood-based planning offers an opportunity to first address particularly challenging or controversial questions on a limited scale, or to develop a measure and test and prove its viability before suggesting it for the entire city.

Mobility planning at the neighbourhood level further provides the opportunity to learn from and to showcase specific neighbourhoods that have come further in sustainable mobility than others. Like this, the heterogeneity of neighbourhoods in a city can be utilised to accelerate transition processes in other neighbourhoods. Just as forerunner cities provide inspiration and knowledge to other cities, certain neighbourhoods can also be forerunners and inspire other parts of a city.



Figure 20: The joint identification of a lack of secure cycle parking resulted in the construction of better storage facilities in Southend-on-Sea.
© City of Southend-on-Sea.

6.2 When is neighbourhood-based mobility planning suitable?

Mobility planning at the neighbourhood level, especially through a genuine co-creation process, is demanding in terms of resources, calendar time and number of working hours. Therefore, a city should carefully consider when to use this approach, how to make sure it strategically supports the SUMP process, for which issues, and in which neighbourhood. Based on the experience from SUNRISE, the following situations can be conducive to the deployment of co-creative planning at the neighbourhood level:

- **A locally recognised, tangible problem** or desire for improvement concerning mobility. Examples are streets that are perceived as barriers or a hindrance for the free movement of children, local parking problems, noise pollution, low accessibility for certain groups, low quality public space due to traffic, poor quality of walking or cycling infrastructure, etc. Local action-groups, protests or frequent complaints can be an indicator that local problems exist. For more abstract problems without a direct, short-term impact on the neighbourhood, or for questions that demand city-wide intervention (e.g. climate issues or large-scale public transport infrastructure), local co-creation is not necessarily recommended.

- **Unique conditions.** Some neighbourhoods have very specific, unique mobility challenges that make no sense to address in a city-wide SUMP. This could be due to specific topographic features (e.g. hills), barriers or other factors that make the neighbourhood somewhat atypical. In such a case, neighbourhood-based planning can facilitate the development of a tailored solution for that particular challenge by using local knowledge and resources in parallel to the city-wide SUMP work. In such a case, the overarching goals and framework as defined in the SUMP need to be clearly defined, as well as budget limits, so that suggested solutions are both feasible and in line with city-wide goals. Within this framework, however, the neighbourhood-based planning process requires a generous degree of flexibility to come up with locally adapted solutions.

- **Controversial issues.** There are many controversial issues in making urban mobility more sustainable. This is particularly true when certain traffic modes are restricted, particularly car traffic, or when there is conflict around the allocation of space between different transport modes or user groups. Examples are speed restrictions, more stringent parking regulations, mobility pricing or access regulations. In such cases, even widely proven solutions can be difficult to implement at a city-wide scale. For such issues it can be advisable to pursue a co-creation process in a neighbourhood where the issue is particularly prominent. This neighbourhood can thus serve as a think-tank and test-case for the entire city. Experience gained in the pilot neighbourhood can then be used to develop city-wide strategies and to replicate successful measures elsewhere. In product-development language: the chosen neighbourhood can be a proof-of-principle prototype before scaling up. By engaging residents and stakeholders in one neighbourhood, it is also far easier to understand the concerns of the population and find ways to mitigate them.

Figure 21: The co-development process in the Hulsberg neighbourhood / Bremen led to the establishment of a free cargo-bike rental scheme as a convenient alternative to the use of private cars. © City of Bremen.



Parking – a hot topic in Bremen: On-street parking and how it should be regulated is a controversial topic in Bremen and the introduction of fees has generally had little support. Illegal parking has become common and accepted for years. The situation was especially problematic in the Hulsberg neighbourhood where high parking pressure and illegal parking on pavements caused significant problems not only for pedestrians and disabled people but also for waste-collecting vehicles and firefighters. Hulsberg was Bremen's 'action neighbourhood' for the SUNRISE project with a specific focus to try to find ways to resolve this problem. In an extensive co-creation process, the problem was widely discussed and eventually, resident parking was introduced.

The experience led Bremen to upscale the SUNRISE approach as a 'blueprint' for Bremen as a whole. Concretely, it is likely that this will feed into the current process to update Bremen's SUMP. The inclusion of the SUNRISE blueprint in the revised SUMP is very important to politically endorse the significantly higher staff requirements (and therefore costs) of this approach.

• **Lack of a single solution.** The most suitable solution to common mobility challenges is not always obvious – both in terms of technical efficiency, public acceptance and political feasibility. Sometimes there is a lack of ideas; sometimes there are too many suggestions, often incompatible. In such cases, it can make sense to first develop and test solutions in a neighbourhood where the problem commonly occurs and to later use these learnings to scale up the solution. Examples could be solutions for school areas, pedestrian infrastructure, parking regulations or even the design of local streets and speed-control measures.

• **Local eagerness:** In some neighbourhoods there might be a stronger appetite, a higher degree of acceptance or simply more (private) resources, time, energy or networks, trust and momentum available for new mobility than in others or the city as a whole. Examples could be shared mobility solutions, MaaS services (Mobility as a Service) or electric vehicles. In such a situation, certain measures can be made visible and tangible also for other neighbourhoods. Like this, the differences across neighbourhoods can be harnessed to accelerate the achievement of broader SUMP goals.



Figure 22: After the SUNRISE co-implementation phase: residents walking safely on the pavement that was previously blocked by parked cars.
© City of Bremen.

7. Recommendations and ways forward

This chapter summarises the key recommendations from SUNRISE and other neighbourhood-mobility projects, for cities and for the regional, national and European level. However, it does not include recommendations on the design or methods for co-creation or neighbourhood mobility planning. These topics are covered in other publications, for example from SUNRISE (www.civitas-sunrise.eu) or from its 'sister projects' (<https://civitas-sunrise.eu/resources/sister-projects>).

7.1 Recommendation to cities

Embrace the possibility of neighbourhood-based planning and co-creation: Neighbourhood-based mobility planning, especially when combined with co-creation, opens new possibilities to cities to improve and accelerate the SUMP process, to introduce tangible change at the local level and to gain increased acceptance. Therefore, it should be embraced by cities and integrated in the wider 'toolbox' of the SUMP process.

Use co-creation and the neighbourhood level strategically: Neighbourhood-based planning should be seen as a means to address local challenges but also as a tool to progress the SUMP process at the city level. Therefore, consideration should always be given to the ways a neighbourhood-based planning process can support or, for beginners, initiate the overall SUMP process of a city. In other words, the neighbourhood activities and chosen challenges for co-creation should fit into the larger context of mobility planning for the whole city, with the potential to scale up the results.

Manage expectations and set a clear framework: A co-creation process can backfire and damage credibility if the possibilities and available resources have not been clearly defined from the outset. Without clearly defining the framework provided by the city-wide goals of the SUMP and the available funding, locally developed proposals might turn out to be in conflict with the overall city goals or simply be impossible to implement. This can lead to disappointment and reduced trust towards initiatives by the city. Therefore, a clear 'corridor of options' and the available funds should be communicated from the start.

Cooperate and learn from other departments: The initiation, organisation and facilitation of neighbourhood-based planning and co-creation requires special skills and methods. It cannot be assumed that these are readily available within a city's transport department. It may be necessary to collaborate with other departments that are more experienced in stakeholder involvement or have existing contacts, for example the social department. External support may be needed to organise and moderate the process, at least until sufficient internal capacity has grown.

Start small and learn: For many cities, the co-creation approach is new, unproven and maybe even perceived as risky or inefficient. Therefore, allow for a learning process by starting with smaller projects and building experience, skills and internal commitment along the way. If a city wishes to regularly engage in neighbourhood-planning processes, it is recommended to build up internal resources/groups with the necessary expertise and social skills. New staff may need to be recruited with specific expertise like community involvement. This capacity can be shared across departments.

Allow for lengthy processes and provide resources: Neighbourhood-based co-creation is neither cheap nor fast. The process typically takes months to years and demands continuity. This requires resources in terms of staff, as well as venues and different tools for stakeholder engagement. It is essential to allocate adequate personnel resources from the beginning, also to maintain continuity and commitment in the 'core group' (a steering group of local stakeholders). The exact length and intensity of the process, and thus its resource requirements, cannot be predicted precisely from the beginning. Therefore, the city administration should allow for some flexibility with regard to resources and set aside sufficient staff time to be able to follow the process through.

Don't engage if you can't deliver: Engaging in a co-creation process implies giving away some level of control and power and trusting the process and the findings developed within the neighbourhood. If city officials or the city government decide to reject the results of neighbourhood co-creation, the process has not only been in vain, but the trust of the residents will be damaged. This will make it far more difficult to involve local stakeholders in the future, and undermines

democratic legitimacy. If a city government is not ready to take this risk, it is not recommended to engage in a co-creation process.

Communicate and explain internally: For many city departments, neighbourhood-based planning and co-creation is not a common way of working. Therefore, time and effort should be set aside to explain and promote the approach within the city administration, especially the department(s) responsible for transport planning and the SUMP. It is important to communicate internally, especially the links to the SUMP, but also the rationale for choosing to engage in a certain neighbourhood or the reason for selecting a certain topic, to avoid the approach being perceived as questioning the authority or professionalism of certain departments.



Figure 23: A new bus stop, which emerged as an important improvement from the co-development phase in Neo Rysio / Thessaloniki. © TheTa.

7.2 Recommendations to regional, national and European bodies

Support capacity building and knowledge exchange: In many countries, cities have only limited experience of co-creation and neighbourhood-based mobility planning. National as well as European organisations can support knowledge exchange and capacity building by providing forums, disseminating best practice and producing tutorials and guidelines, case studies and other resources on neighbourhood-based mobility planning in the respective national language.

Furthermore, direct knowledge exchange between neighbourhood-planning projects in different cities should be encouraged and facilitated. A specific neighbourhood can have more similarities with neighbourhoods with similar characteristics in another city than with neighbourhoods in its own city. Existing national and European platforms for knowledge-exchange on sustainable mobility could be used to facilitate match-making and the sharing of good practice.

Provide funding and time: Given the (relative) novelty and resource requirements of neighbourhood-based co-creation, many cities will be hesitant to pursue this approach without external seed funding. Therefore, this is a crucial area for engagement by various funding bodies. But it is not only about the provision of funds. The conditions, reporting requirements and duration of project funding also need to be carefully considered. The latter point is particularly important because 'you can't hurry co-creation' (as one local stakeholder in the SUNRISE project articulated the need for time). The expectation to complete all phases of the co-creation chain (see chapter 3.2) in just a few years is often unrealistic.

Permit tailored evaluation approaches: Traditional evaluation metrics (e.g. tons of CO₂ saved, changes in modal split or economic cost-benefit analyses) might not be suitable for co-creation processes since the outcome, by definition, cannot be known at the outset. Also, many conventional evaluation parameters simply do not make sense at a spatial level as small as a neighbourhood, either because the decisive causal factors lie outside the neighbourhood and/or because there is no way to obtain the data at the granularity of a neighbourhood.

Instead of demanding such pre-defined evaluation parameters, co-creation projects should be assessed through context specific criteria. For example, the change to the percentage of parents who feel confident about letting their children walk to school as part of a 'walking bus' compared to letting them walk alone before (when no walking bus existed) should be evaluated. Particularly important are also parameters like to which extent the project has generated co-creation capacity, social cohesion, whether hard-to-reach groups were involved, whether the proposed project is embedded within a city-wide SUMP strategy, whether the results can be scaled up to other neighbourhoods or cities, etcetera. This does not exclude the evaluation of the project outcome using more common project indicators as well – if applicable!

Support systematic research on co-creation: There is some early evidence on the potential contribution of neighbourhood-based co-creation towards more systemic, city-wide sustainable mobility; after all, this SUMP topic guide is based on this issue. However, full, comprehensive and generally applicable knowledge is actually patchy. Furthermore, more empirically-based experience on methods and tools to support the process and the necessary conditions for a successful outcome is still needed. Therefore, it is recommended to support

further research in this field, with a focus on methods and tools that can be applied by cities.

Update the SUMP concept to include more geographical scales: The Sustainable Urban Mobility Planning (SUMP) concept should be updated to make city-wide and neighbourhood-level planning approaches structurally compatible and to utilise synergies between them. Currently the concept emphasises the importance of including the functional urban area within a SUMP. In the same way, it should be emphasised that the more local scale of the neighbourhood also needs to be considered within every SUMP, and that different tools and approaches may be needed, depending on the geographical and organisational context. However, it should be stressed that the overarching goals of the SUMP should transcend all scales.

Include neighbourhood-based planning and co-creation in training: Awareness of social capital in the neighbourhoods, knowledge of how to utilise it and know-how on the possibilities and limits of co-creation and neighbourhood-based planning should be an integral part of training for city planners as well as transport planners. Therefore, these topics should be integrated within the curricula of vocational training organisations and institutions of higher education.



Figure 24: Major construction works in Southend-on-Sea as part of the SUNRISE co-implementation phase. The thorough co-creation process also helped to mobilise additional regional funds. © City of Southend-on-Sea.

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