FROM POP-UP TO PERMANENT: A CASE STUDY ON BERLIN

Promoting healthy, bike-friendly and sustainable urban mobility in post-covid times

One Health Research Centre

Therme One Health

Research question:

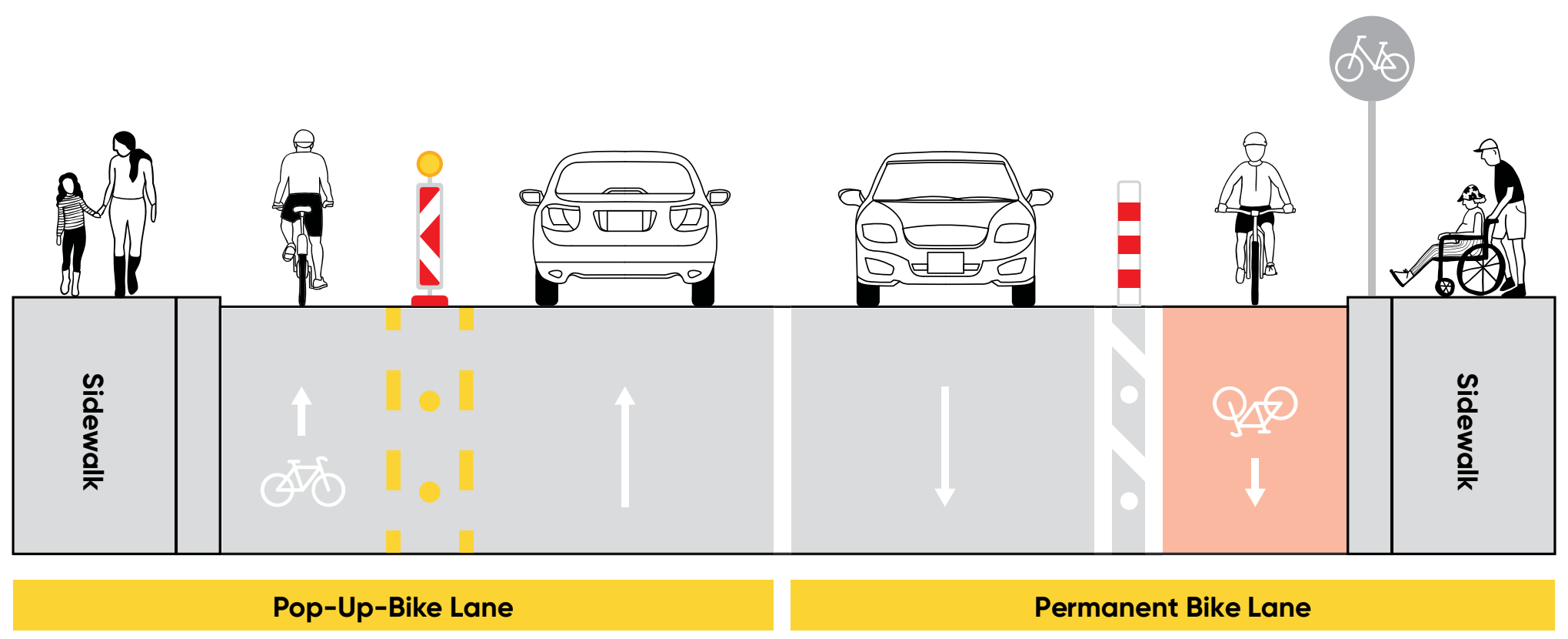
"What are barriers and drivers for the implementation of PUBLs and on which legal basis is it possible to steady this healthy and climate friendly mobility solution in post-COVID-19 times?"[1]

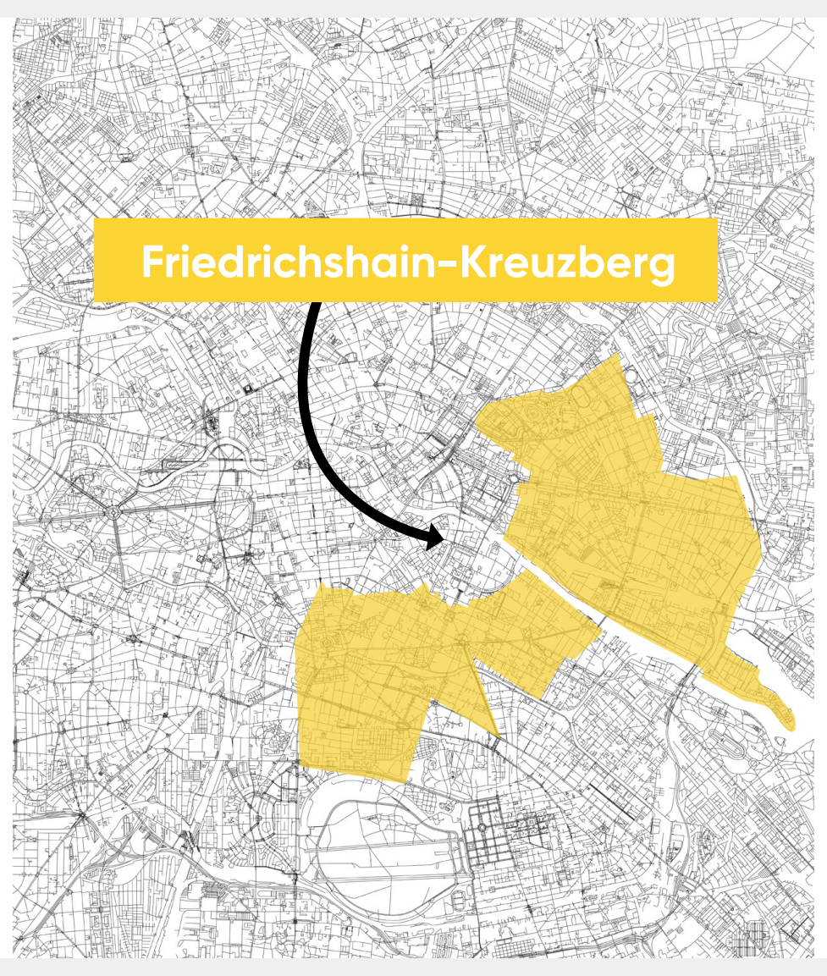
What are PUBLs?

Pop-up bike lanes (PUBLs) are temporary installed bike lanes that were created in the district of Friedrichshain-Kreuzberg in Berlin during the first phase of the COVID-19 pandemic in 2020.

PUBLs are characterized by their fast and pragmatic implementation with temporary elements (among other things: yellow adhesive markings, spatial demarcation by delineators). In 2022, nearly all PUBLs in this district were converted into permanent bike lanes.

Road transition: from PUBLs to permanent





Friedrichshain-Kreuzberg, Berlin

The district is one of twelve districts in Berlin and was the first to implement this temporary solution, which quickly attracted national press attention.

20.4 km^2

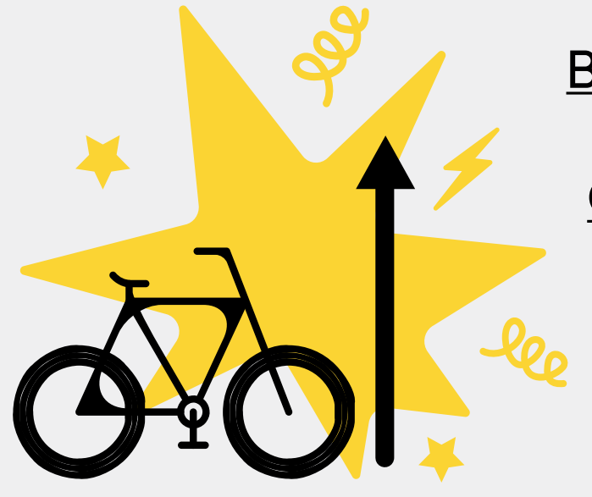
289,000 inhabitants

38 average age

> 25 km PUBLs steadied

From Covid to bike lanes. How did we get here?

Due to the COVID-19 pandemic, there was **a significant change in people's travelling patterns**. Berlin's public transportation lost a third of its passengers during winter 2020/2021.[2] It was the mixture of remote work/education and fear of infection, leading to this decrease. In 2020, every 7th person in Germany didn't travel at all for work and education, and 18% didn't use public transport, because of fearing an infection.[3] As a result, there was a shift from public transportation, where keeping 1.5 m minimum distance deemed protective against infection could not be guaranteed, to cycling and walking.[4] This resulted in a "Bike-Boom" (e.g., low capacities of sellers/manufacturers) in Germany in Summer 2020.[5] The combination of an explosive increase in cycling due to COVID-19[6] and a weakened public transport system[7] became the main starting signal for action[8] and urged public administration to react quickly[9].



Bike Boom due to COVID-19

Why PUBLs? Start simple and move fast

Cycling is key to achieving healthy, climate-friendly mobility in cities. It is emission-free, requires little space and is superior to all other modes of transport (except walking) in terms of noise, exhaust fumes and particulate matter. Moreover, the physical inactivity of people is globally on the rise. Studies display that regular physical activity reduces the risk of mortality and dementia by up to 30% and risk of developing type 2 diabetes by up to 40%.[10] Cycling daily helps in reducing the risk of cardiovascular diseases[11] and has a documented increase in mental health and well-being.[12]

In order to switch from automobility to sustainable mobility, the quantity and quality of bike lanes has to be improved significantly. Correspondingly PUBLs led to an increased use of bicycles by implementing the required infrastructure.[13] But why temporary bike lanes first? The **pop-up approach provides a head-start** when it comes to planning and execution of bike lanes. First, the street is becoming "more readable", which means a clearer structure and easier understanding of irrelevant and relevant space.[14] Second, it's a much faster process than the planning of permanent bike lanes. Furthermore, their relatively lower costs make PUBLs an attractive option. The installation costs in Berlin were approximately 10.000 € per kilometer.[15] In comparison, the planning costs alone for one kilometer of bicycle lane in Berlin usually costs around 40.000 €.[16] In addition, taking behavioral changes towards more cycle-based mobility, PUBLs will decrease the amount of CO_2-emissions by giving a more sustainable alternative to cars.

Christian Haegele
Head of the Department for Traffic Management | Senate Department for Environment, Mobility, Consumer and Climate Protection, Berlin

> **Pop-up-bike lanes are not an instrument to accelerate the change of transport on a large scale but are a partial instrument that can be used for certain situations. It is much more a question of achieving large effects with small measures and closing gaps. It is not an instrument that can be used across the board, but properly dosed and well thought out, it makes a valuable contribution.**

Ready, Set, Go! Drivers for the implementation of PUBLs

The global **COVID-19 pandemic provided a window of opportunity** for the establishment of PUBLs.[17] At the legal core of administrative orders establishing PUBLs, however, was German federal traffic law, which is strictly road safety oriented. Only traffic-related legal considerations (lack of or inadequate cycling infrastructure resulting in dangerous traffic situations, proven on the basis of traffic volumes and accident statistics) were taken into account as a court-proof justification.[18] However, the pandemic acted as a catalyst for the establishment of PUBLs. Encouraging cycling would mean enforcing necessary measures that complied with the 1.5 m distance requirements to reduce the risk of infection rates.[19]

The influence of the Berlin Mobility Act (MobG BE) as a driver is assessed ambiguously by experts. Within the German constitutional framework, road traffic regulation is part of federal legislative competence. Accordingly, provisions of the MobG BE distinguish carefully between Berlin and federal competences. As a consequence, some provisions such as § 43 MobG BE (regarding the installation of bicycle facilities on all main roads) use comparatively soft phrasing (e.g. "shall" instead of "must", "will"). **Nevertheless, the law is considered to have a high steering function due to its political significance.**[20] Also, within the Berlin administration, the MobG BE has to be considered in their decisions[21], and, in turn, PUBLs themselves serve to implement the objectives of the MobG BE.[22]

The case of PUBLs in Berlin also shows that a **close cooperation of different administrative levels** (in Berlin namely the Department of Traffic Management within the central administrative body for climate and mobility, and the Department for streets and green spaces in the District Office of Friedrichshain-Kreuzberg), partly due to an established connection of the respective leading persons and their corresponding visions, was crucial for the success of PUBLs in Friedrichshain-Kreuzberg.[23] Another notable driver is the perseverance of the responsible administration in the face of criticism against implemented PUBL.[24]

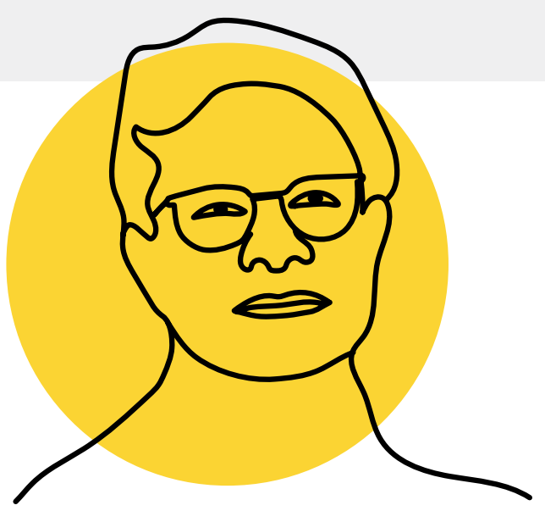
Furthermore, the interviews highlighted that **personally committed individuals** in management positions with the necessary drive are key to successfully implement PUBLs.[25] This is even more effective, when the bicycle infrastructure is embedded in an overall bicycle planning concept, which includes city-wide guidelines and an argumentation basis for infrastructure expansion.[26] Especially through courageous interpretation of the applicable legal framework and taking action with the given resources, PUBLs can play their role in making the "mobility transition" real.

Hitting the brakes. Barriers for implementation of PUBLs

Barriers for the implementation of PUBLs mainly mirror the above stated drivers. Especially a **lack of (personal) commitment in the administration** hinders the implementation of such solutions. This inactivity[27] can be attributed to political attitudes, differing priorities or a lack of courage or knowledge to interpret the legal framework in such a way that temporary solutions are justifiable.[28] In some situations, when one or more of these barriers occur at the same time within the respective administration, it becomes impossible to implement temporary solutions. Especially the assessment,[29] that legal barriers might be hindering the implementation of PUBLs - whether or not they actually exist - could be a high barrier before starting the planning process itself.

In addition, **outdated administrative structures and ideas in traffic planning,** like the prevailing (German) perfectionism and the dominant concept of a smooth and flowing car traffic form further barriers.[30] Furthermore, **a lack of resources, may they be personnel, financial, or the given timeframe,** proved to be the main barriers for the implementation of PUBLs in the interviews.[31] In principle, (a lack of) participation in the implementation of PUBLs does not seem to be an obstacle. From a legal perspective, no formal participation is required for the administrative order.[32] The authority acts on the basis of an existing dangerous situation. However, a low assessment of participation by citizens and low transparency (e.g., due to information being passed on too slowly) can lead to increased dissatisfaction of important stakeholders, which can also be an obstacle to the acceptance and continuation of PUBLs, if not sufficiently taken into account.[33]

Drivers	Barriers
Personally committed leaders	Reluctant administration
Good cooperation on administrative levels	Old administrative structures & ideologies
Window of opportunity (COVID-19)	Lack of resources



Felix Weisbrich
Head of the Department for Streets and Green Spaces | District Office Friedrichshain-Kreuzberg, Berlin

> **Transport planning is conflict planning. Planning is not only the technical process, but also the negotiation of conflicts. The pop-up bike lanes demonstrate this in functioning "living labs". Perfect planning is not the goal here. The focus here lies on quick administrative solutions rather than on detailed technical planning. In the long term, the prevailing perfectionism in (German) planning should be discarded and administration reformed accordingly.**

Here to stay! Steadying temporary solutions

Steadying PUBLs means shifting the temporary solutions to a permanent existing infrastructure, that is mainly a fixed installation – e.g., changing the temporary spatial demarcation by delineators to a permanent spatial demarcation by bollards. In Friedrichshain-Kreuzberg nearly all these lanes were transferred to permanent structures.[34]

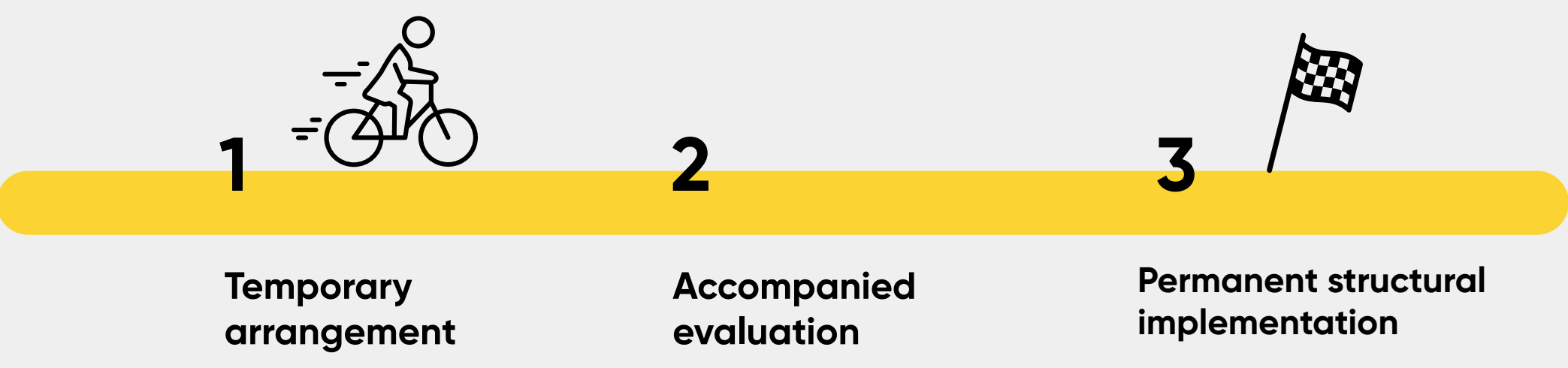
In conclusion, the presented barriers and drivers for PUBLs are generally valid for the steadying process. Nonetheless some drivers and barriers could be highlighted. In Berlin, the process of steadying pop-up bike lanes is somewhat becoming automatic. In general, a three-step approach seems to prove successful and was thus presented as a possible future standard procedure:

1. temporary arrangement,
2. accompanying evaluation and
3. permanent structural implementation.[35]

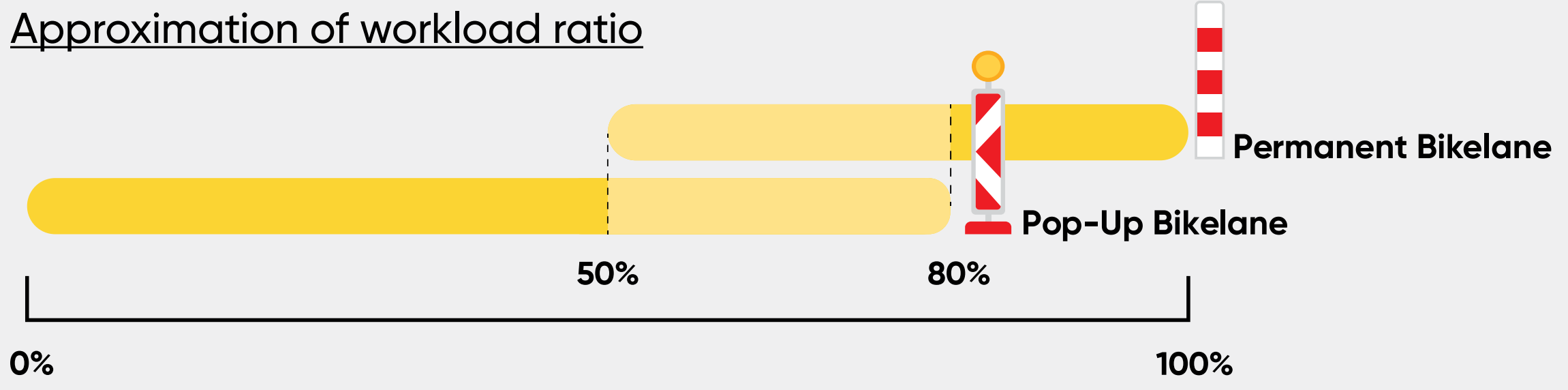
In addition, the process of temporary installation of pop-up bike lanes was summarized in a handbook with 11 steps, that could be followed in 10 days.[36] This could help other (German) cities in copying and following the implementation of PUBLs in a similar fashion. The experiences out of the learning processes through this, should be spread more widely with other districts and municipalities (**"spread the word!"**[37]) as showing good practice examples is one identified driver in steadying. Another driver is pressure from civil society[38] – with an increasing presence of topics such as climate protection, territorial justice and sustainable mobility, pressure on policy makers and administration to act is on the rise. Road safety ("Vision Zero") and health aspects, as well as positive feedback on existing PUBLs from civil society are promoting the steadying process.[39]

A crucial step from temporary to permanence is evaluation. It makes it possible to refine planning guidelines for subsequent constructional implementation based on identified improvement needs, thus shortening planning procedures considerably.[40] The expert opinions regarding the ratio of the effort to implement a PUBLs and make it a permanent solution afterwards ranges between 50% (temporary) / 50% (steadying)[41] to 80% / 20%[42]. As a result, **planning costs can be saved**[43], which would reduce one of the main barriers of steadying PUBLs: possible higher costs. Under some conditions, the implementation of temporary PUBL could have higher costs than implementing the steady solution as a first step. This could be the case in areas where the temporary solution has a lot of changes in planning or experienced a lot of vandalism/loss.[44]

3-Step approach to go from PUBLs to permanence

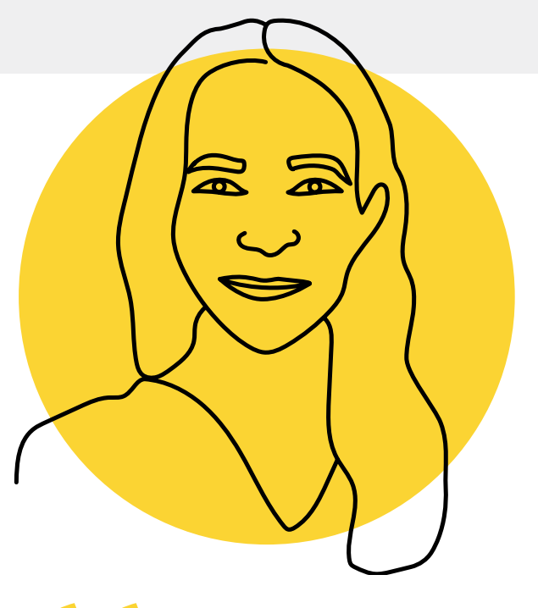


Start with PUBLs and your halfway there! Approximation of workload ratio



Finding Biketopia

PUBLs prove that **fast, efficient, and compliant actions** are possible to implement change in cycling mobility and providing climate-friendly solutions. But how do we move forward from here? The federal and state governments can make key adjustments to give municipalities greater scope for action, especially with regard to legal requirements (particularly road and road traffic laws) and regulations, as well as the provision of resources (finance and human resources).[45] A strong signal is needed from the federal level where a **paradigm shift from car-centered planning to planning that prioritizes sustainable mobility** must take place.[46] Henceforth, a clear policy line that is reflected in binding decisions and forms. A legal integration of health, environmental, climate policy and urban planning objectives in the transport legislation (such as the Road Transport Act - StVG and the Road Traffic Regulation - StVO) is urgently needed to move away from the paradigm of giving preference to moving and stationary car traffic as a sole reference.[47] In addition, a clear and consistent design of recommendations and success factors is needed, e.g., to strengthen the national cycling strategy through funds, national cycling plans or networks.[48] This will assist all before mentioned aspects. Therefore, spreading the word about best practices and drivers/barriers of implementing and steadying PUBLs is important to reach this goal from a political perspective. **As an underlining result, the basis in argumentation is not the COVID-19 pandemic, which made it possible to implement and steady PUBLs as a sustainable and healthy solution, but a future-oriented, climate-, health-, and safety-centered transport planning approach.** In line with the results of the interviews, the PUBLs are a pioneer example of how to act proactively in the existing legal framework. They show initial solutions answering to barriers that still exist. In the long term, a shift like the "mobility transition" requires legislative measures to provide an adequate legal framework to which the administrative procedures also then require adaption.



Hanna Rhein
Consultant Urban Mobility, Transport and Air Pollution Control | Environmental Action Germany

> **It is important that the pop-up solution approach becomes more widespread and is heard! We have room to maneuver and should not wait for major regulations such as the Road Traffic Act (Straßenverkehrsgesetz - StVG) and Road Traffic Regulation (Straßenverkehrs-Ordnung - StVO) to be changed, as this leads to long delays. We should use our possible short ways to make change – just like pop-up bike lanes.**

Credits
Researchers: Katharina Csillak, Simon Kaser | Design and illustrations: Anna-Louisa Dogley
Creative supervision: Odile Stabon | Copy-editing: Friederike Pfeifer, Abdulghani Al Sabouni

IKEM | Institute for Climate Protection, Energy and Mobility e.V.

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[1] To answer these questions, first, an interdisciplinary, non-structured literature review in the urban planning and legal field by using the snowball sampling technique was performed, which means the literature that was found was the [illegible]
conducted. These people are Berlin based stakeholders (f/m/d) with expertise in traffic planning on district or municipal level and/or with experiences in the planning of PUBLs from accompanying perspectives (science, NGO). In the fol[illegible]
for Environment, Mobility, Consumer and Climate Protection, Berlin), I3 - Dr. B. Ensink (Mobycon), I4 - J. Würbach, I5 - H. Rhein (Environmental Action Germany), I6 - Dr. J. Jarass (German Aerospace Center, Institute of Transport R[illegible]
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15.08.2022). [41] I2. [42] I1, I3. [43] I3. [44] I2, I3, I7. [45] Cf. Stein, T., Klein, T., Lindner, S. (2022): Was hemmt die Umsetzung der kommunalen Radverkehrsplanung? Erste Ergebnisse aus dem laufenden BMBF-Forschungsprojekt „KoRa – Beseitigun[illegible]
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