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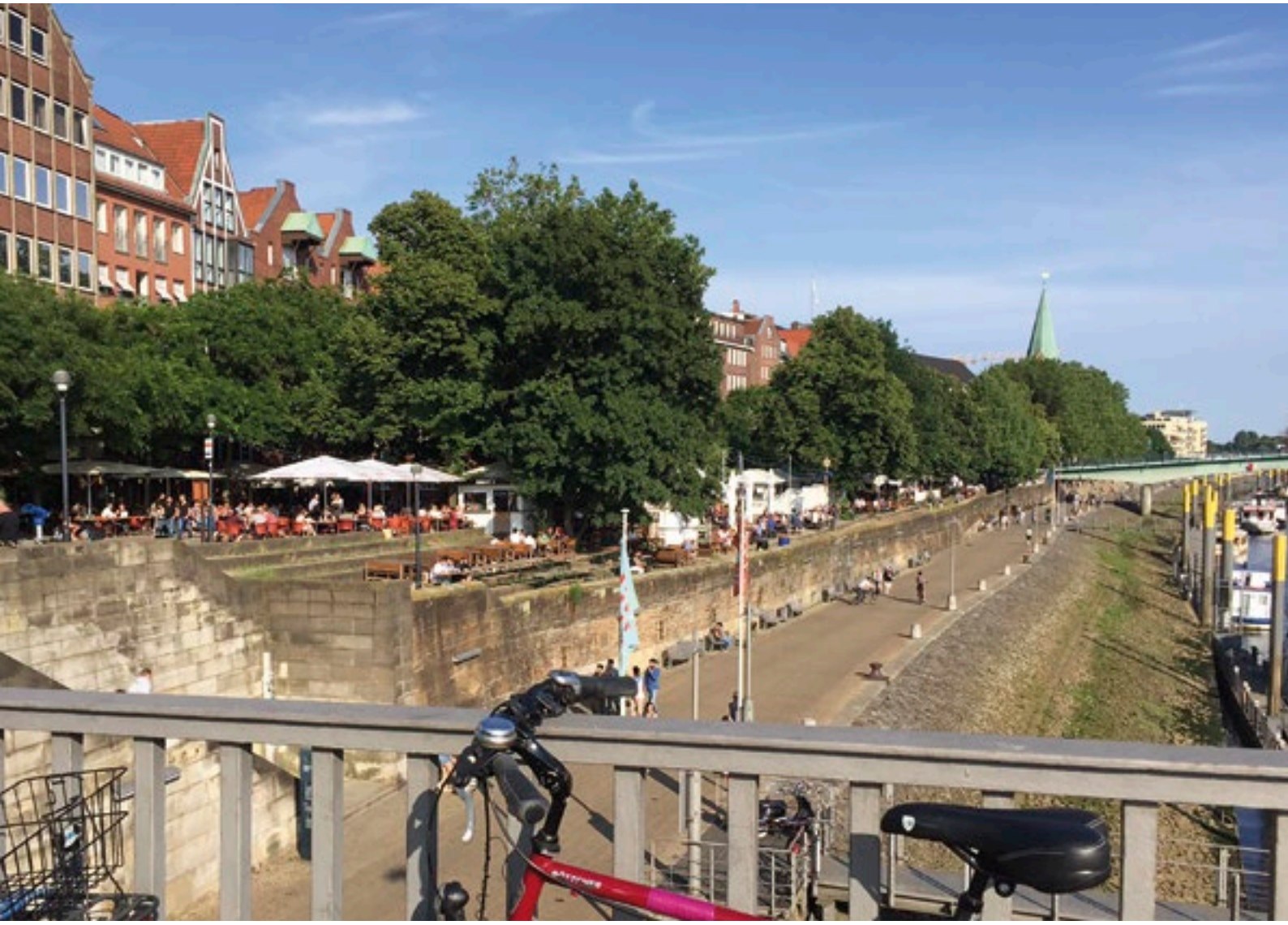

Connective Cities Dialogue Event

Sustainable Urban Mobility: Strategies and Pathways towards More Efficient, Inclusive and Environmentally Sustainable Cities

19 – 21 June 2017 in Bremen, Germany

Partners of Connective Cities

Deutscher Städtetag

ENGAGEMENT GLOBAL
Service für Entwicklungsinitiativen

SERVICE AGENCY
COMMUNITIES IN ONE WORLD

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

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Disclaimer

Preface

The Free Hanseatic City of Bremen's coat of arms shows a silver key.

This seems almost emblematic for unlocking the potentials of the topic of the Connective Cities' dialogue event "Sustainable urban mobility: strategies and pathways towards more efficient, inclusive and environmentally sustainable cities".

The event gathered practitioners from 10 countries from 19 to 21 June 2017 in Bremen; more than 30 participants joined from South Africa, Brazil, Lithuania, Macedonia, Namibia, Thailand and Germany.

Bremen is both an ancient city as well as a Federal State of Germany. Its bicycle lanes are even longer than those of the famous bike-city Copenhagen. Bremen's cycling makes up for 22 per cent of the modal split. Obviously, there was a lot of experience to share with the participants at the dialogue event which enabled a lively exchange.

Bremen is not only a model case for bike traffic: The city is also increasing the use of car sharing. Both features were explored on two inspiring field tours – on foot and by bike, organised by our Bremen hosts. Moreover, we had a preview into one of Bremen's first three electric public busses prior to its official inauguration.

The Connective Cities' team and its partners would like to take this opportunity to cordially express their gratitude to the Free Hanseatic City of Bremen for co-organising the dialogue event and sharing interesting insights as well as experiences so generously. In addition we would like to thank the Bremen University of Applied Sciences (Hochschule Bremen) for hosting the event in its premises. Bremen's hospitality will always be remembered. We are also thankful for the excellent cooperation prior and during the event.

Above all we wish to express our heartfelt respect and warm thanks to the participants for presenting their inspiring case studies, sharing their abundant expertise and contributing to the lively, stimulating and significant discussions during the event.

About this Documentation

The main results of the event are documented in this report. Major aspects of the topic are laid out and the local experiences presented at the event are summarised. The report also highlights key outcomes of the peer to peer advice and action planning sessions. The planning slot resulted in four project ideas addressing more sustainable solutions for the ever rising urban traffic challenges for different cities all over the globe. These ideas are outlined briefly at the end of this publication. The documentation also seeks to inform readers about the way Connective Cities works. It describes the approach as well as the methodology used in the event and explains how the Connective Cities' network supports joint learning, knowledge exchange and municipal cooperation across the world. We hope you will be inspired by the examples and experiences presented.

Alice Balbo and Alexander Wagner

Connective Cities – International Community of Practice for Sustainable Urban Development

Connective Cities is a project jointly carried out by the German Association of Cities (Deutscher Städtetag), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Service Agency Communities in One World of Engagement Global. The initiative is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ).

The platform provides opportunities for local practitioners from municipalities across the globe to share their expert knowledge and experiences in four thematic areas: good urban governance, integrated urban development, municipal services, and local economic development.

By organising dialogue formats in different world regions, Connective Cities facilitates face-to-face multi-stakeholder exchange, peer-to-peer learning and networking opportunities among urban practitioners from local administrations, the private sector, academia, and civil society. Connective Cities' dialogue formats create an environment stimulating innovative ideas and strategies to solve local challenges. In many cases, the discussions lead to longer-term forms of knowledge exchange and cooperation among the participating cities which are further supported through local project workshops, study tours, trainings and virtual discussion fora and contribute to practical change processes in municipalities.

For more information, including the Connective Cities good practice database and its pool of experts for technical support, visit: ***www.connective-cities.net/en***.

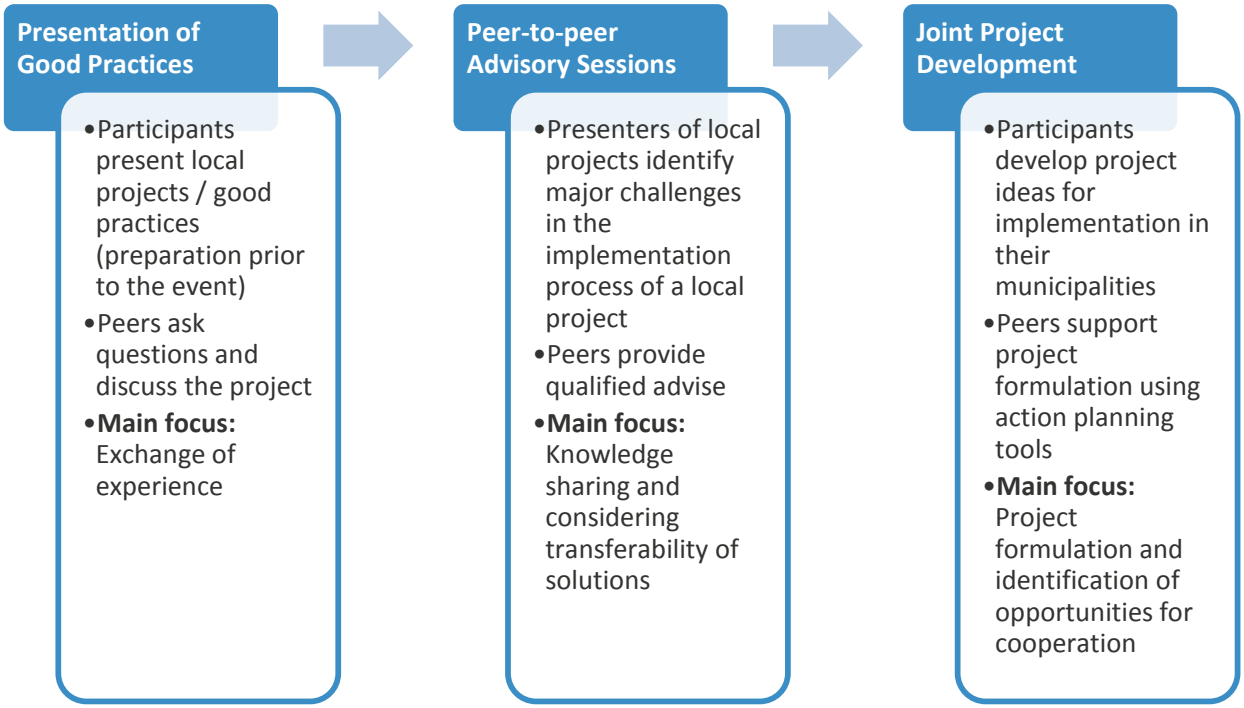
Local practitioners at the Connective Cities Bremen dialogue event

Background, Objectives and Results

Methodology

Typically for Connective Cities, the dialogue event in Bremen was participatory and practice-oriented to foster joint promotion of cooperation and successful future project activities.

Workshop phases of Connective Cities dialogue events



Scientific Introduction and Exchanging Experience (Phase 1 & 2)

Following an introduction to the topic, the participants presented eleven practical and transferable examples of their efforts towards sustainable mobility, and thus pointed out both cases of good practice and still unresolved questions touching on key issues relevant to all municipal practitioners. This provided opportunities to transfer ideas from one city to another.

Sharing Knowledge, Transferring Solutions (Phase 3)

After identifying challenges in the implementation of strategies and projects, peer advice sessions offered new perspectives for innovative solutions.

Action Planning and Opportunities for Cooperation (Phase 4)

Applying a set of presented action planning tools practitioners elaborated four project ideas to be considered in their spheres of operation. Benefitting from informed peer advice, interfaces as well as concrete ideas for mutual cooperation were identified.

Impulse presentations and site visits added value to discover fast tracks to new approaches.

Introduction to the Topic

Sustainable Urban Mobility: Strategies and Pathways towards More Efficient, Inclusive and Environmentally Sustainable Cities

Mobility is a key feature of urban life and transport a driving factor of our economy – connecting people and distributing goods. Often new transport infrastructure enables better connections by car but at the same time undermines walking and cycling.

The demand for transportation is considered to rise three to four times by 2050. Due to the fast rate of urban sprawl, strategic development can frequently not keep pace adequately with the bursting demand for services and mobility infrastructure, a disparity eventually only increasing private motorised transport. Consequently, widespread congestion has become the norm in many cities, negatively impacting urban life e.g. increasing stress, safety risks as accidents, air and noise pollution etc. **Urban mobility drives climate change:** Transport represents the fastest growing source of greenhouse gas emissions as it relies on oil as its principal fuel.

Mobility continues to be a municipal challenge. Local governments strongly influence mobility patterns and can impact the overall quality of life and performance of a city towards its citizens. Public transport is a touchstone for the quality of municipal performance. Moreover, sustainable mobility is part and parcel of the systemic traffic challenge which includes city planning at large in order to overcome the physical, social, economic, political and environmental constraints of movement. Healthy cities enable citizens to walk and cycle; both are also means against obesity caused by lack of physical activity in the modern age and both are, at the same time, more efficient when it comes to traffic issues: E.g. these modes of transport do not claim much space and certainly less so than private cars that remain parked most of the time.

Mobility and accessibility are intertwined with development and should therefore be a matter of crucial interest for **transition and developing cities.** Transport conditions tend to worsen as economic development increases and more people can afford to buy cars and motorcycles – leading to even more congestions and other problems associated with extensive motorisation. Yet, cities in transition and developing countries are in a unique position to guide their urban structure and transportation systems before a culture of motorisation becomes fully established. Instilling sustainable growth design principles into planning city expansion, maintaining and improving public transport, expanding infrastructure for non-motorised movement and other smart concepts are proactive measures – golden opportunities not to be missed.

Mobility is a path towards sustainable cities and calls for a paradigm shift in urban planning. Encouraging compact cities and mixed-land use are ways towards resident-centred and integrated planning which increase accessibility and reduce the need for transportation altogether. Thus, urban planning and design should focus on how to bring people and places together by creating cities that value accessibility rather than merely adding urban transport infrastructure to increase the movement of people and goods.

The concept of sustainable transport encompasses modes, practices and policies that maximise the economic, environmental and social benefits of accessibility and mobility while minimising the negative impacts. Transport and spatial development are perhaps the most inseparable components of a sustainable city plan. A well-executed spatial development plan incorporating smart growth designs means that motorised travel can be reduced drastically. A complementary package of public transport, quality footpaths and cycle ways, vehicle-restriction measures, clean fuels, safety programmes, a focus on behaviour and high standards can constitute a new paradigm for urban mobility and access.

The role of non-motorised transport in urban space needs to be rethought in order to optimise the flow of traffic but also to increase and encourage the use of non-motorised transport, such as walking and cycling. Streets need to be adapted, with walkways, crossings and cycling lanes. Transport junctions need to be established to create connections linking different modes of transport, thus facilitating access to and extending the range of a public transport system, on both the macro level – the city, the region and beyond – and micro level – the neighbourhood.

A reliable and user-friendly urban public transport network is a prerequisite to sustainability, not only because most trips involve a combination of several modes of transport. Affordable multi-modal transport systems and modal integration should be guiding any urban mobility strategy. "Last mile access" has proven to play an instrumental role in providing easy access to the public transport system. In recent years, **new technologies and innovations** have changed the way we use mobility services making choices for modes of transport easier and offering access to sharing concepts such as bike and car sharing which reduce car parking requirements considerably.

More sustainable energy sources and electric vehicles (buses, e-bikes and cars) help to reduce the environmental impact of the transport sector in cities.

In light of the above mentioned aspects the leading issues discussed at the dialogue event were:

- fostering walking and cycling in cities,
- ensuring a safe, efficient and sustainable urban public transport network and
- innovative urban mobility options including their integration into urban development procedures.

Rebecca Karbaumer presenting the good practice of the City of Bremen, Germany

Welcoming Inputs

Rebecca Karbaumer of the Ministry for Environment, Construction and Transportation of the Free Hanseatic City of Bremen welcomed the participants.

Among the 557,000 residents of Bremen, bike use is becoming increasingly popular – bikers and pedestrians make up for about 45 per cent of a progressively balanced modal split, a success to which Bremen's "Sustainable Urban Mobility Plan 2025 (SUMP)", adopted in 2014, is contributing its share.

During an official reception at the City Hall of Bremen Dr. Joachim Lohse, Senator for Environment, Construction and Transportation of the Free Hanseatic City of Bremen, recalled old conflicts about traffic in his city. This prompted him to initiate the process to develop the **"Sustainable Urban Mobility Plan 2025 (SUMP)"** :
"I researched who the main protagonists of those controversies were: the chamber of commerce, the association of car motorists and on the other side the environmental groups and the civil society organisations for alternative transport. I invited them all into the process to develop a new urban mobility plan and that was quite successful.
We discussed about the targets, the transport system of the future, and asked: 'What shall it deliver?' The first target was mobility for everybody."

English version of SUMP
(www.bau.bremen.de/sixcms/media.php/13/SUMP_Bremen2025_web.pdf)
Bremen's SUMP won an award from the European Commission's Sustainable Urban Mobility Campaign. You can download the finalist sheet with inspiring ideas for sustainable mobility plans from
(www.eltis.org/discover/case-studies/bremen-sump-monitoring-and-evaluation-champion-germany)
The two-year long public participation process is documented at ***www.bremenbewegen.de*** (in German only).

The road for efficient and sustainable transport is wide open. This is what **Michael Glotz-Richter, Senior Project Manager for Sustainable Mobility of the Free Hanseatic City of Bremen**, showed. Air quality is a major issue for German cities as driving bans, linked to dirty diesel engines, are being discussed, while reducing CO_2 emissions remains on the agenda, too. *"Get away from the pink elephant, away from car-centred thinking"*, he urged. Bremen f.e. closed the area around the City Hall for car traffic. On the banks of the River Weser an area that was previously a dead space for parking cars was cleared from vehicles and vitalised into a stretch of now buzzy beer gardens. This illustrates how taking sustainability in traffic seriously can help to improve the quality of urban space and live. *"Plan your city and its mobility together. Put people ahead of vehicles. Cities for citizens"*, Glotz-Richter said. Too often, street space is not used efficiently – too much public space tends to be allocated to cars, whether driving or parking.

Good quality infrastructure improves the image of public transport. St. Petersburg's prestigious underground stations bear witness to how much value public transport can be attributed to. Dedicating bus lanes, as f.e. in Belo Horizonte or Bremen, needs brave political decisions at times. Rapid bus lanes can boost the benefits of using public buses, the backbone of transport worldwide. Intermodal hubs address the crucial issue of the first and the last mile. The changing demands in transporting goods and new demands in delivery services need to be addressed as urban planning integrates mobility. A special suggestion by Glotz-Richter: *"Take children's views into account: The city of their dreams has no cars."*

Carlos Esteves of the City of Durban's eThekwini Municipality reported on the challenges of solving mobility requirements smartly and in a sustainable way when planning new housing quarters in less affluent suburban areas, where residential density is yet to rise.

Bonnie Fenton, from the German Cyclists` Association (ADFC), said cycling should be encouraged as a daily transport mode for everyone.

The PRESTO project funded by the European Commission looks at implementation strategies for cycling in cities. For cities with less than 5 per cent bike-traffic share, providing infrastructure making cycling possible, comfortable and safe was the best promotion.

The FLOW project, which is supported by the EU, aims at cycling and walking as means to reduce urban congestion.

ADFC, Allgemeiner Deutscher Fahrrad-Club e. V.
www.adfc.de/about-us/about-us

A leaflet on PRESTO can be downloaded from
http://www.epomm.eu/old_website/docs/1529/presto_leaflet_english.pdf

Local Experiences

Fostering Walking and Cycling in Cities

Sustainable Urban Mobility Planning in Bremen, Germany

Pedestrianising the city centre, assigning cycle priority streets, allotting space for cycle parking, extending the tram network and creating intermodal hubs as Park&Ride / Bike&Ride are components of Bremen's "Sustainable Urban Mobility Plan 2025".

Expanding stakeholder involvement was instrumental to make the plan a success. 46 per cent of all trips in Bremen are non-motorised; public transport accounts for 14 per cent of the modal split.

Still, motorised individual traffic needs to be taken into account. However, it needs to be considered that urban space is limited. Too much of it is being occupied by parking cars; private cars are statistically used only 47 minutes per day. Commercially organised car sharing helps to tackle the issue. Today, about 80 stations with 300 available vehicles all over the city serve more than 13,000 customers: Each shared car replaces about 15 private cars in Bremen. Thus car sharing was able to take more than 4,200 private cars off the road. *"By 2020 the number is to rise to 6,000 shared cars"*, Rebecca Karbaumer said.

View of the City of Bremen

Mile Biljanovski presenting the good practice of the City of Skopje, Macedonia

Skopje Velo-City, Macedonia

"Our main challenge in Skopje remains to promote environmentally sustainable traffic", said Mile Biljanovski of the City of Skopje. He said, bike usage was still too low: in 2010 only 1.4 per cent of the residents moved by bike. *"In March 2014 a working group to promote cycling infrastructure was created."* Civil society organisations were invited. The City of Skopje succeeded in adopting an action plan for bike paths with traffic signs to be put into use from 2014 to 2017; regulations for design and construction were developed by the city but have not yet been adopted by the national Macedonian Ministry for Transport and Communication.

Meanwhile, the City of Skopje has built 60 km of bicycle paths along the primary road network and 20 km of bike paths along the river Vardar. Parking spaces for the bikes were not forgotten. In 2017, the number of kilometres ridden on bike had more than doubled. However, the city's target for biking to reach at least 5 per cent of the modal share by 2020 remains a challenge. Bike paths are abused for illegal car parking and despite the brand new infrastructure, people still seem to shy away from bike riding.

Skopje is striving to get more bikes on the road and has built five manual rent-a-bike-stations in 2012. In addition people willing to buy a bike are now being supported with a subsidy of 65€.

"For example: Construction of a bike lane in central Oujda, Morocco"

Sustainable urban mobility also matters for bilateral development cooperation. Germany and the Kingdom of Morocco agreed to improve bicycle traffic in Oujda Municipality. The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH together with the Moroccan Directorate of the Local Governments (DGCL) and the City of Oujda have conducted preliminary studies for the construction of a first safe bike lane in the city centre of Oujda. The pilot project looks at the initial 2 km of a 45 km network to be built by 2030. The project includes improving and integrating intelligent traffic control measures on five signalised intersections. Such traffic control management is needed urgently, since the number of accidents involving bikers is high.

Currently the modal share of bike traffic in Oujda lies at modest 2 per cent; better and safer infrastructure might boost cycling in future.

A major challenge during the implementation of the pilot project has been the lack of standards and codes in data collection at the national level as well as tools and instruments to monitor and evaluate sustainable transport projects – general tasks which could perhaps be solved by joint learning and practical cooperation efforts of like-minded municipalities.

To support such exchange Oujda is also part of a project which supports knowledge sharing between Maghrebian and German municipalities, implemented by the Service Agency Communities in One World of Engagement Global and GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

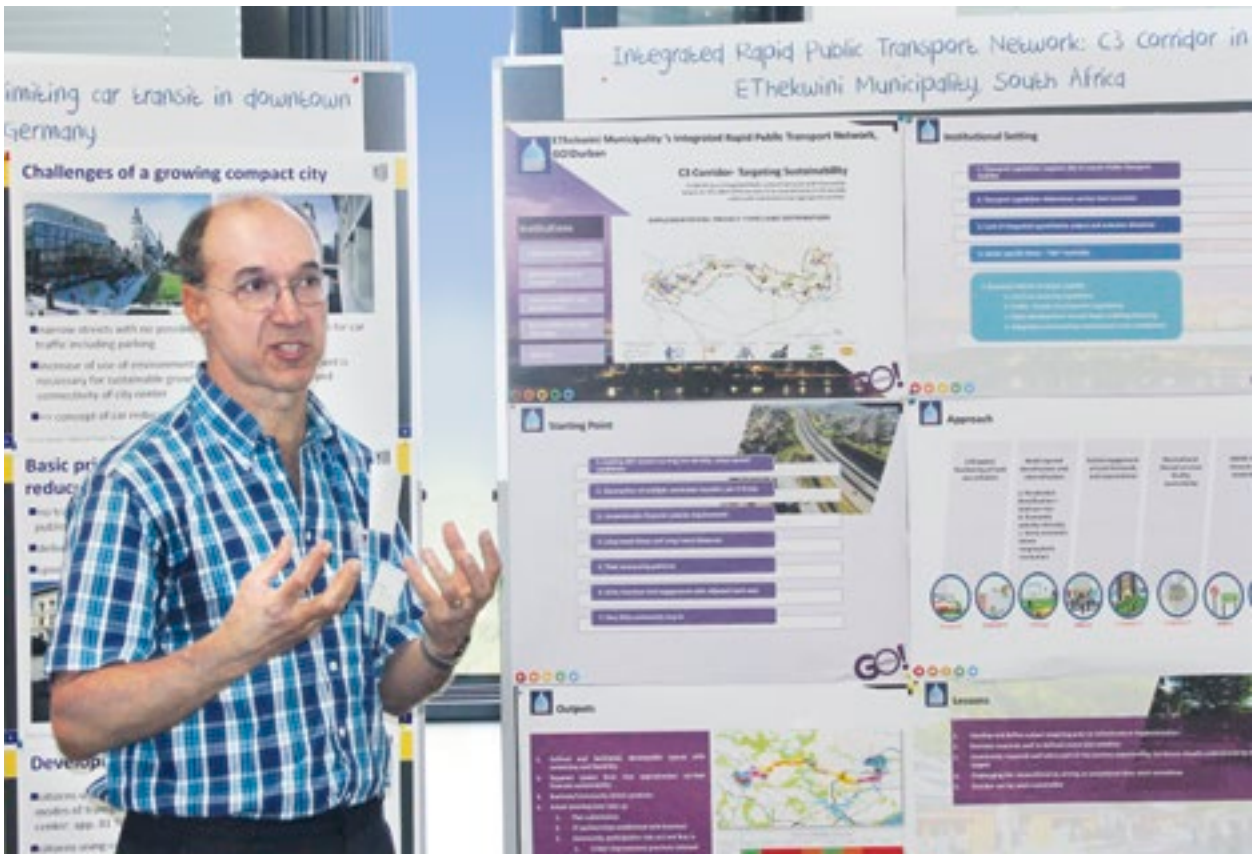
Implementing Areas with Reduced Speed, the "30 Zones", in Belo Horizonte, Brazil

Belo Horizonte's metropolitan area is home to some 5.5 million people. *"Cars have always been prioritised"*, explained Eveline Prado Trevisan of Belo Horizonte's municipal transport company BHTRANS. Her duty: Put the city's 30km/h zones into effect – not an easy task as drivers' respect for speed reductions is yet to be improved. While the advantages of the reduced speed zones seem to be obvious when it comes to cyclists, objections were raised in the stakeholders' meeting.

Since 2005 bike support programmes have been available and integrating them into the 30 zones should bring about extra benefits both for the 30 zones and for making cycling more attractive in the city. Yet political and technical support could be bigger.

To move forward more swiftly backing was sought from civil society organisations. Public hearings and open workshops for discussion and planning were organised – while planners were truly open to listen. *"We asked: What kind of city do we want?"*, said Prado Trevisan. *"We learnt that public administration and citizens can indeed work together successfully."* The previous contacts with Bremen were helpful to develop this project idea.

Eveline Prado Trevisan presenting the good practice from Belo Horizonte, Brazil



Urban Public Transport Network: Safe, Efficient and Sustainable

Pilot Project "Integrated Rapid Public Transport Network: C3 Corridor in eThekwini Municipality, South Africa."

"Durban is prone to traffic heart attacks", Carlos Esteves of eThekwini Municipality (City of Durban) said, *"but the brownfield development shows there is light at the end of the tunnel."* Esteves is facing a complex task. The share of currently 50 per cent of the population having access to scheduled services of public transportation in the wider area of Durban is to be increased to 85 per cent by 2025.

This cannot be achieved with a "silo" planning mentality. Integrated land use and mobility planning together with interface mechanisms need be established – on different levels, be it land use planning regulations or public-private development – just to mention two fields. Carving out a public transport system is not an easy task, given low housing density levels, questions around financial sustainability as well as long travel times and distances. 14 public transport stations are being built along the way, each with an individual development plan. The neighbourhoods are supposed to maintain them.

"Will they move?", Esteves asked and referred to different dimensions: Will people move closer together, closer to the public transport service facilities? Will they move away from the ideology of owning private cars? Will they move in a developmental sense and work together?
But then: Mobility is about moving people.

For more background see also report on the Training on Implementing the Urban Nexus Approach incorporating holistic cooperation across the various specialist departments of municipal administration in concert with civil society and the private sector:
www.connective-cities.net/es/veranstaltungen/dokumentationen/trainings/implementierung-des-urban-nexus-ansatzes/

Carlos Esteves presenting the good practice of the eThekwini Municipality/Durban, South Africa

Sustainable Urban Transport (SUT) initiative in Chiang Mai, Thailand

Chiang Mai had long been praised by its 8 – 9 million tourists per year for its relative tranquillity regarding car traffic, its noise and air pollution including greenhouse gas emissions.

"However, the historical city faces increasing urban transport and land use planning challenges, due to unplanned development", Trinnawat Suwanprik of Chiang Mai Municipality explained. Public means of transport are non-existent. The volume of traffic has been increasing continuously at around 6 per cent per year. Given the trend is continuing, in 2022 the number of trips per day will almost have doubled in only a decade.

In order to translate the vision of a livable and sustainable city into action, a bottom-up approach has been launched with public consultations and interview surveys. Local stakeholders were heavily involved in the detailed design of a new pilot Non-Motorised Transportation Centre, e.g. featuring a public bike sharing facility at the Three Kings Monument, located at the heart of the city, for the benefit of residents and tourists.

Trinnawat Suwanprik presenting the good practice of the Chiang Mai Municipality, Thailand

Concept of a Car Reduced City Centre in Leipzig, Germany

"Leipzig is one of the fastest growing cities in Germany", Jan Rickmeyer of the City of Leipzig explained. As the population increases – given the current modal share of cars –, the traffic system will become prone to congestion and the high quality of life Leipzig is now known for may suffer. The concept of a car reduced city centre was already developed in the 1990s, when the cars clogged the centre, local enterprises were struggling and the quality of public space was poor. Today about 81 per cent of the citizens opt for environmentally cautious modes of transport, when going to the city centre. It has become more attractive to spend time there; today there are more shops and customers.

"Truly involving stakeholders, not just informing them, is mandatory", Rickmeyer said. The next step on the planning agenda: Extending the car reduced city centre zone.

Sustainable Urban Transport Plan – "Move Windhoek": Implementation of a New Bus Transport System in Windhoek, Namibia

Currently only 4 per cent of the population in Windhoek use buses: The public bus system used to be considered to be inefficient and unreliable. *"People still rather use private cars, taxis or mini busses",* Mary Ndeshihafela Shiimi of the City of Windhoek said. Congestion is ever increasing; non-motorised traffic facilities are non-existent. The project "Move Windhoek", was introduced through the Sustainable Urban Transport Master Plan in 2012.

The bus fleet was increased and modernised. More efficient routes and schedules were established, bus efficiency and attractiveness were boosted, successfully so. Fees for car parking were increased to discourage private car use. Newly planned streets now include pedestrian and bicycle lanes.

www.connective-cities.net
For more information: www.connective-cities.net/es/gute-praktiken/details/gutepraktik/movewindhoek/

Innovative Urban Mobility Options

Introducing Low Emission Motortricycle (Tuk-Tuk) for Better Air Quality and Climate change in Bangkok, Thailand

Ten million vehicles in Bangkok are polluting the air, contributing to climate change and producing harmful noise. Among the culprits: 10.000 Tuk-Tuks; their total number is restricted, with good reason, since Bangkok's typical motortricycles often lack energy and emissions' efficiency.

This is mainly because 95 per cent run on simple engine technology. *"We proposed to change the 2-stroke to 4-stroke engines"*, explained Ittipol Pawarmart from the Ministry of Natural Resources and Environment. Thus noise emissions can be reduced by 20 per cent; changing to electric Tuk-Tuks would result in a cut of one hundred per cent regarding all emissions. This does not only help to protect the climate, it is also beneficial for people's health.

Information on planning and implementing Low Emission Zones:
Report on Low Emission and Congestion Charge Zones in Europe with impact assessment studies for Augsburg, Munich, Berlin and Stockholm (UBA German Environment Agency; 2017 in: Analyse der Wirksamkeit von Umweltzonen in drei deutschen Städten: Berlin, München und Augsburg (at the beginning you find a summary in English. For the complete English version, see the appendix p.95ff (the appendix contains other parts in English, too)
www.umweltbundesamt.de/en/publikationen/analyse-der-wirksamkeit-von-umweltzonen-in-drei

Feasibility Study: European City Pass for Low Emission Zones Final Report
(European Commmission, DG Environment 2014)
(http://lowemissionzones.eu/clarsmembers/images/stories/EU_docs/LEZ_Final_Report.pdf)
On health and low emission zones see the results of the EU-Project ACCEPTED (Assessment of Changing Conditions, Environmental Policies, Time-activities, Exposure and Disease, Assessment of changing conditions, environmental policies, time-activities, exposure and disease which analysed „changes in urban design and traffic policy, demography, climate and environmental policies,[which] are likely to modify both outdoor and indoor air quality and therefore also public health"
www.acceptedera.eu/documentation/final-documentation

The Commuter Portal for the Region Braunschweig, Germany

How to save several thousand tons of CO_2 and reduce congestions at the same time, namely just by means of communication and marketing? A commuter online platform shows a way forward.

The cities of Braunschweig, Wolfsburg, Salzgitter and the surrounding counties worked together to care for their many commuters and adapted the set-up to local needs of a car-pooling portal which has been available in Germany since 2006. *"The aim of the project is to change the modal split for commuters"*, said Peter Jungemann of the regional association for the Braunschweig metropolitan area. Too many people travel alone in their private car which makes travelling inefficient and leads to rush hour congestions. *"We want to get some more people into this one car."*

Not only can users look for cost sharing passengers: Details about public transport alternatives are also displayed for those looking for a joint-ride opportunity – including connection details and travel time analysis. This can help to convince more commuters to make better use of public transportation. All it needs is "a homepage and a lot of marketing", according to Jungemann.

www.pendlerportal.de
(in German. On the commuter portal with 5.000-6.000 users per year. About 30.000 connections are being offered.)

Peter Jungemann presenting the good practice of the regional association for the Braunschweig metropolitan area, Germany

Marius Berulis presenting the good practice from Vilnius, Lithuania

Innovative Urban Mobility in Vilnius, Lithuania

Vilnius seeks to enhance quality in public transport and strives to transform its urban mobility network in a sustainable manner primarily by addressing the issues of public transport and sharing cars as well as bikes. Taking into account the special needs of people with disabilities features also high on the city's agenda.

Citizens used to be reluctant towards using public transport, partly because little information about the service was available. Research studies, surveys and last but not least public consultations were initiated to come up with fitting solutions. E.g. it was found that there is a demand for bike sharing beyond the city centre. Sharing systems were made more attractive by reducing the number of free car parking space in the city centre and improving infrastructure, for sharing systems among others.

Using public transport has become more user-friendly with free charging facilities for mobile phones and by providing more information channels, in real time. An online tool helps to plan individual travel routes. People may now take bikes along when using public transportation.

Currently Vilnius wants to further integrate different modes of travel. *"We are therefore planning a new ticketing system"*, said Marius Berulis of Vilnius's planning municipal company. Ticketing for bus, trains, bike and car sharing shall be combined in the new system.

Measures and Examples for the Support of Bicycle Traffic in Bremen, OHM-PROJECTS / NGO Mobilitätsarena

Civil Society can be a driver for sustainable development. The Mobilitätsarena (mobility arena) is more than a user-driven initiative: The registered association was founded as a forum for artists, authors, scientists, inventors, traders and activists with visions on achieving a better quality of, sustainable urban mobility and on improving bicycle traffic in particular. Michael Ohm of "OHM-PROJECTS – International Sustainable Development" and chairman of the NGO: *"Because motorised individual traffic has bumped climatically and spatially up against limits, it time for us to promote the development of sustainable mobility systems: integrating electric cars, bicycles and e-bikes, stimulating excellency in public transport and pushing the idea of sharing means of transport – by talks, debates, exhibitions and excursions for example."*

Peer-to-Peer Sessions

How to overcome challenges in developing strategies, in planning as well as in implementing local projects? Structured peer-to-peer advice has already helped many Connective Cities' dialogue event participants to unleash the full potential of their ideas and tasks.

Challenge can at times show delicate twists. This is why the following reports are anonymous summaries.

Challenge: How to bring together relevant institutions, departments and organisations in order to develop an integrated master plan?

Traffic and transportation issues have cross cutting dimensions. When it comes to environmental aspects, such as initialising low emission zones, decision makers and administrators of different governmental levels and sectors need to harmonise their work plans – even though they might not regard the issue as being their goal or relevant enough to prioritise it. This might rather make them stick to their own established work plans. Eventually the implementation of the low emission zone becomes more difficult, since issues outside the work plans are not easy to finance.

Ways to move forward can be, among others:

- develop an overarching master plan to help to integrate air pollution into other sectors' work plans;
- initiate a collaborative process working closely with other relevant actors;
- find financial resources for projects and link them to your goals.

Peer-to-peer working group session at the Bremen event

Networking exchange among participants at the Bremen event

Challenge: How to convince people give up using private automotive vehicles?

Private cars promise convenience and comfort. Thus it is difficult to make people change their somewhat entrenched views and habits and motivate them to opt for more sustainable modes of transportation.

Peers suggested trying e.g. the following:

- create public transport service offers that are faster, cheaper, comfortable and safe – in short: better alternatives, if possible with extras as user-friendly benefits such as free wifi and provide emotional incentives selling a feeling – maybe through mentors acting as public transport "ambassadors" or "angels";
- link public transport with transfers of students to school;
- start public transportation services free of charge and combine them with an on-the-spot-information campaign.

Challenge: Are there methods and mechanisms to "force" densification?

Broad city sprawl is the natural enemy of efficient public transport systems and everyday use of bicycles. Car oriented development makes lavish use of space possible – and transformation is often being objected to.

Peers said it might help:

- to communicate the benefits of being closer to each other and to the service;
- to realise a model showcase;
- one or two successful prototypes might create a domino effect.

Challenge: How to encourage people to get actively involved in projects featuring non-motorised traffic?

Transformation processes often fall into the hen-and-egg-trap: You want people to hop on public buses – but service performance could be improved. Yet you need the service to be popular and well frequented in order to justify and afford the very investment that makes the network competitive and service performance better eventually. Which then will attract the those user numbers that you would need at the very beginning of the investment process.

This is what you can try according to peer advice:

- regarding communication: Change the label for the project;
- make the system more transparent by providing real time traffic information;
- focus on different target groups.

Challenge: How to convince people to change their habits and accept restrictions, e.g. when trying to reduce motorised traffic in a city centre?

Winning hearts and minds for change is more difficult when people perceive losing benefits and advantages.

- dialogue with shop owners as your natural allies: with less annoying traffic, more people will enjoy shopping;
- analyse users, launch a media campaign – look for positive rather than negative frames in communication (e.g. do not say the centre shall be "restricted for cars" but "opened for pedestrians");
- look for a sociologically and psychologically wise approach to address different types of car drivers.

Challenge: How can we involve local residents in designing low speed zones in the city?

In participation processes organised and experienced stakeholder groups are often more easily identified and become a dominant voice. How to stimulate inputs by those who live and work in the project area?

- contact additional parties that might have objections against speed reduction, as e.g. bus operators, as soon as possible;
- engage with associations of neighbourhood and commerce; create a pilot project and measure the impact before and after;
- engage schools and mobilise support of students. Ask for children's views.

Challenge: How to promote riding bicycles to increase the number of cyclists?

When there is no tradition, it might be difficult to get new customary habits on their way – even though you built proper bike lanes already.

- convince employers to support biking by their employees and workers (by providing shower facilities, bike repair tools etc.) or sponsor activities;
- encourage the use of bicycles, e.g. by subsidising bike purchases;
- plan marketing campaigns (such as alerting the media, organising contests or showing attractive role models giving bikers a face to copy).

Reporting back session after the peer-to-peer exchange

Working group discussions on the Durban project idea

Action Planning and Next Steps

Having analysed the challenges for concrete projects with the help of peers, ways to solve issues in order to foster the transformative power towards sustainability in the field of urban mobility were moved to the centre of consideration during the final phase of the Connective Cities' dialogue event.

Peers advice assisted municipal practitioners to develop concrete drafts of project ideas to be put into action. Opportunities for future collaboration between participating experts, municipalities, through support instruments of Connective Cities and funding opportunities of the Service Agency Communities in One World were explored.

In drafting ideas for action, a set of tools was presented to help focus on the core issues to be tackled. Analysing the situation and requirements as if they were a "problem tree" makes it easier to distinguish causes from effects – and literally dig to the root of the issue.

Mapping stakeholders helps to identify and determine the significance of actors – and helps to plan addressing their needs and interests in a better way. A strategy can be developed by clearly defining the overall global. Identifying specific objectives to reach the goal can be facilitated by envisaging the outputs. From there it is easier to think about the required activities and what kind of support might be helpful to implement them and unleash their potential.

Please register to receive the Connectives Cities' newsletter at

www.connective-cities.net/en/media-centre/newsletter

Working group results of the exchange on the Bangkok project idea

Project: Low Emission Zone (LEZ) Panthum Wan District in Bangkok, Thailand

Objective:
Establish an institutional framework and launch a process of establishing a master plan (out of three existing plans)

Activities:
Several administrative bodies need to coordinate to create a Low Emission Zone in Bangkok while the private sector also needs to be involved. At first they need to mutually inform each other about their existing plans. After a master plan workshop, a steering group for the follow-up process should be established. Subtopics need to be set up. The master plan and its activities should be linked to available funding. Moreover public acceptance needs to be generated. Therefore a public relations campaign on the low emission zone needs to be initiated.

Necessary support:
- showcase mechanisms of financial support for actors in the establishment of a LEZ;
- showcase results from existing low emission zones and successful traffic management; highlight their impacts and refer to experiences with innovative technology;
- explore models for monitoring and evaluation.

Project: Pedestrianisation of part of the CBD area in eThekwini Municipality (Durban), South Africa

Objective:
Make the CBD a more livable space

Activities and necessary support:
A pilot project inspired by other cities' examples needs to be planned. A best practice webinar is to help identifying the most appropriate approach looking at international and national model cases fitting local conditions. Relevant stakeholders need to be mapped. An external expert should review the results and help to develop arguments to convince each target group that the project is valuable (e.g. by showing international examples). Local and international experts can explain the project to the public at stakeholders' and media meetings. Another webinar can help to review the draft concept plan created by local city staff.

Mary Shiimi of the City of Windhoek presenting the project idea for the Namibian capital city

Project: Improve provision of information regarding the public transport network in Windhoek, Namibia

Objective:
Using buses, and the bus service itself, will become more attractive when passengers are provided with information. On a more general level the quality of bus services is to be improved.

Activities:
- Create a network map for users that is easy to read, colour coded and contains interchanges. It to be displayed, among others, at the bus stops;
- make maps, route and ticketing Information and timetables available at bus stops, in a centrally located shop and on the internet;
- create better facilities at bus stops (including maintenance f.e. develop attractive bus stops with shade, lighting, benches, trash cans etc.).

Necessary support:
Hold a local project workshop with international best practice examples to address:
- methods and designs for creating the network map;
- plan roll-out and distribution of information (paper maps, internet, media work, schools etc.).

Project: Active Mobility in Belo Horizonte, Brazil

Objective:
Develop a strategy for active modes of mobility in Belo Horizonte

Activities:
At first, stakeholders need to be mapped and analysed to develop a dedicated action plan in order to involve them. Following this a communication concept needs to be drafted.
A participation concept needs to be worked out, too. Street design guidelines specific to Belo Horizonte need to be developed. They should pay attention to the interests of non-motorised traffic users as well. Finally a model project for a street network needs to be established.

Necessary support:
- Webinar;
- expert mission

Working group results of the exchange on the Belo Horizonte project idea

Follow-Up Support

Connective Cities can assist and provide support for projects of the participants, e.g. by:

- providing access to information, virtual networking and knowledge exchange through its website www.connective-cities.net. The website includes a good practice database, among others;
- linking experts from Connective Cities' expert pool with interested cities and organise expert missions, study tours, training sessions and webinars;
- share information on funding opportunities and facilitating contact with funding institutions.

The Service Agency Communities in One World of Engagement Global provides different funding opportunities for cooperation projects between German and international municipalities. German partners can apply for different financial support instruments. Small scale projects and meetings to initiate and establish municipal cooperation can be supported through the **Small Projects Fund for Municipal Development Cooperation** *(kleinprojekte@engagement-global.de)*. The programme Partnership Projects for Sustainable Local Development (Nakopa) is meant for projects that last for up to three years *(nakopa@engagement-global.de)*.

Some Nakopa projects related to sustainable urban mobility:

- Zanzibar Town-Potsdam: Infrastructure development of the MzaniMmoja Square as a contribution to sustainable urban development in Zanzibar Town and the improvement of urban planning processes (2014 – 2015)
- Lviv-Leipzig: "Street for all" – Participatory planning of a city street in Lviv (2015 – 2018)
- Puerto Leguízamo-Schondorf: Electromobility on the water in Puerto Leguízamo (2015 – 2016)
- Quian`an – Dresden: Focus on integrated transport planning with emphasis on public transport and mobility management for fast-growing, medium-sized cities, using the example of Qian'an (2014 – 2015)

Participants traveling by bus to the site visit at the Bremen public transportation service BSAG

Field Visits

Three field visits on sustainable urban mobility were organised. Besides visiting the public transportation provider Bremer Straßenbahn AG (BSAG), a group of participants joined a bicycle tour to test Bremen's achievements in bike infrastructure personally: quality bike lanes, bike sharing facilities and cycling roads, where cyclists are given priority over motorists.

Another field visit explored Bremen's street design and car sharing system: Shared cars are available all over the city at so-called mobility points. Introduced in 2003, the car sharing system in Bremen has attracted 13,000 users so far. Statistically, every shared car replaces up to 15 private cars and therefore saves public space.

Visit to Bremen's public transportation service Bremer Straßenbahn AG (BSAG)
Founded more than 140 ago as a horse-drawn tram stock company, BSAG stands for Bremen's commitment to sustainability. It serves an area with 609,000 residents and moves more than 100 million people a year with more than half a million passenger-kilometres, 7 tram and 43 bus routes of a total length of 615 km stopping at 630 stations. Whereas all trams have been powered by electricity for 130 years, the bus fleet is now being electrified: BSAG's representative for Company Strategy Yusuf Demirkaya showed the participants one of the first operable electric buses, which Bremen is testing, ahead of its official launch. The 18-metre long articulated bus can reach 300 km on one smartly charged battery. BSAG strives to provide half of its services climate neutrally by 2025.
(BSAG's website is in German only: ***www.bsag.de***)

Additional Reading

- A Guide to Reducing the Impact of Urban Transport on the climate (2010, UBA / German Environment Agency)
  www.umweltbundesamt.de/en/publikationen/a-guide-to-reducing-impact-of-urban-transport-on

- Determining Factors in Traffic Growth: Developments, Causes and Possible Future Directions
  (2005, UBA / German Environment Agency)
  www.umweltbundesamt.de/en/publikationen/determining-factors-in-traffic-growth

- Pilot Project Pedestrians and Bike-Friendly City
  (Modellvorhaben "Fußgänger- und fahrradfreundliche Stadt" 2005, UBA / German Environment Agency
  in German with Abstract in English)
  www.umweltbundesamt.de/en/publikationen/modellvorhaben-fussgaenger-fahrradfreundliche-stadt

- Evaluation Matters: A Practitioners' Guide to Sound Evaluation for Urban Mobility Measures (2013)
  www.civitas.eu/sites/default/files/Evaluation_Matters.pdf

- Environmental Benefits of Innovative and Integrated Urban Mobility Concepts
  (2016 UBA /German Environment Agency)
  www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2016-12-14_umkomoko_end1_kurz-eng_fin.pdf

- More resources and inspiration from the EU in promoting sustainable urban mobility:
  www.mobilityweek.eu
  www.civitas.eu
  www.epomm.eu
  www.eltis.org

Selection from the Connective Cities' Website
Connective Cities Practitioners' Workshops
in English:

- Green Cities' Implications for Sustainable Urban Mobility
  17 – 19 November 2015 in Cebu, Philippines
  Report: ***www.connective-cities.net/fileStorage/Veranstaltungen/Projektwerkstatt_Cebu/Dokumente/CC_Documentation_Cebu_final_web.pdf***
  Keynotes: ***www.connective-cities.net/es/veranstaltungen/details/veranstaltung/green-cities-implications-for-sustainable-urban-mobility/***

in Spanish:

- Urban emission reduction through integrated mobility concepts
  Connective Cities Practitioners' Workshop
  17 – 19 June 2015 in Bogotá, Colombia
  www.connective-cities.net/es/veranstaltungen/details/veranstaltung/innerstaedtische-emissionsminderung-durch-integrierte-mobilitaetskonzepte/
  www.connective-cities.net/fileStorage/Veranstaltungen/Projektwerkstatt_Bogota/Dokumente/Documentacion_Taller_de_Proyectos_Movilidad_y_calidad_del_aire.pdf

- Integrated mobility systems for inclusive and climate-friendly cities
  18 – 20 May 2016 in Toluca, Mexico
  www.connective-cities.net/es/veranstaltungen/details/veranstaltung/integrierte-mobilitaetssysteme-fuer-inklusive-und-klimafreundliche-staedte/

Local Workshops

- 4th Connective Cities Asian Dialogue Event
  Sustainable Urban Mobility and Climate Change – Reducing Air Pollution by Climate Friendly Means of Urban Transport
  27 – 29 September 2016 in Bangkok, Thailand
  Report and Keynotes:
  www.connective-cities.net/veranstaltungen-details/veranstaltung/sustainable-urban-mobility-and-climate-change/

- Improving the Urban Physical Framework Plan of Cebu Metropolitan Region towards Transit-Oriented Development
  13 – 15 March 2017 in Cebu, Philippines
  www.connective-cities.net/es/veranstaltungen/dokumentationen/lokale-projektworkshops/improving-the-urban-physical-framework-plan-of-cebu-metropolitan-region/

Webinars

As part of its network of urban practitioners in the area of sustainable urban mobility, Connective Cities organises regularly and on demand webinar on the different aspects of this topic. German experts are mobilised accordingly to provide their specific expertise. Speakers already included mobility experts from the City of Leipzig and the City of Nuremberg. To sign up to this thematic working group and get more information on upcoming webinars please contact: info@connective-cities.net

Good Practice

- Medellín's Metrocable: Mobility as Fundamental Factor of Integrated and Inclusive Urban Development
  www.connective-cities.net/es/gute-praktiken/details/gutepraktik/die-seilbahn-von-medellin/
  www.connective-cities.net/es/gute-praktiken/categorygp/movilidad-sostenible/

- MoveWindhoek – Master plan for sustainable urban transport
  www.connective-cities.net/es/gute-praktiken/details/gutepraktik/movewindhoek

- Green Loop Cebu
  www.connective-cities.net/es/gute-praktiken/details/gutepraktik/der-green-loop-von-metro-cebu/

- Cycling Canal and Community Project in Bangkok
  www.connective-cities.net/es/gute-praktiken/details/gutepraktik/cycling-canal-and-community-project-in-bangkok-bangmod-case/

- Integrated Action Program for Climate Protection in Munich,
  Munich aims to make 50-percent cut in CO_2 emissions by 2030
  www.connective-cities.net/es/gute-praktiken/details/gutepraktik/integriertes-handlungsprogramm-klimaschutz-in-muenchen

- The Bus Rapid Transit System ›Rea Vaya‹ in Johannesburg
  Connecting the city on individual lanes
  www.connective-cities.net/es/gute-praktiken/details/gutepraktik/der-schnellbus-rea-vaya-in-johannesburg/

List of Participating Institutions

- eThekwini Municipality (Durban), South Africa
- City of Leipzig, Germany
- City of Skopje, Macedonia
- City of Windhoek, Namibia
- Chiang Mai Municipality, Thailand
- Free Hanseatic City of Bremen, Germany
- Belo Horizonte municipal transport company (BHTRANS), Brazil
- Ministry of Natural Resources and Environment, Bangkok, Thailand
- Regional Association for the Metropolitan Area of Braunschweig, Germany
- Vilnius planning municipal company, Lithuania
- Bremen University of Applied Sciences (Hochschule Bremen), Germany
- German Cyclists' Association (ADFC)
- GIZ Eschborn
- OHM-Projects, Germany
- Mobilitätsarena e.V. Bremen, Germany

Group photo of the participants of the Connective Cities dialogue event in Bremen

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