

Concepts for Sustainable Urban Mobility

Bottom-Up Approaches and Case Studies



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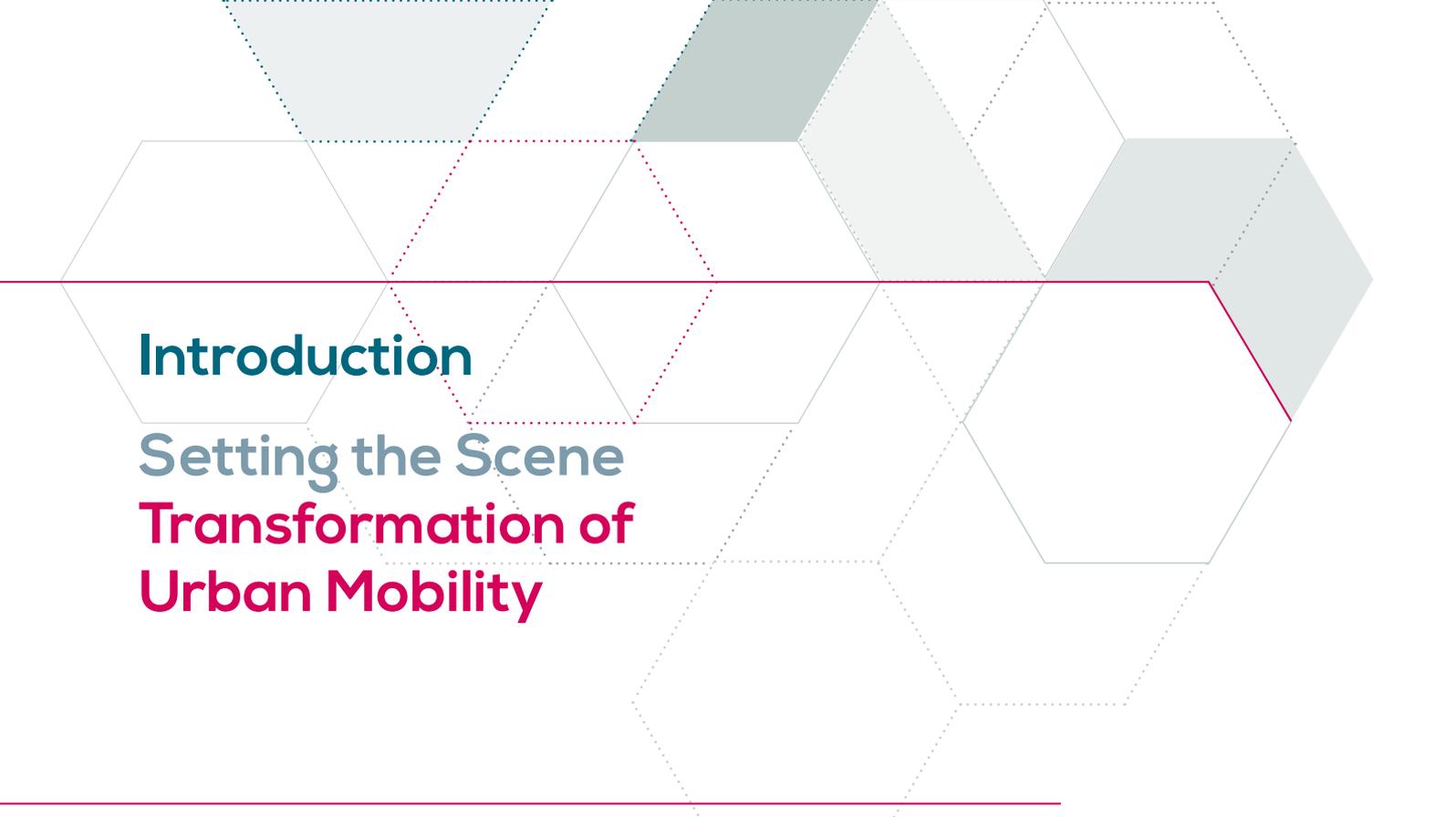
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Introduction

Setting the Scene Transformation of Urban Mobility

Transport – emissions – urbanization

Transport remains the troubled child of decarbonization. Global scenario studies such as the IPCC¹ show transport to be a key factor in cutting emissions even as they highlight the difficulties of deep mitigation. Globally, about one quarter of direct greenhouse gas emissions come from the transport sector, where passenger road vehicles have the largest share. Despite the urgency of reducing emissions, there is no turning point in sight. On the contrary, individual car ownership is still on the rise, and efficiency gains are more than offset by the increased weight and size of cars.

At the same time, urbanization is advancing globally – 60% of the world's population is expected to live in cities in 2030. Together, these trends paint a worrisome picture of the cities of the future. Congestion, pollution, and high transport costs are the direct consequences of a car-centered mobility concept for most places. The current trend of switching to clean electric vehicles is only one part of the solution as long as congestion remains high and city transport systems remain exclusive.

Bottom-up transition

A transformation of urban mobility typically follows Avoid-Shift-Improve (A-S-I) approaches. Thus, a deep transformation of cities' mobility landscape goes far beyond the introduction of cleaner, more efficient cars – which is framed as improving the transport sector. A successful transformation needs to include measures to avoid transport, e.g. via smart city planning and digitalization, as well as measures to shift modes of transport from cars to public transport, bicycling, or walking. This can, for example, be achieved by better bicycle infrastructure, safer, more inclusive and affordable public transport services, and pedestrian-friendly city designs. To find the most optimal solutions for different cities, the people's perspective needs to replace the car-centered planning approaches. Bottom-up community initiatives are increasingly at the center of equitable and sustainable mobility transition efforts to facilitate the socially just transition of urban mobility. Thus, civil society initiatives can be a powerful catalyst here to push forward change processes.

¹The Intergovernmental Panel on Climate Change – <https://www.ipcc.ch/>

Connect and create changes

Bottom-up initiatives are essential for local change, but often lack the capacities or network to connect on an international level and to share experiences and ideas. Thus, the Arab-German Young Academy of Sciences and Humanities (AGYA) in cooperation with Technische Universität Berlin and the Reiner Lemoine Institute have organized an online workshop aiming to bring together initiatives working on sustainable urban mobility transition to harness the potential of civil society and to add to this collective voice to address citizen needs related to transport issues. With this event and the resulting e-report, we aim to overcome the lack of network and connection between initiatives, to underline the need for change, and to allow diverse communities to come together and exchange ideas, best-practices and lessons learned for local and global change.

This paper is an interactive knowledge product that presents background information on sustainable urban mobility based on the presented keynotes, while also presenting practical examples of selected initiatives working on the mobility transition in different cities in the Arab world and Berlin. It concludes with concrete recommendations on how to facilitate the mobility transformation from the perspective of civil society initiatives. We invite you to be inspired by these examples and to connect with the people behind these initiatives to create the change needed for a sustainable mobility future.

How do you envision the future?



“A feminist approach differs from the narrow view in planning and building that most people have, it does not focus exclusively on technical solutions. We focus on accessibility, safety and social justice. This event captured this perspective perfectly and helped us to understand different challenges at different places and to learn from each other.”

**Susanne Menge, Member of the Parliament and Spokesperson
Federal Association for Mobility and Transport – Green Party Germany,
Founder of FRAUEN MACHEN MOBIL(ITÄT)**



Impulses





Transport Policies and the Role of Civil Society

Susanne Menge

Member of the Parliament and Spokesperson
Federal Association for Mobility and Transport –
Green Party Germany, Founder of FRAUEN
MACHEN MOBIL(ITÄT)

Susanne Menge has been a member of the Green Party since 1984, and holds a degree in Teaching Economics and Politics for secondary school. Susanne Menge's political work focuses on the mobility transition, especially on increasing the importance of biking and public transport. She was the spokesperson of the Group for Transport Policy, Ports and Shipping from 2013–2017, and helped to initiate the “Dialogforum Schiene Nord” which aimed to promote citizen participation in order to create perspectives for the expansion of rail infrastructure in the Bremen-Hamburg-Hannover region. As of 2021, Susanne Menge is a member of the German Parliament.

Women need to drive change in the mobility sector

Historically, urban transport systems are planned around cars and their drivers. The needs thus reflected are mainly the needs of men, commuting to work and back home. This narrow view of transport needs and respective planning has led to locked-in mobility systems that cannot provide fair, inclusive, and affordable mobility for all. Especially women are now providing ideas and creating and organizing the much-needed mobility transition.

Aiming to amplify the voices of women active in the mobility transition, Susanne Menge and others founded the Women in Mobility Network. The Women in Mobility Network aims to raise awareness for women in the mobility sector, strengthen leadership positions, and promote project management. Within

the Green Party, people passionate about mobility have founded the initiative FRAUEN MACHEN MOBIL(ITÄT). This initiative aims to reduce traffic, and to increase mobility, safety, and climate justice. “We want mobility to be enjoyable”. FRAUEN MACHEN MOBIL(ITÄT) is working towards exerting political influence on infrastructure planning in Germany.

Diversity of women active in the mobility transition

The women active in this field are as diverse as womanhood itself. There are women from the Global South, such as Fadzai Eniah Mavhuna, project manager “Mobility for Africa”, or Patricia Martínez Barba, chief of staff for territorial strategic management in the government of Jalisco, Mexico. Women from the Global North include Dr. Sigrid Nikutta, board

member DB Cargo or Marianne Weinreich, Cycling Embassy of Denmark. Women from widely ranging spheres are actively shaping the mobility transition. In civil society, women like Dr. Patricia Nzolantima, founder of the first women's economic empowerment hub in Kinshasa, are doing amazing work. In academia, Dr. Jana Kühl is Germany's first professor of cycling management. In politics and public administration, agents of mobility transition include Anne Hidalgo, mayor of Paris and Elke van den Brandt, minister for mobility, public works and road safety in Brussels.

We are lucky to have women like Laura Bahamón-Peña, Pop-Up Bike Lanes Columbia, and Katja Diehl, She Drives Mobility, in on the project as well as many more, without whom the mobility transition would be impossible.

A feminist approach

For too long, transport policy has pursued the goal of building car-friendly cities. This has resulted in a lack of mobility, despite the growth of traffic. "The car-friendliness in Germany is in our way." A feminist approach differs from the narrow view in planning and building held by most people, because unlike the approach taken by most men, the feminist approach does not focus exclusively on technical solutions. The feminist approach focuses on accessibility, safety, and social justice. It considers the needs of everyone, especially those of the most socially vulnerable

(children, youth, the elderly, and people with special needs). In this approach, urban planning is focused on making public space more climate-friendly and socially acceptable in combination with improved mobility.

Process of transformation and sustainability strategies from a political perspective

From the perspective of the Green Party, an inclusive and fair mobility system includes the following aspects: Streets are reorganized to favour active mobility, and the thus freed-up streets and parking areas are converted, for example, into playgrounds or social meetings spaces. The Green Party also wants to realize the principle of "short distances", which means mixed neighbourhoods with residential and commercial areas within walking distance. In addition, they want to strengthen public transportation through improved services and more affordable ticket pricing. In this context, one goal is to reduce the number of cars and trucks by transferring more traffic to rail- and waterways. Moreover, the Green Party aims to implement the principles of "fewer, quieter, smaller" for many modes of transportation, including cars. It is also of the utmost importance to implement the Avoid-Shift-Improve (A-S-I) approach (in German referred to as the "three V's" "Vermeiden, Verringern, Verlagern") and to encourage alternative modes of transportation, e.g., by promoting the travel of the last mile with cargo bikes.

Keynote Susanne Lange

Transportation and the Role of Civil Society



Circular cities

The concept of circular cities means that all resources used in the city remain within the cycle. For example, construction materials can be sourced by recycling infrastructure, equipment, and vehicles. Circularity is promoted in existing public places by aiming for more active mobility, more inclusive public transportation, and more social space. Redesigning resource-efficient circular cities must reduce the need for personal vehicles and promote shared mobility, e.g. by helping people share and maintain their bicycles and cars in community workshops and repair cafés. New models featuring digital and platform-based technological solutions must be integrated to create circular cities and facilitate active municipalities.

Modifying the legal framework to enable change

Policymakers play an important role in this transition. This can be demonstrated in the federal system of Germany, where the legislative power is divided between the German Bundestag and the sixteen state parliaments. Municipalities can only do as much as the legal framework allows them to do. The following two examples illustrate how existing legal frameworks can hinder the transition to more sustainable mobility. According to the BauGB, most new buildings must provide parking spaces for its inhabitants. This creates massive amounts of space reserved for parking. In addition, all issues concerning “moving traffic” are organized within the German Traffic Regulation, which hinders the local introduction of new speed limits or the reorganization of existing speed limits. We believe that allowing for more local power in determining traffic regulations can speed up the mobility transition and permit cities embracing this approach to position themselves as front-runners in urban sustainable mobility.

Policy instruments

Certain policy instruments have proven to be both effective and successful. In the field of legislative changes, this includes funding public transportation. Here the focus should lie on climate-friendly buses or electrified and efficient modes of transport such as trams and metro lines. Model projects, such as 30 km/h-zones or bike paths at the roadside, have demonstrated the potential of these concepts to help achieve a sustainable mobility transition. Driving 30 km/h instead of 50 km/h within cities significantly reduces both the risk of fatal car accidents and the level of emissions, noise pollution, and traffic blockage. Bike paths are among the most effective pull factors for increased bicycle use in cities. Such measures are summarized in so-called “vision zero” strategies, aiming at zero traffic deaths.

The role of civil society organizations in the mobility transition

It is of utmost importance that political parties and groups – especially civil society organizations – cooperate. This involves integrating their expertise in policy-making. Reflecting the mobility needs of the people can only be done through bottom-up approaches and planning. The Green Party and FRAUEN MACHEN MOBIL(ITÄT) also want to empower global partnerships in the field of climate-friendly mobility, working together to share best practices and working solutions for sustainable urban mobility.

Additional information:

<https://www.womeninmobility.org/>

1

Study and understand women's mobility

2

Develop inclusive mobility services

3

Ensure women's security in transport systems

4

Empower women in the transport sector

5

Create awareness and stimulate behavioral change

5 Principles for women and transport

Source: Women Mobilize Women





Sustainable and Inclusive Mobility in Amman

Sarah Hepp

Director of Regional Climate and Energy Project MENA,
Friedrich-Ebert-Stiftung, Jordan

Sarah Hepp is the director of the Jordan-based Regional Climate and Energy Project MENA of the German Friedrich-Ebert-Stiftung (FES). She is also the director of Friedrich-Ebert-Stiftung Iraq and the deputy director of FES Jordan. Prior to that, she worked for the Friedrich-Ebert-Stiftung in Brussels, Berlin, and Stuttgart. In the Brussels FES office, she was responsible for the field of gender equality in the EU. Sarah graduated from the Rheinische Friedrich-Wilhelms-Universität in Bonn and the Alma Mater Università di Bologna with a bachelor's degree in Romance Languages and Political Science, and she holds a master's degree in European Studies from the Rheinisch-Westfälische Technische Hochschule (RWTH) Aachen.

Activities of the Friedrich-Ebert-Stiftung

The Friedrich-Ebert-Stiftung (FES) is committed to strengthening civil society by empowering people to successfully engage in the political, trade-union, and the civil spheres on the national and international level. FES advocates for free societies, strong democracies, and welfare-states that offer all their citizens the same opportunities to participate on political, economic, social and cultural levels, regardless of their origin, sex, or religion. One of more than 100 country offices worldwide is located in Amman, Jordan.

Goal and approach of the Regional Climate and Energy Project MENA

The Regional Climate and Energy Project in MENA works on a national and regional level covering the entire MENA region (The Middle East and North Africa). The project is centered on three pillars: Just energy transition, climate justice, and social and sustainable cities. The social justice aspect is of central importance to the work. It is not only important that the goals of the Paris Climate Agreement are met. The path towards this goal is embedded in the Sustainable Development Goals (SDGs). But this transition is "above all a major social challenge".

Just transition

FES advocates for a just transition. “We think it’s not enough to only make our economies greener, we also need to reshape our society towards a care economy.” And it is essential, that no one is left behind in this transition process. Therefore, it is necessary to include a gender perspective in all projects. The mobility sector is a main driver for CO₂ emissions and a source of injustice in the MENA region. Mobility in the MENA region is not gender neutral. Access to transportation is vital for women, poor citizens, the elderly, children, and people with special needs to achieve their full potential.

Situation in Amman

Especially in Jordan and the capital city Amman, there is a growing need for transportation and mobility due to massive demographic and urban growth. Almost half of the Jordanian population lives in Amman. In 2004, 1.9 million inhabitants lived in the Amman Governorate, and in 2020 this number has grown to 4.4 million. This increase is primarily caused by the refugee influx from Syria and Iraq. This growth in population explains why car ownership rates in Jordan have increased tenfold in less than four decades. In 2017, one vehicle was shared by 6 persons, as compared to just one vehicle per 58 people forty years ago.

Challenges in the mobility system in Amman

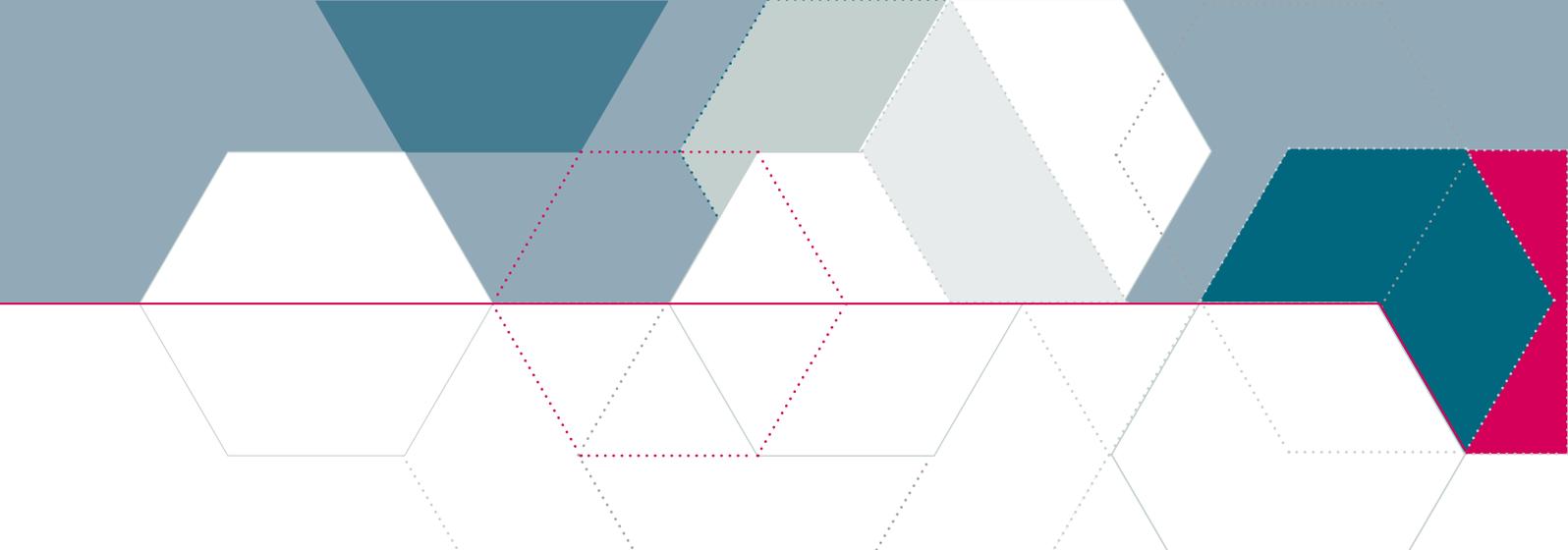
Increasing reliance on private cars has resulted in several challenges. Firstly, 50–90% of air pollution in Jordanian towns is caused by road traffic. This urban air pollution carries public health risks and negatively affects people’s ability to engage in more active forms of mobility (e.g. walking, cycling).

Additionally, GHG (greenhouse gas) emissions attributed to transport are 16% (in 2016), and in 2021 that level is expected to be even higher. The increased use of private cars has also led to major challenges in pedestrian mobility. Sidewalk construction and maintenance are responsibilities of the private landowners. The weak enforcement of sidewalk standards and traffic laws by the government, coupled with a lack of well-maintained pedestrian crossings, has made pedestrian mobility very unattractive compared to private car use.

Currently, cycling is a rather uncommon mode of transport. Largely viewed as a recreational activity, almost no cycling infrastructure exists. Moreover, Amman has a rather hilly topography, and all of these factors are a hindrance to adopting this mode of mobility. While 33% of the population uses public transport, a majority of these users are

Keynote
Sarah H
Sustainable and inclusive
mobility in Amman





considered captive riders, which means they have no other option for traveling, as they do not have a car. The lack of safe and efficient public transport is a reason for the low female participation in the workforce, as demonstrated by a study published in 2018 by FES and SADAQA, which found that 47% of Jordanian women have declined a job offer due to the lack of available safe, affordable, and accessible public transportation. One advancement has been the Bus-Rapid-Transit-System (BRT), which went into operation in Amman in 2021, after 10 years of delay. Another line is planned to go into operation this year, but despite these major advancements, the first and last mile remain a challenge.

Moreover, while the share of electric and hydrogen cars is increasing due to certain government policies, such as granted custom exemptions, people are still reluctant to depend on electric vehicles as a primary vehicle, partially due to a lack of charging infrastructure.

Presently, there are hardly any green spaces in Amman, which means that there is basically no shade when one waits for the bus, and almost no areas in the city that can absorb CO₂ emissions. In the context of trying

to tackle all these issues, funding is a huge challenge due to Jordan's restricted financial situation. "Jordan is quite bankrupt". Projects can therefore only be implemented if there is enough funding, and this is mostly provided by international donor organizations. Increasing funding nationally and internationally is a key challenge that we are currently trying to address.

How to create positive change

Solutions for these specific challenges need to consider the special situation in Amman. The key to transformation is to create attractive alternatives to individual car use based on a mobility transition plan. This plan should center on a cleaner, safer, and more accessible public transport system to improve women's mobility, in particular. This means planning for high public transport coverage, creating affordable price schemes, and implementing security measures to protect female passengers within buses, but also at stations and within the first and last mile. Cycling and walking can be encouraged by creating appropriate infrastructure, which needs to be part of comprehensive and sustainable urban planning.

Additional information:

<https://mena.fes.de/topics/climate-and-energy/>

<https://www.facebook.com/FESMENA/>

https://twitter.com/fes_mena

<https://www.youtube.com/c/FESonline>





Urban Mobility – Focus on Avoid and Shift

Prof. Dr. Felix Creutzig

Mercator Research Institute on Global
Commons and Climate Change (MCC)
and Technische Universität Berlin

Prof. Dr. Felix Creutzig is scientific coordinator and speaker of the Einstein Climate Change Center and Public Policy, head of the working group Land Use, Infrastructures and Transport at the Mercator Research Institute on Global Commons and Climate Change and chair of Sustainability Economics of Human Settlements at Technische Universität Berlin. He is coordinating lead author of the IPCC's Sixth Assessment Report and was a lead analyst of the Global Energy Assessment. His research interests include building models of sustainable urban form and transport, conceptualizing and quantifying GHG emissions of cities, and assessing opportunities for GHG mitigation of cities world-wide.

Activities of the Mercator Research Institute on Global Commons and Climate Change (MCC)

The MCC is a non-profit scientific think tank that combines high-level economic and social science analyses, with the goal of developing policy options that can both stop global warming and enhance prosperity and human well-being. More specifically, MCC provides solution-oriented policy portfolios for climate mitigation, for governing the global commons in general, and for enhancing the many aspects of human well-being. In 2017, MCC was ranked as Europe's best performing climate research institute relative to its size, and MCC scientists are researching at the forefront of these complex and important issues.

The sustainable urban transition as a key component of fighting climate change

Transport accounts for 20% of global emissions and, consequently, a sustainable mobility transition is of high importance for fighting climate change from a global perspective. Moreover, transport is also one of the aspects with one of the highest potentials for emission reductions from an individual perspective in more affluent countries, which highlights the necessity of using bottom-up approaches and showcases the potential that demand-side climate solutions can have in mitigating emissions.

Demand-side solutions for a sustainable urban transition

Demand-side solutions focus on factors such as changing behaviour, consumption, lifestyles, technology choices and coupled production-consumption infrastructures and systems. In contrast, supply-side climate solutions focus on limiting the supply of fossil fuels or deploying carbon dioxide-removal technologies that keep demand by end users constant. Demand-side solutions have been underrepresented in the past and have a large potential for reducing GHG emissions. End-use interventions, which are demand-side interventions, could reduce GHG emissions by over 50% in the transport sector by 2050. One framework that has proven to be very useful is the Avoid-Shift-Improve (A-S-I) approach, which categorizes demand-side climate change policies, and allows for a better understanding of various policies. In the following sections, policies addressing the mobility transition in the three categories Avoid-Shift-Improve will be presented and evaluated.

Avoid

The most significant reduction in emissions happens when we avoid emissions completely. One of the most important factors for the urban mobility transition is that one increases the accessibility of cities and focuses on the construction of infrastructure. In the future, most of the emissions of infrastructure will be

emitted by urban structures that are currently being built, and consequently, these urban structures should be built in a low-carbon way. In general, the amount of newly created infrastructure should be limited, while making sure that accessibility remains high, which is a unique and complex challenge.

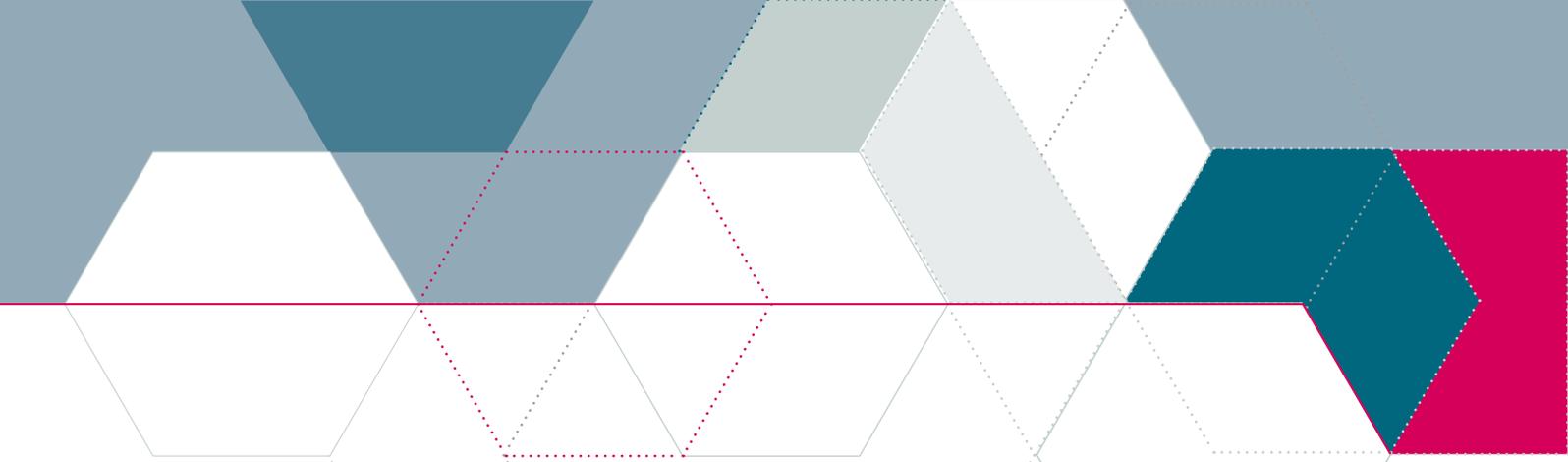
Shift

Shift plays a huge role in the sustainable mobility transition. The shift towards more sustainable mobility can have positive effects that go beyond reducing emissions, such as reducing congestion and improving health outcomes. For example, the introduction of pop-up bicycle lanes leads to substantial increases in cycling. 11.5 km of provisional pop-up bike lanes per city increased cycling activity by 11% to 48% on average. This generates between \$1 and \$7 billion in health benefits alone per year.

Besides a shift away from vehicular mobility, the use structure of vehicles also plays a significant role. While shared and smart mobility is not necessarily sustainable, it can play a significant role in reducing emissions if the amount of people per kilogram of vehicle is high. If a car is shared between 4–6 people, this can have significant effects on emissions per person-kilometer and can be an important part of the Shift policies. The international transport forum modelled shared pool mobility scenarios for Helsinki

Keynote
Prof. Dr. Creutzig
Urban Mobility Focus on
Avoid and Shift





and found that replacing private car travel with shared mobility can have extremely positive effects. In the study, an implementation of shared mobility led to a 37% reduction in congestion, a 34% reduction of GHG emissions, and large space gains, as parking spaces are repurposed for cycling, cafes, etc.

Improve

In the improve aspect, one is mainly focused on the technological improvements for cars and more precisely for battery electric vehicles. One major development of recent years is that the price of batteries has dropped significantly, and this has led to increased usage and popularity of electric vehicles, which helps in reducing emissions. Until 2040, a total mobility transition towards electric vehicles is plausible.

Beyond emission reductions

Besides the positive effects the afore-mentioned policies can have on emissions, demand-side options improve well-being, health outcomes, and are more economically efficient. The congestion and air pollution costs of utilizing cars in cities are up to

10 times higher in cities compared to rural areas, and we have alternatives that are socially and economically beneficial. However, this switch is not necessarily easy, and progress still has to be made.

Current scientific challenges associated with a sustainable mobility transition

One problem that is currently being researched is the endogeneity of preferences. If people live outside the city, they will often state the necessity of car mobility, but when these same people move to cities and see the benefits associated with alternative modes of transport, they will change their preferences and use these alternative modes of transportation. Because people are not able to state this change in preferences in advance of moving to the city, it leads to difficulties in correctly addressing the demand for different modes of transport, which is an integral part of demand-side solutions. This is a major challenge from a scientific standpoint for economists and will need to be addressed in future research to further advise decision-makers on sustainable mobility transition.

Additional information:

<https://www.mcc-berlin.net/ueber-uns/team/creutzig-felix.html>

End-use interventions – avoid, shift, improve – can reduce GHG emissions by 40–70% in 2050



Source: Creutzig et al, Demand-side solutions to climate change mitigation consistent with high levels of well-being. Nature Climate Change 12, 36–46 (2022).



Habitat and Mobility in Algiers Suburbs

Dr. Lilia Makhloufi

Ecole Polytechnique
d'Architecture et d'Urbanisme,
Algeria and AGYA Member

Dr. Lilia Makhloufi is an architect and urban planner. She works as a teacher and researcher at Ecole Polytechnique d'Architecture et d'Urbanisme (EPAU) in Algiers, Algeria. Her main research interests include topics such as public spaces, the city, and urban sustainability. As of 2019, Dr. Lilia Makhloufi also is a member of the Arab-German Young Academy of Sciences and Humanities (AGYA).

Challenges of car-dominated transport systems as exemplified by Algiers

In Algiers, the capital of Algeria, the transport system has suffered from overcrowding, congestion, delays, and pollution. This created a predominance of individual vehicular mobility, with a lack of viable alternative modes of transportation for large shares of the population. While some small-scale subway stations existed in the city centre, public transport in the suburban areas was limited to buses and a few trains. A change in transport planning was necessary to create a system that could meet the needs of all.

The establishment of a tramway line as an alternative transport solution

An inclusive transport system is a crucial component of a strong urban economy and a high quality of life, and an important step towards this goal was taken in 2011, with the introduction of a new tramway line that links the suburbs with downtown Algiers. In the following years, the tramway line was extended several times, and it now spreads over 23.2 km with a total of 38 stations.

The positive effect of establishing the tramway line is exemplified in the development of one commune, Bab Ezzouar. 15km away from the city centre, this commune hosts the largest university in Algeria. It has been evolving gradually since the '70s, following a general plan that allowed for the integration of different types of architecture and dwellings. Urban planners focused on ensuring a high population density that would guarantee services, transportation, and the general vitalization of the district. Bab Ezzouar has become one of the fastest growing municipalities.

Nowadays, Bab Ezzouar can be divided into three main zones: the university, the residential area, and the economic district. In the beginning, mobility planning in Bab Ezzouar focused on buses and individual vehicles. However, as they realized the importance of the university and the proximity to the airport, the authorities decided to integrate Bab Ezzouar into the new tramway line, while also creating a subway extension that would connect the commune to the city centre and allow for an interconnection between the metro station and the tram station.

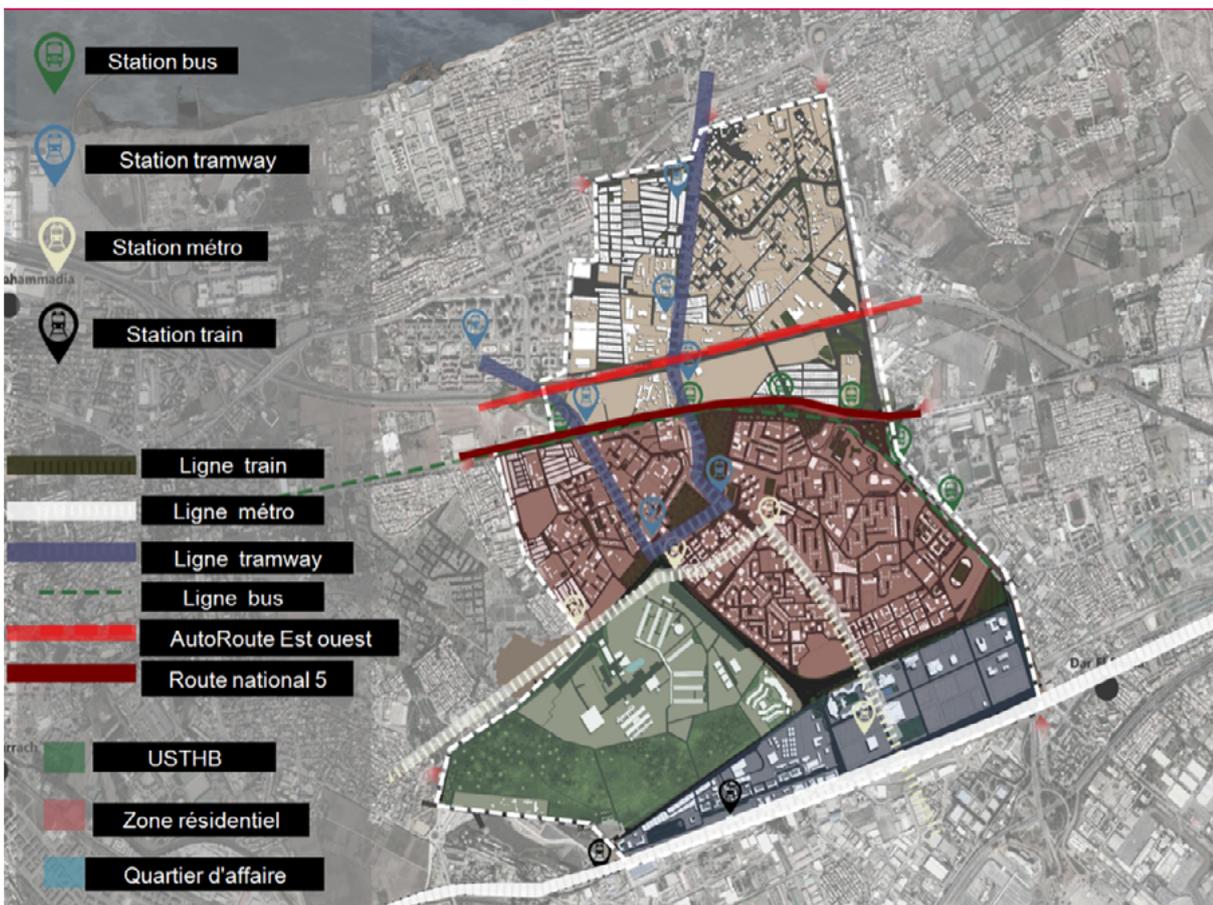
Holistic planning to improve mobility options in urban areas

The new mobility services significantly increased the accessibility to the area and the mobility for students, teachers, and inhabitants. The authorities also focused on building more public and pedestrian spaces in parallel to the new tramway line, to encourage inhabitants to walk and reduce car usage. The effect of these policies has been substantial, even though the subway station is still under construction. To ensure that people can adapt to the new system at their own pace, individual vehicular transport was not excluded, and the tram line was built next to existing roads.

In parallel to the tramway line, more public and pedestrian spaces, including playgrounds, were built to encourage the inhabitants to walk or use the tramway line more and drive less. Congestion has dropped significantly. However, the tramway line only connects inhabitants to the eastern part of Algiers, and not its west. Consequently, many people still rely on cars for their daily commutes if their work is in the western part, and there is a certain struggle between people who prefer to use their own cars and people who prefer to use the tramway line.

Prospects for mobility in Algiers

Extending the tramway line further is an important next step towards achieving sustainable urban mobility in Algiers. In general, the western part of Algiers should be in the focus of mobility policy, with one key goal being the expansion of alternative modes of transportation. The tramway line has had a substantial effect on mobility behaviour, and has encouraged the use of alternative transportation methods. Since the introduction of the tramway line, one important observation has been that many people have moved from the city centre to the eastern suburbs, and now use the tramway line for very frequent round trips. This underlines that the suburbs and the city centre should not be considered as two distinct regions, as the tramway line allows for such an easy connection between both. The example of Bab Ezzouar shows how smart urban planning coupled with a more inclusive public transport system can help achieve a sustainable mobility transition while also contributing to a better quality of life.



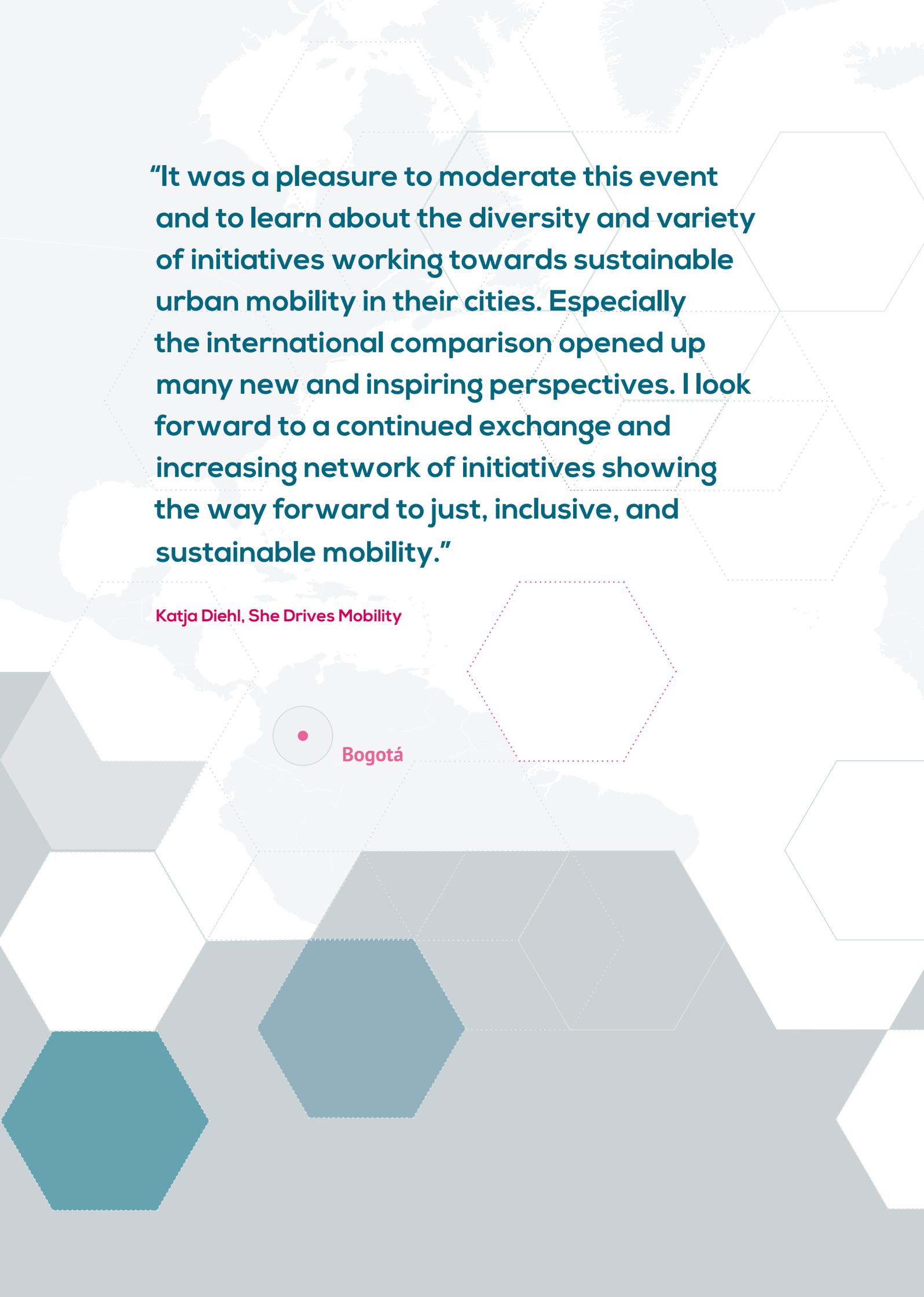
Synthesis of transportation means in Bab Ezzouar, Algiers

Additional information:
<http://www.epau-alger.edu.dz/>



“It was a pleasure to moderate this event and to learn about the diversity and variety of initiatives working towards sustainable urban mobility in their cities. Especially the international comparison opened up many new and inspiring perspectives. I look forward to a continued exchange and increasing network of initiatives showing the way forward to just, inclusive, and sustainable mobility.”

Katja Diehl, She Drives Mobility



Bogotá



Berlin

Initiatives

Civil Society Initiatives and Bottom-up Approaches

Beirut

Ramallah

Amman

Cairo



◆ **Tabdeel**

Cycling for a revolution of transport modes and gender roles



Tabdeel

- **Cairo, Egypt**
- **Established in 2018**
- **Cycling company/advocacy collective**
- **Represented by Heba Attia Mousa (founder and director)**

Goals and approach

Transforming urban mobility in Cairo and beyond

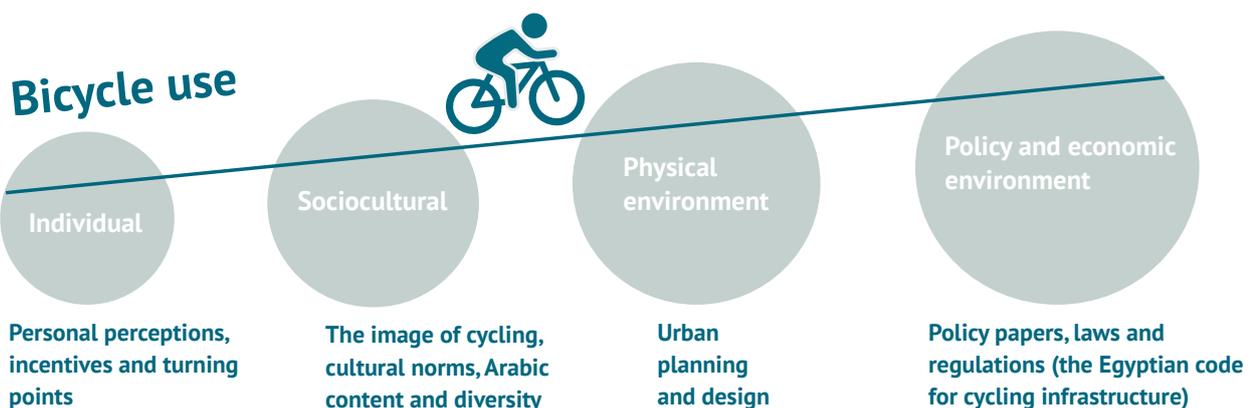
Tabdeel aims to transform urban mobility in the Arab world towards more non-motorized mobility. The Cairo-based company started as a cycling advocacy group promoting human-powered mobility (walking and cycling). Starting off with this idea, the advocacy group soon developed into a company with a broader vision. Tabdeel's vision is to build Egyptian cities around human needs while respecting the environment, and to give pedestrians and bike-users the right to use and shape the public space and their cities. This vision leads to Tabdeel's mission: the company

wants to inspire and mobilize the urban residents to interact with the changing mobility scene, urban environment, and lifestyles.

Art meets technology meets design

Tabdeel applies a multi-disciplinary approach to its work, utilizing art, technology, design, knowledge production, and community building to cover the topic from different perspectives (socio-cultural, geographic, technical, and economic). In the last year during the pandemic, Tabdeel provided people a small financial

Tabdeel's levels of engagement:



incentive to travel by bicycle. After the end of the program the organization recognized that some of the users had in fact purchased a bike and are now using it on a regular basis.

An innovative multi-level-approach

Tabdeel addresses the goal of increasing bicycle use on different levels. On the individual level, the organization tries to change the perceptions and incentives that go into personal decisions. In the past, Tabdeel has conducted frequent workshops all around Egypt aimed at understanding differences in local cycling cultures.

On the socio-cultural level, Tabdeel works on improving the image of cycling and raising awareness for cultural norms and stereotypes that inhibit increased bicycle use. A changing physical environment needs changes in urban planning and design. Tabdeel has already contributed to infrastructure changes in major Egyptian cities that allow for increased non-motorized mobility. It writes policy papers seeking to impact

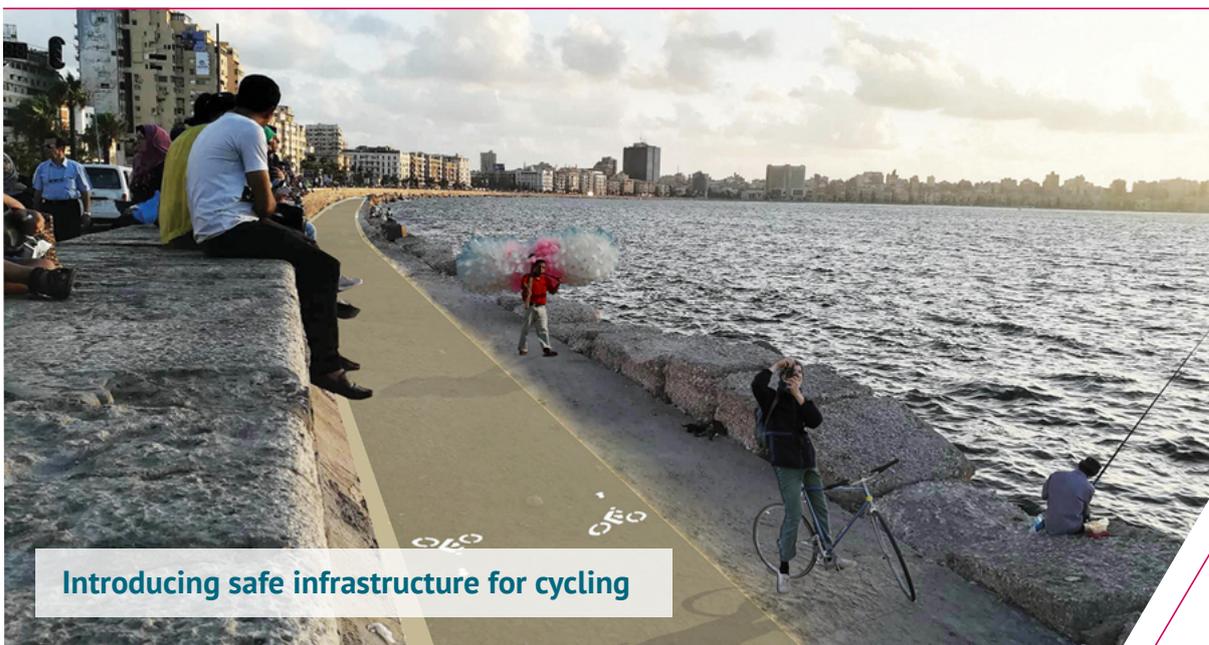
policy and change laws and regulations. Currently, Tabdeel is working on the first cargo-bike sharing concept in Egypt.

A feminist approach against stereotypes and harassment

Tabdeel takes a gender-sensitive and feminist approach, since the mode of transportation in Cairo and especially cycling is highly gendered. Riding a bicycle, women can be subjected to serious forms of harassment and harm.

In the words of Heba Moussa, the founder and CEO of Tabdeel: “99 percent of cyclists in Cairo are men. So, the visibility for a woman is very high. In the neighborhoods where I normally cycle, people are used to seeing me on a bike. But when I go to another neighborhood, I get more harassment, and not only verbal harassment, but more dangerous forms of harassment. People, for example, kick my bicycle, etc.”

Tabdeel’s vision of sustainable mobility in Cairo:



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◆ Kiezblocks/Changing Cities

Free residential areas from motorised through traffic



Kiezblocks/Changing Cities

- Berlin, Germany
- Started in summer 2020
- Initiative for low traffic neighbourhoods
- Represented by Jakob Gemassmer (volunteer and scientific advisor)

Goals and approach

Make cities more attractive

Changing Cities is an organization which promotes the transport revolution from below with projects in Berlin and nationwide. #Kiezblocks are a Berlin campaign of Changing Cities with the idea to free residential areas from motorised through traffic. The Kiezblocks campaign was inspired by Superblocks in Barcelona and combined those with the Dutch "compartments". The campaign name comes from the northern German and especially Berlin name for a residential area with its own infrastructure, namely "Kiez". Cities are increasingly no longer adapted to the needs of the people. Streets are now only a place of transit, lacking safety, space, and quality. The Kiezblocks campaign wants to open up the streets again to all people, and make them spaces to feel at ease in.

Activate and support local initiatives

Berlin has many initiatives fighting for low traffic neighborhoods, but they are not yet connected and therefore each one fights the same fight alone. The "tool" they use is a citizen's petition, in which you set up a petition and collect at least 1000 signatures from local residents, in order for the district to deal with it. To achieve that, Changing Cities calls or emails the initiatives in the different districts, conducts social

media communications, and holds events on the streets so that everyone can connect with each other. This is so effective that Kiezblocks are now even mentioned in the new Berlin coalition agreement.

The idea behind a "kiezblock"

A "kiezblock" differs from a normal residential area in that streets are closed off using bollards that direct through traffic onto the main streets and away from the residential areas. Bikes and pedestrians can still pass through the streets, but now street furniture, such as benches and playground equipment, as well as plants and trees can be set up. That leads to a reduction in air pollution and noise emissions in that area. The quality of stay increases, and the streets become safer.

Changing cities for climate change

Cities are heat islands, especially in summer. Therefore, these newly created places can be real game changers. There are no cars to heat up the streets, and urban gardening and newly planted trees absorb CO₂ emissions for fresher air. This allows cities to cool down. You can feel the difference between a fully trafficked road or a "kiezblock". The air is fresher, and

you feel more comfortable. Some changes are immediately noticeable, like reduced noise and emissions levels and increased space. Further effects will also occur in the long term. More people will switch from cars to other modes of transport, and those who continue to rely on cars will benefit from reduced traffic. After several years, the neighborhood

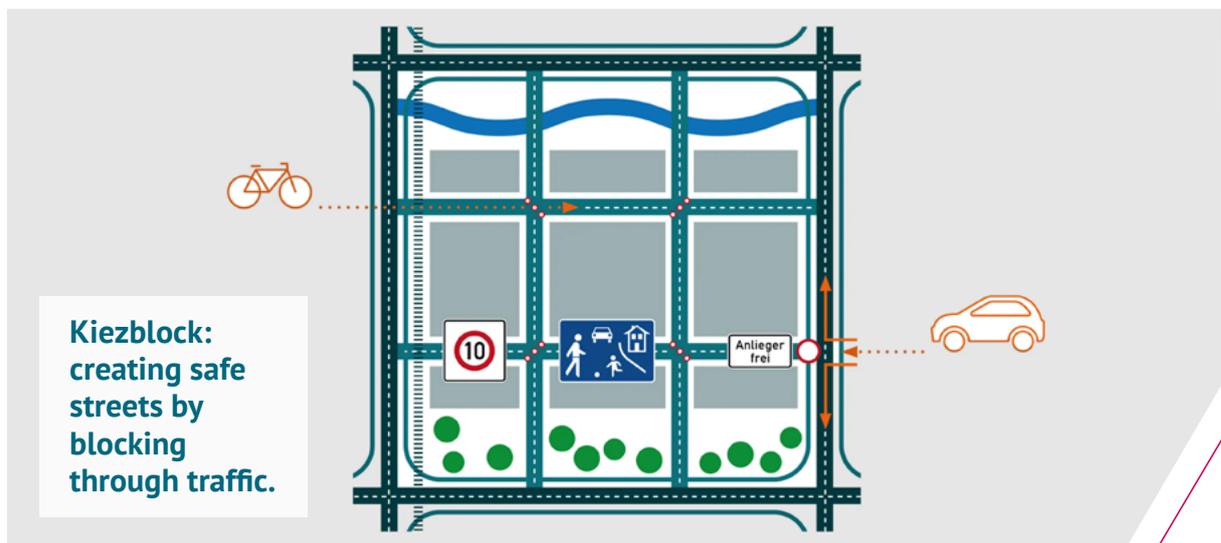
will be upgraded with more local businesses and fewer privately owned cars. For now, there are about 70 “kiezblock” initiatives in Berlin, and efforts are being made to implement as many initiatives as possible soon so that people can feel more comfortable in their city.

Kiezblocks vision of sustainable mobility in Berlin

The Kiezblock concept

A neighbourhood block is a residential area without through traffic. Measures such as through-route closures, one-way streets, and speed limits prevent motorists from using a neighbourhood only as a shortcut. Instead, through traffic is directed to the main streets, where urban planning has determined it belongs. Residents can, of course, continue to drive into the neighbourhood block, and all buildings in the block are still accessible for e.g. emergency vehicles, garbage collection, delivery traffic. These changes will make walking and biking

within the “kiezblock” safer and more pleasant. The number of cars in the neighbourhood decreases, and the freed-up spaces can be used by everyone and for everything possible: Places to stay, places to sit, sports and playgrounds, green spaces or pedestrian zones and bicycle lanes. The main streets around a neighbourhood block must also be made safer for pedestrian and bicycle traffic, and residents must be protected from traffic noise and air pollution. This can be realized through speed limits of 30 km/h, safe bike lanes and crosswalks.



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◆ Pop-Up Bike Lanes Bogotá

An inspiration for Berlin



Pop-Up Bike Lanes Bogotá

- ◆ Bogotá, Colombia
- ◆ Established in 2020
- ◆ Citizen initiative
- ◆ Represented by Laura Bahamón-Peña (Bicycle manager of Bogotá 2020–2021)

Goals and approach

Nothing is more powerful than an idea whose time has come

On the 16th of March 2020, the very first day of lockdown in Bogotá, the inhabitants of Colombia's capital awoke to find 22km of additional bike lanes outside their doors. The next day, the additional bike lanes had increased to a length of 117km. The new lanes expanded the existing 550km of permanent cycling infrastructure by more than one fifth. To prevent the spread of Covid-19, Laura Bahamón-Peña and her team from the District Mobility Secretariat closed well over one hundred kilometres of lanes on major roads in Bogotá to allow for their use by cyclists. The idea of the so-called pop-up bike lane was born.

A university degree in passion

The passion of industrial designer Laura Bahamón-Peña for cycling started at the National University of Colombia. Back then, she designed a bicycle frame called Asimetrik, one of the special bike models that was part of the first bike sharing service in Colombia. For her Master's thesis, Laura Bahamón-Peña joined the prestigious Hochschule für Gestaltung Schwäbisch Gmünd (Germany). Her Master's thesis centred on a public bike system in Bogotá. After returning to the country, she joined the Urban Development Institute, and then went on to join Bogotá's District Mobility Secretariat.

Changing riding routines in the third-most congested city in the world

In March 2020, the challenge was moving the people from the densely populated residential areas, e.g. Suba and Kennedy, to the city centre, where most people work. They had to provide a safe alternative to the public bus system, which was still the main mode of transportation in Bogotá for 37% of the inhabitants. And there is another challenge: According to a recent Tomtom ranking, Bogotá is the third-most congested city in the world, with a congestion level of 53%, only one digit behind the ignominious number one: Moscow. This high level of congestion is also one of the factors that makes biking so attractive.

An inspiration from the past

The inspiration for the bold move came from the past. In 1974, cycling enthusiasts convinced the administration to close off main roads for a few hours and open them for bikes. The measure became so popular that it was referred to as "The festival of the pedals". A newspaper called cycling a "future obsession" ("La cicla, Obsesión del Futuro"). 50 years of Ciclovía in Bogotá have left a mark. Now, the city employs more than 1300 cycling guardians, and on Sundays and public holidays, the city temporarily closes off roads to cars and turns them into spaces for cycling, sport, and recreation.

A seed for decisions

No wonder the idea of pop-up bike lanes gained international popularity, and the concept of the District Mobility Secretariat was soon implemented in other cities across America, Europe, and Australia. But the pop-up bike lanes are more than a measure met to face the public health crisis. In fact, they are the

result of a citizen initiative that served “as a seed for decisions on transport policy”. For those cycling enthusiasts of the 70’s and for Laura Bahamón-Peña the way forward is clear: “We want less pollution, less congestion, cities for all, more green spaces, and of course, more bike lanes.”

Pop-Up Bike Lanes Bogotá’s vision of a sustainable mobility future:

The “Corredor Verde de la Carrera Septima”: a safe space for walking, cycling, and sustainable transport.



Get in touch

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◆ Shankaboot

Reducing traffic congestion while offering jobs in Ramallah



Shankaboot

- Ramallah, Palestine
- Established in 2020
- Environmentally friendly online-services-based company
- Represented by Qusai Jabr (CEO and co-founder)

Goals and approach

Integrating environmental, social and economic development

Shankaboot is a group of passionate community and youth activists and young entrepreneurs who share the same vision of achieving environmental and sustainable domestic development. Shankaboot uses electric bikes as an alternative to traditional transportation methods in delivery services. Following their aim to reduce traffic congestion, offer job opportunities, and create an eco-friendly alternative, Shankaboot seeks to integrate the three dimensions of sustainable development: the environmental, social, and economic. The name Shankaboot is a merge of the two Arabic words Ankaboot العنكبوت (spider) and Shabaka شبكة (web). The team consists of a group of youth activists and young entrepreneurs around CEO and co-founder Qusai Jabr.

Food and merchandise right at your doorstep

Shankaboot offers online-based delivery of food and merchandise using electric bicycles. To connect the driver and the client, Shankaboot developed its own app. With its service the company aims at decreasing

the environmental footprint and encouraging an active bicycle culture in Ramallah. At the same time, the company provides job opportunities for the Palestine youth that make up one fifth of the Palestine population.

Transforming the traditional transportation sector

However, the vision of CEO and co-founder Qusai Jabr is broader: he is committed to transforming the traditional transportation sector in Ramallah. In order to do so, Shankaboot is following a two-step approach: building a social infrastructure while at the same time promoting the development of a physical infrastructure. "We want to create a network of electric bikes." The network should be accompanied by supporting infrastructure. "We need additional bike services and repair shops that support the creation of a bike culture." Equally important, Shankaboot is a business that creates flexible and well-paid job opportunities for all Palestinian youth without gender discrimination. In fact, Shankaboot encourages female participation in their fleet of partners and supports their right to ride freely.

With its activities, Shankaboot targets the Palestine youth and younger generations. Qusai Jabr knows what it means to have no perspective of employment. After he graduated as a civil engineer, he could not find a job. He therefore started Shankaboot with his friends and family members, with the vision of encouraging bicycling in Palestine. This is uphill work. While the start-up is extending its activities,

the number of cars in Ramallah is still increasing. Nevertheless, Qusai Jabr is optimistic about the future and the influence Shankaboot can have in transforming the mobility sector in Palestine: "Shankaboot was created with the vision of changing the mode of transportation in Palestine to reduce the need for mobility and to replace non-renewable energy with eco-friendly energy."

Shankaboot's vision of a sustainable mobility future:



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**ARAB-GERMAN
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◆ Transport for Cairo

Mapping African megacities

Transport
for Cairo



مواصلات
للقاهرة

Transport for Cairo

- Cairo, Egypt
- Established in 2015
- Transport consultancy
- Represented by Abdelrahman Hegazy (Co-founder and research associate)

Goals and approach

Mapping Greater Cairo

In 2015, Abdelrahman Hegazy and his friends saw the necessity to unravel the complex mobility network in Africa's largest megacity. They started with the ambitious idea to map Greater Cairo's public transport network. They mapped the transport system of the city with 25 million inhabitants as a GTFS feed, which was later launched on Google Maps. In 2017, Transport for Cairo (TfC) founded the Urban Mobility Lab, to focus more on research and the question of how to process the collected data. With its Urban Mobility Lab, in 2017 TfC published the policy paper "How can Transit Mapping contribute to achieving Adequate Urban mobility?", in collaboration with the Friedrich-Ebert-Stiftung. Two years later, TfC and the World Bank presented the Multimodal Transport Strategy for the Greater Cairo Region. In the Urban Mobility Lab, TfC partners with universities and think tanks to produce publications, datasets, training programs, and novel research concepts that utilize data science. In October 2021, TfC presented the Sustainable Urban Mobility Planning (SUMP), partnering again with Friedrich-Ebert-Stiftung. In the participatory process, TfC examined the effects of Cairo's mobility policies on GHG emissions.

Challenges for African megacities

African megacities are faced with several challenges: rapid urbanization as well as economic and population growth in times of climate crisis force developing cities to tackle the ever-changing mobility scene. Many of these cities are characterized by the dominant undercapitalized informal transportation sector and inefficient access to jobs and opportunities. Finally, in many of these places, the transportation sector is the fastest growing sector in GHG emissions.

Promoting holistic sustainable planning

Here TfC comes into play. The Egyptian company supports African cities to envision and build sustainable mobility systems: TfC is empowering cities with technology and skills. Their Urban Mobility Lab is proof of its actionable research and affordable data models. Overall, Transport for Cairo is promoting holistic sustainable planning. To collect and aggregate the data about the formal and informal bus system, TfC uses the open-source data collection and management system Routelab. That software has digitized and automated the processes developed by TfC in years of informal transit mapping. After years

of experience with the software, Transport for Cairo can not only provide customers with the technology, but also provides the training needed for mapping large complex systems.

TfC is therefore responding to a necessity that is felt not only in Egypt but beyond. Since its foundation, the consultancy has mapped five buzzing African

metropolises, among them Kampala, Addis Abeba, and Accra. But realizing their vision of a clean, equitable, and opportunity generating urban mobility system in every African city does not come on its own. Therefore, TfC is always looking out for collaboration partners in the fields of research, open data, modelling, tech development, and outreach to cities. So, do not hesitate to get in touch.

Transport for Cairo's vision of a sustainable mobility future:



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◆ Sekketak Khadra Imagining a Cairo for cyclists



Sekketak Khadra

- Cairo, Egypt
- Established in 2016
- Cycling initiative
- Represented by Mohamed Samy (project manager)

Goals and approach

“Overloaded by bikes instead of cars”

“I’ve always been a passionate cyclist”, says Mohamed Samy, project manager of Sekketak Khadra in Cairo. “And I’ve always imagined Egypt’s streets overloaded with bikes instead of cars.” Thanks to him and the work of the cycling initiative Sekketak Khadra, this vision could one day become reality in Africa’s largest and most congested city. He had this idea when he visited a European country and noticed the use of bicycles as a means of daily transportation. Returning to Egypt, he and a group of fellow cycling enthusiasts started Sekketak Khadra back in 2016. Since then, Sekketak Khadra has been working to improve the cycling services in the city of Cairo and to understand the needs of cyclists for future planning and activities.

Bike racks for Cairo

Right after its foundation, Sekketak Khadra tackled the task of improving the cycling infrastructure in Cairo. As soon as April 2016, Sekketak Khadra signed a Memorandum of Understanding with the Cairo Governorate, UN Habitat, and the Embassy of Denmark. Since then, the initiative has implemented more than a hundred bike racks. An unexpected challenge turned out to be finding the best locations. Firstly, the

organisation mapped potential spots and conducted surveys among pedestrians and cyclists to find out what they consider to be the best spot for a bicycle rack. Secondly, they mapped spots near video surveillance and security guards, e.g. banks, malls, schools, university. They then decided on exact locations for more than 100 bike racks in Cairo. All of them are in Heliopolis and Downtown. They chose those parts of the megacity because they are the ones most used by cyclists. Sekketak Khadra has set in motion the establishment of a bike sharing system, which will be launched in Cairo very soon.

Transforming Cairo

But Sekketak Khadra does not stop there. The initiative wants to spread the cycling culture throughout Cairo and all over Egypt. Sekketak Khadra encourages people to be bicycle commuters and leave their cars behind to reduce air-pollution and traffic congestion in Cairo.

They launched the initiative to transform Cairo into a greener and more bicycle-friendly city. “I have always asked myself how more cycling would change the environment and the dynamics of Cairo and Egypt as a whole”, says Mohamed Samy. To enable this

change, he has also founded the biking initiative Go Bike and is currently writing a book. The book is filled with stories, facts, and figures on cycling and reviews cycling infrastructure around the world according to the Copenhagen index. The author aims at spreading the cycling enthusiasm and supporting the cycling culture in Egypt. The initiative Go Bike addresses an even broader level, with a mission to create a commu-

nity of passionate riders of all ages, religions, classes, and backgrounds. They thereby want to drive positive change in other areas: making life healthier, strengthening community bonds, empowering women and combatting climate change. With such a multilevel approach Mohamed Samy's dream of a city overloaded by bikes could very soon become a reality.

Sekketak Khadras vision of a sustainable mobility future:



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ARAB-GERMAN
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◆ SADAQA

Fighting for gender-sensitive public transport



SADAQA

- Amman, Jordan
- Established in 2011
- Women's rights organization
- Represented by Sahar Aloul (core team)

Goals and approach

Three key barriers for women

SADAQA was founded by a group of working women. Back in 2011, they decided to raise their voice against the unfair distribution of care work among genders and its effect on their labour. More than ten years after its foundation, the non-governmental organization works to eliminate the three main barriers for the entry of women into the workplace: the lack of public transport, the lack of day-care, and the lack of pay equity. And there remains a lot to be done. Jordan is one of the countries with the lowest level of economic participation of women.

Proving that mobility is highly gendered

In 2018, SADAQA in cooperation with the Friedrich-Ebert-Stiftung (FES) conducted a study on the perspective of female users of public transportation in Jordan. The study entitled "Gender in Public Transportation" was the first of its kind to study the effect of public transport on women's access to public space.

The results prove how gendered public transport in Jordan is. 47% of women surveyed said that they had turned down a job offer due to the lack of public transport. Based on those findings and two years later, SADAQA, in cooperation with the Jordanian Ministry of Transport and UN Women, launched a National Framework for Gender Sensitive Public Transport which aims to enhance reliability, safety, and accessibility of public transport for women.

Women in agriculture

This approach should not be misunderstood as being focused exclusively on urban areas. In fact, in 2020, SADAQA conducted another study on the mobility of women working in agriculture, one of the most disenfranchised groups in the labour market. SADAQA highlighted the difficult conditions of women workers in the farming sector and documented their experiences and challenges when using public transportation to and from their workplaces.

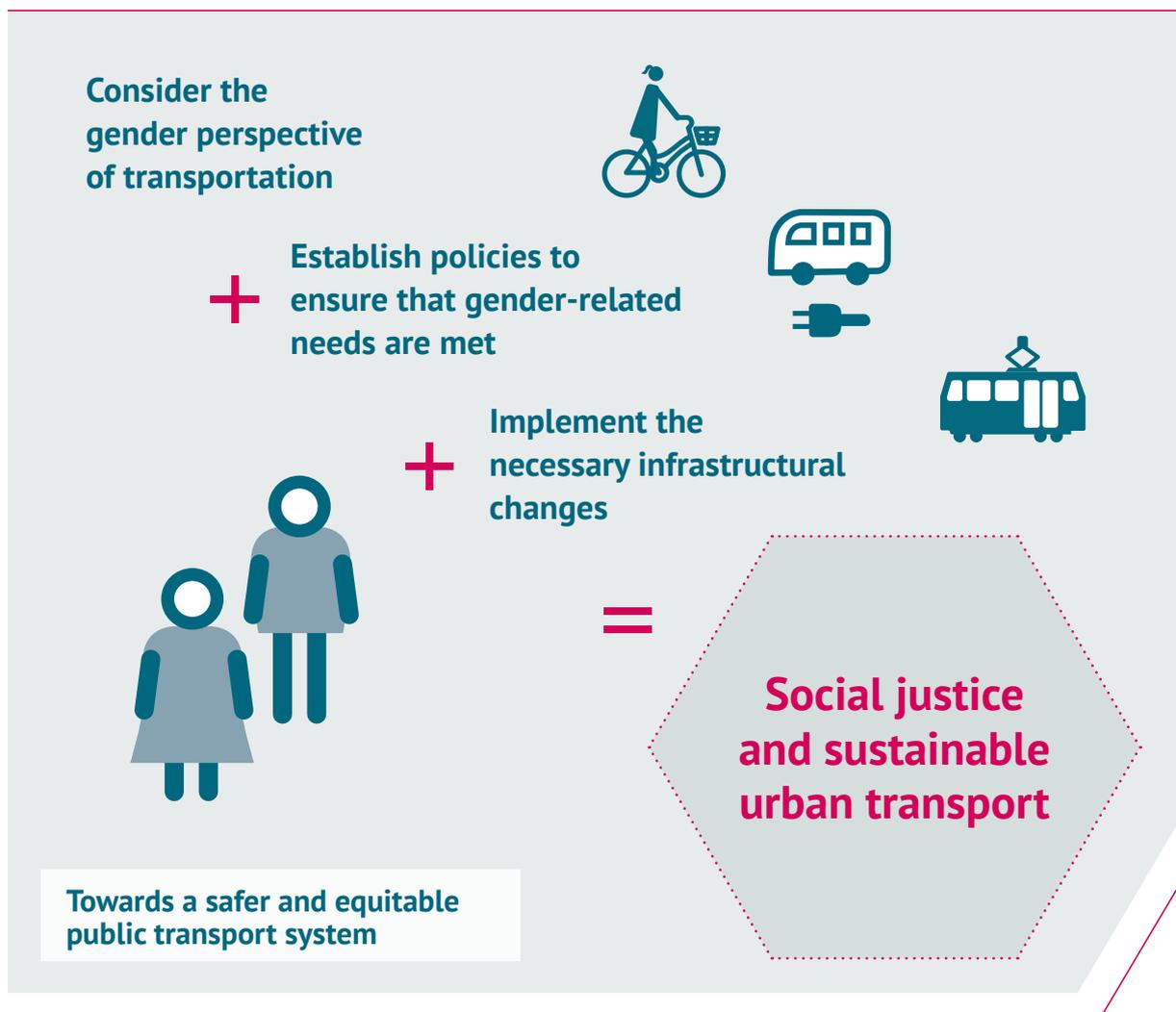
Introducing a comprehensive gender-sensitive transport system

All of these activities center around SADAQA's main goal: to remove obstacles to the economic participation of women in public spaces, taking into consideration the needs of women to impact their economic, political, and social participation. This could be reached by introducing a comprehensive gender sensitive transport system that provides easily accessible, affordable, clean, reliable, and safe transport services.

Better public transport for all

To reach its goal, SADAQA targets various policymakers, including parliamentarians, government stakeholders and the administration. SADAQA is calling on them to consider gender and social mainstreaming in the transportation system, by enhancing services, improving cost effectiveness, minimizing transportation time, and improving women's experience on means of public transport in general. The result will be public transport that does not benefit solely women, but all people.

SADAQA's vision of sustainable mobility in Amman:



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◆ ParkplatzTransform Creating space for people



ParkplatzTransform

- Berlin, Germany
- Established in 2019
- Civil society initiative
- Represented by Luke Haywood & Maren Mieke (volunteers)

Goals and approach

Less space for parking

In October 2019, some people who were already engaged in the shift towards more sustainable mobility in Berlin became increasingly frustrated by the slow progress of the transition of transportation, the so-called “Verkehrswende”, despite the huge number of inhabitants in favour of the project in Germany’s vibrant capital. They united under a simple vision: Less space for parking – more space for people. Led by the question: What can we contribute to realizing this vision, the group founded the initiative ParkplatzTransform. The small team of eight to ten volunteers is mapping parking space. The strategy is to provide data and show the extent of parking space in Berlin and the enormous amount of space cars block in Berlin’s streets. The need for such an initiative arises from the fact that for most of Berlin, the exact number of parking spaces is simply unknown.

Collecting data for an urban transformation

The goal to provide a database for urban transformation is highly relevant for the mobility transition. Firstly, the open-source database can raise public awareness of the extent of the problem. Secondly, ParkplatzTransform encourages data use by other non-governmental actors in the same field (e.g. FoE, VCD, ADFC, Changing Cities, PowerShift) and aims

to support their arguments. Additionally, the civil society initiative puts a special focus on areas in Berlin where parking spaces are already part of the public debate, and the initiative can therefore support local initiatives and their demands. Lastly, the data supports their own demands: fewer parking spaces and no free parking zones in Berlin.

Participatory mapping

To collect the data, ParkplatzTransform developed a method of participatory mapping. Like the data, the process of data collection itself can raise public awareness. Therefore, ParkplatzTransform organizes public mapping get-togethers. In this way, participants gain first-hand experience and have the opportunity to talk to residents who may have never considered the topic of parking and the space it occupies. The participatory mapping is done in small groups of about five people, who count and characterize parking lots and map them with pen and paper. Compared to other technologies of mapping, this method allows the initiative to map not only the number of parking lots, but also their type. This is specifically insightful, as there are different types of parking spaces, each subject to specific regulations. Parking spaces such as gender-specific parking, residential parking, disabled parking, loading zones, charging stations etc. cannot

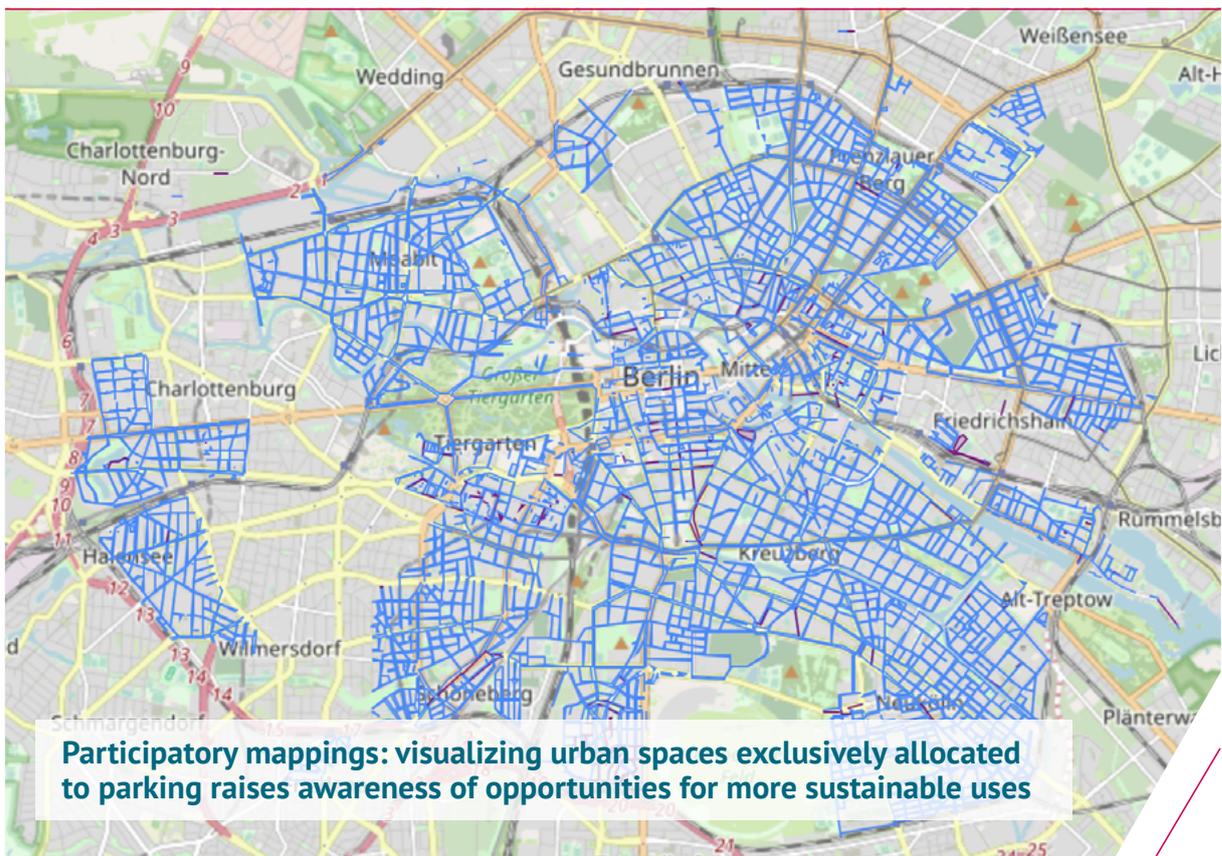
otherwise be differentiated in such detail. Nevertheless, the initiative is currently developing an app to facilitate individual mobile mapping. At the time of writing, the group is seeking people to test the app – please contact them to find out more.

Making the case against parking space

The need for an initiative like ParkplatzTransform becomes obvious in the example of the planned but not yet realized bike lane in the Hermannstraße, next to the popular Schillerkiez. One of the main arguments brought up against building bike lanes is the need to

remove parking spaces for them. ParkplatzTransform therefore mapped the area and proved that only four percent of the total spaces used for parking were located along Hermannstraße, so that the remaining 96% would not be affected by the new bike lane. Finally, the arguments and data collected were taken up by politicians to push the project forward. This example shows how a bottom-up approach to data collection, analysis, and contextualization can contribute to a fairer street space allocation in Berlin.

ParkplatzTransform's vision of sustainable mobility in Berlin



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ARAB-GERMAN
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◆ Riders' Rights

Transforming transport for riders and drivers



Riders' Rights

- Beirut, Lebanon
- Established in 2019
- NGO
- Represented by Chadi Faraj (founder) and Carine Assaf (researcher)

Goals and approach

Riders' Rights

Riders' Rights (RR) evolved in 2019 from a grass-roots initiative known as the "Bus Map Project" (BMP). BMP emerged in the summer of 2015 as a collective mapping grassroots initiative. After its emergence, RR attracted a large number of riders that commuted by bus on a daily basis, and RR has grown ever since. The team now consists of riders, drivers, designers, academics, experts, activists, NGO representatives, students, etc.

Approach

RR NGO is built on a collaborative network with the aim to make mobility accessible and inclusive to all, while defending riders' and operators' rights, and promoting a shared transport system while working on incremental changes for the transport sector to achieve mobility justice. RR considers mobility justice as closely related to basic rights, human rights, freedom of expression, internet, and education.

Defining the problem in Beirut

One common problem in cities is that they are often very car-oriented. The informal transport sector has a stigma attached to it, which can partially be traced back historically to the time after the civil war

(1975–1990), when the state failed to seize the opportunity to reinstate the public transport system. Nowadays, the politics of mobility have trapped the informal transit system as quasi-inaccessible, unsafe, and irregular for non-habituated riders and non-transparent for riders and operators. In Lebanon, there is an additional stigma due to the first bus accident and the civil war. Since the 17 October 2019 revolution more people are claiming spaces on the streets. Coupled with the pandemic, these two factors remind everyone about their mobility rights. In Beirut, almost 80% of the streets are taken by cars, 18% by taxis, 1.7% by informal transit, and less than 1% by un-motorized transport. The country's mobility vision needs a serious re-evaluation, as has become very clear through the continuous increases in fuel costs and fuel shortages. In this context, RR is trying to "change the questions about informal mobility", which is "set in culture and approaches". RR sees informal mobility as the solution, instead of seeing it as a problem. RR is trying to change the perception of the informal transit system, by breaking the stigma of irregularity and lacking safety often associated with the informal transit system. The informal transport system could thereby transition to a more formal public transport system including individual modes of transport like walking and cycling.

By reframing the mobility vision as a question of mobility justice (by creating a mobility justice network) one empowers the riders and drivers and supports a mobility system, which incorporates different modes of mobility. This integrated mobility landscape – bus, cycling, walking, etc. – would encourage people to move away from using individual cars and taxis. By creating advocacy for the integrated mobility landscape and for mobility justice, the government could implement sustainable strategies for the transport sector.

Taking a look back

BMP emerged as a collective mapping grassroots initiative to palliate the lack of data (maps, timetables, stops, etc.). At the beginning, people had no idea about the exact routes of the buses, and when BMP became active, citizens thought the activists were representatives of a new company that was installing a completely new bus system. This indicates the stigma towards the informal bus system. The map explains the existing system and thereby protects it. BMP also used the data to make the system more accessible. Afterwards, RR created a crowdsourcing platform, for different buses to share all the data collected on one app – Smarter Buses. This app was initiated in 2008 and emerged as a social enterprise in 2018. Smarter Buses aims to become a real-time tracking system in the near future.

Values

RR does not use a top-down approach and has a good relationship to the informal mobility sector. They do not want to force the technology on to the informal transit system, but instead, RR wants to adapt the technology towards the system. In this context, RR

values sustainability and aims to support the informal transit service through the implementation of low-cost solutions. These include measures such as reusing old smartphones to map and track the buses and vans of the informal transit system. In addition, RR is building a community of bus riders and is thereby creating a new dimension of the system.

Strategies

RR has three committee groups: Funding and social media, awareness, and outreach. When Beirut faced a total lockdown, RR organized a campaign called “Bus Line Heroes” to support the drivers who had lost their jobs. Moreover, RR developed an information campaign to prevent the spread of Covid-19 in buses to help keep drivers and riders safe. RR also started a campaign called “save and ride”, aimed at supporting the informal transit system by encouraging people to take the bus. To achieve this goal, various promotions were launched, including the granting of discounts in selected restaurants. RR also raises awareness by holding frequent talks, hosted in public or at the clubhouse, and through a blog published by RR.

Partners and outreach

In the long run, RR aims to build a transit community, consisting of a network of riders and non-riders, operators, drivers, unions, politicians, municipalities, experts, etc. An especially important part of this network are academics, as people need to be sufficiently educated to change the system and to avoid the use of cars. One of the activities that is currently emerging and bears a significant potential for improvement is the creation of a transport database in Lebanon.

Riders’ Rights vision of a sustainable mobility future:

We envision a world where social justice, transportation and equitable movement is accessible to all. The optimistic commitment to the potential of socio-political change can offer new pathways of collaboration and solidarity for socially innovative initiatives.

Get in touch

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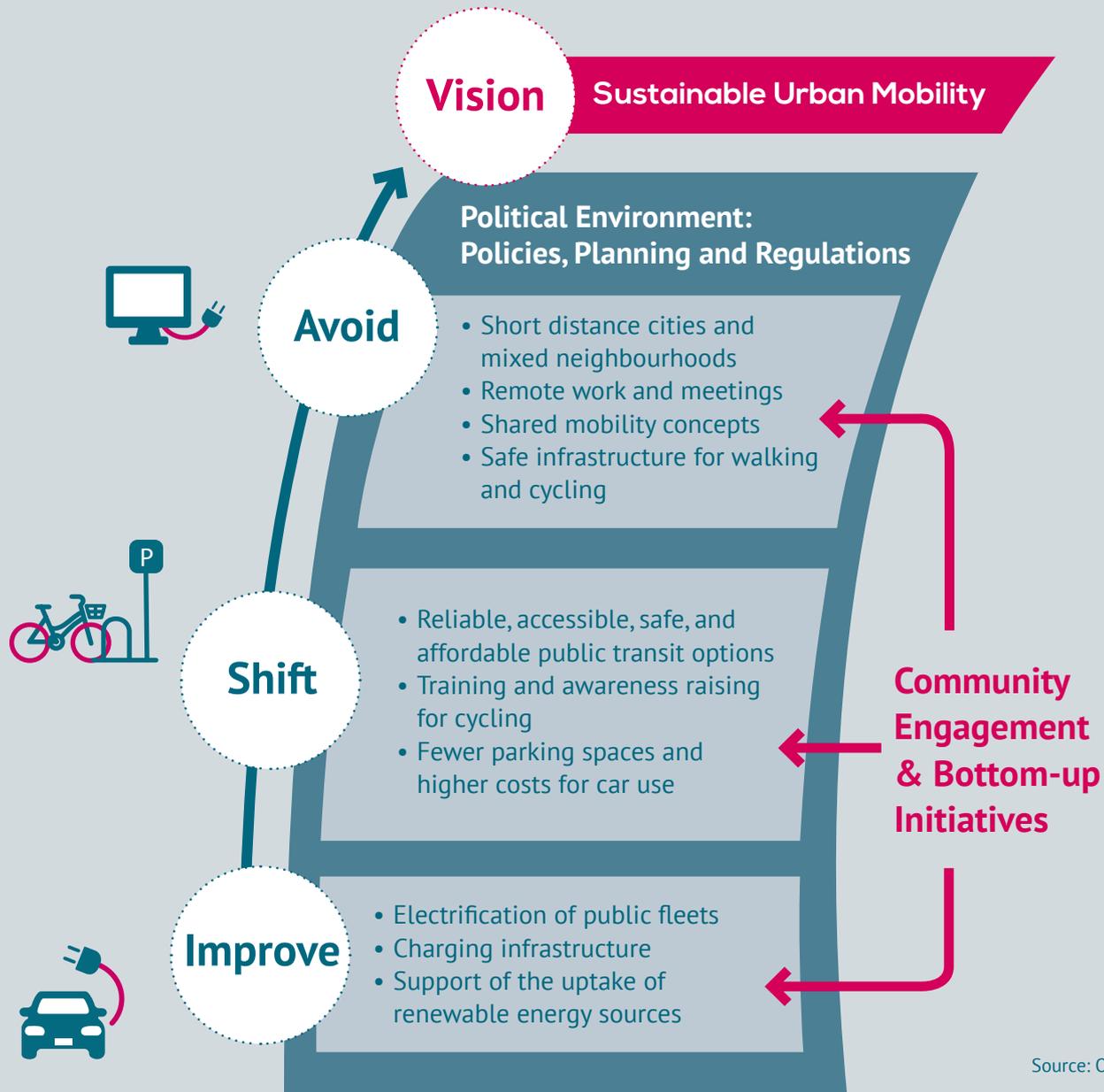
“Avoid and shift approaches are crucial – and underestimated – for a successful transformation of the transport sector. We need more discussion and exchange on what approaches have worked and can be replicated. The workshop and its results are a wonderful example of how to do this.”

Prof. Dr. Felix Creutzig, Mercator Research Institute on Global Commons and Climate Change (MCC) and TU Berlin

Recommendations



◆ Recommendations Towards a Sustainable Mobility Future



Source: Own presentation based on workshop results

Within the framework of the international and transdisciplinary AGYA online workshop 'Concepts for Sustainable Urban Mobility: Bottom-up Approaches and Case Studies' held on 14 December 2021 in

collaboration with Technische Universität Berlin (TU Berlin) and Reiner Lemoine Institute (RLI), about 50 mobility sector stakeholders including mobility experts, policy-makers and representatives of civil

society initiatives from 7 countries came together for bottom-up networking, brainstorming and North-South-South exchange.

From the workshop's impulse lectures, thematic group discussions, and pitch presentations of various civil society initiatives, the following recommendations were developed. They aim to provide feasible strategies to work towards a sustainable mobility future not

only in the Arab world and Germany, but also at an international level. The recommendations are based on the experience of civil society initiatives – from cities in the Arab region, Bogotá and Berlin – that are actively working on the transformation of the mobility systems in their cities, and are anchored around three thematic subgroups: Cycling in Cities, Just Transport and Gender Equity, as well as Sustainable Transport Policies.

1. Vision

Cities need to develop their vision of sustainable mobility based on different stakeholder perspectives and bottom-up engagement. Moving away from the status quo will require explicit consideration of the mobility needs of all citizens with a focus on vulnerable groups. Thus, key criteria for future mobility concepts are inclusivity, gender equity, affordability, and accessibility. Shifting away from car-centered towards human-centered planning must be part of that vision to avoid lock-in dilemmas. Formulating such a vision in a participatory and democratic process is the first step towards sustainable mobility.

2. Policies, planning and regulations

Implementing the vision means formulating policies, plans, and regulations. While comprehensive regulations often occur at the state and national levels, cities also have the capacity to propose them on a local level. The ability of cities to be more responsive to their constituents helps to enable innovative strategies. For proper planning, accessible and current data is indispensable. Therefore, cities should encourage open data collection and access to draw a complete picture of mobility needs and services. This should include surveys considering the special needs of women, children, and other vulnerable groups. Based on the assessed mobility needs of the population and current services, concrete regulations that include direct measures can be implemented effectively. This implementation needs to follow the Good Governance approach to ensure the acceptance of the regulations and measures.

3. Direct measures – Avoid

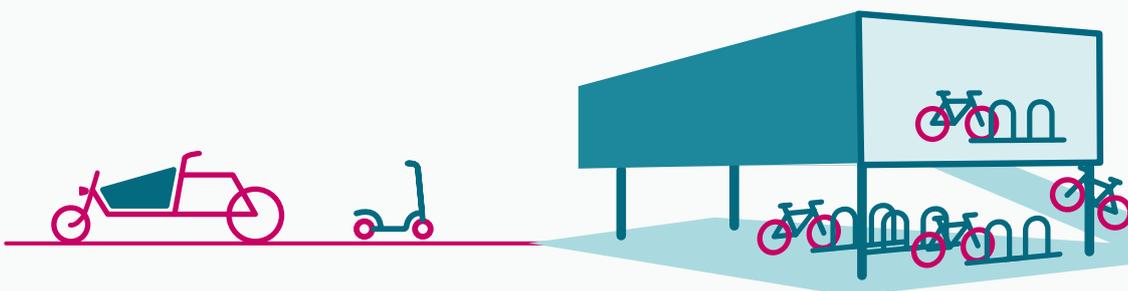
Avoid means reducing transport needs. Cities can achieve this through smart and people-friendly planning. The introduction of mixed districts with residential and commercial buildings, for instance, allows for shorter commutes to work as well as for shopping and leisure activities in the local neighbourhood. Again, the needs of vulnerable groups should be in the focus of these plans. Additionally, digital work can reduce the need for physical presences and related travel to offices or meetings. Shared mobility can reduce the need for individual trips. Here, it is important to incentivize alternative (e.g. green and safe) concepts of shared mobility (e.g. only electric vehicles, female drivers).

4. Direct measures – Shift (public transport)

One key aspect of the **Shift** measure is making car-based transport less incentivizing, which can be achieved by implementing road tolls or reducing the amount of parking spaces while simultaneously raising the prices of parking spots. In addition, pull factors for public transport and walking and cycling should be strengthened, to facilitate the use of these alternative and more sustainable modes of transportation. The first step towards more attractive public transport is to increase accessibility by optimizing routes and schedules. The coverage should be high enough to allow access for everyone within walking distance. For less densely populated areas, on-demand public transport offers an effective solution. In addition, public transport should be affordable to all via subsidized social tariffs. Safety measures such as women only passenger cars, female guards and ticket inspectors, and appropriate infrastructure at stations or bus stops must be implemented to achieve just and gender-equal public transport systems that attract more users.

5. Direct measures – Shift (walking & cycling)

The other way to **shift** transport modes away from cars is to encourage walking and cycling. Two components that can help boost the attractiveness of cycling is the implementation of safe infrastructure, such as protected bike lanes, and ensuring that people have the possibility to learn cycling in a safe environment. Another goal is to normalize female cyclists, as many of the existing cultural barriers can be traced back to existing patriarchal norms associated with the usage of bicycles by women. In the words of Susan B. Anthony “bicycling... has done more to emancipate women than anything else in the world. It gives women a feeling of freedom and self-reliance.” Concrete measures that can help alleviate the current situation include the promotion of female public figures advocating for the utilization of bicycles by women and the strengthening of civil initiatives that advocate sustainable mobility.



6. Direct measures – Improve (electric transport)

Improve means enhancing the efficiency of cars for individual transport. The main goal is to switch from combusting fossil fuels to using electric cars powered by renewables. To make this step especially successful, cities should support the implementation of renewable energy sources. This reduces the CO₂ intensity of the electric vehicles' "fuel". Individual electric mobility needs appropriate charging infrastructure and priority lanes to accelerate the transition. In addition, all public fleets need to be converted to electric buses, or to be substituted by trams or trains. Urban regulatory bodies have the potential to accelerate this transformation through supportive, practical, and disruptive policies.

7. Community engagement and bottom-up initiatives

The key success factor of the transformation towards sustainable urban mobility is public acceptance and support. Cities will fail when implementing new mobility concepts against the will of their citizens. Thus, community and stakeholder engagement is crucial in all policy and planning processes. The work of bottom-up initiatives needs to be empowered and leveraged. These initiatives follow the real needs of local and often vulnerable groups; therefore, decision-makers need to incorporate their findings and demands into the design of city and mobility concepts. In conclusion, supporting bottom-up initiatives is a direct link to incorporating citizens' needs into the urban mobility landscape.

Disclaimer: In this report, we adopted a binary definition of gender. However, we do acknowledge the complex reality of gender diversity, and that transport systems disproportionately impact the experiences of non-binary, trans, or non-heterosexual individuals. And while we often refer to women as vulnerable with regards to their experiences within the transport system, we also want to stress that there is nothing intrinsically vulnerable or passive about women.





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