



factsheet

Pedestrian Infrastructure



**Wuppertal
Institut**

UN HABITAT
FOR A BETTER URBAN FUTURE



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Urban Electric Mobility Initiative (UEMI) was initiated by UN-Habitat and the SOLUTIONS project and launched at the UN Climate Summit in September 2014 in New York.

UEMI aims to help phasing out conventionally fueled vehicles and increase the share of electric vehicles (2-,3- and 4-wheelers) in the total volume of individual motorized transport in cities to at least 30% by 2030. The UEMI is an active partnership that aims to track international action in the area of electric mobility and initiates local actions. The UEMI delivers tools and guidelines, generates synergies between e-mobility programmes and supports local implementation actions in Africa, Asia, Europe and Latin America.

SOLUTIONS aims to support the exchange on innovative and green urban mobility solutions between cities from Europe, Africa, Asia and Latin America. The network builds on the SOLUTIONS project and brings together a wealth of experience and technical knowledge from international organisations, consultants, cities, and experts involved in transport issues and solutions.

The overall objective is to make a substantial contribution to the uptake of innovative and green urban mobility solutions across the world by facilitating dialogue and exchange, promoting successful policy, providing guidance and tailored advice to city officials, fostering future cooperation on research, development and innovation.

SOLUTIONS_UEMI supports urban mobility implementation actions that contribute to the Paris Agreement and the New Urban Agenda.

Sustainable energy and mobility can make positive contributions to a number of policy objectives, nationally and locally. In particular in cities there is a great potential to create synergies between for example safety, air quality, productivity, access and climate change mitigation. A UEMI resource centre will provide opportunities for direct collaboration on projects focusing on sustainable urban mobility and the role e-mobility can play in it. The UEMI will pool expertise, facilitate exchange and initiate implementation oriented actions.

UN-Habitat, the Wuppertal Institute & Climate Action Implementation Facility jointly host the resource centre for the Urban Electric Mobility Initiative, aiming to bridge the gap between urban energy and transport and boosting sustainable transport and urban e-mobility.

UEMI

Solutions

Aims

Brief

Good pedestrian infrastructure improves the safety and comfort of pedestrians and increases their visibility. It helps reduce traffic speed and the likelihood of serious accidents. Improving traffic safety in towns is predominantly a matter of managing speed and implementing safety elements into road design. Appropriate speed is the cornerstone of safety, and wherever the cars often meet vulnerable road users, the speed limit should not exceed 30 km/h. Managing speed in built-up areas then typically comprises of engineering measures that calm traffic, supported by public education.

Examples

Adjusting the design of a road reduces speeds and makes walking more comfortable for pedestrians. Measures include optically narrowing carriageways, arranging appropriately the proportions of traffic space (e.g. the carriageway must not be the dominant component), suppressing long views of roads (by forming street sectors, or dividing the street to shorter segments), and supporting the impression of the presence of life (setting the greenery and “street furniture”, such as post-boxes, streetlamps and benches).

Engineering measures such as optimising the width of road lanes; installing central islands to protect pedestrians, and islands at town gates; extending pavements; creating small roundabouts; elevating surfaces; and installing greenery can affect a driver's behaviour psychologically and physically so that they reduce their speed and remain alert. These structural adjustments have a positive impact not only on traffic safety, but also on the aesthetics and humanisation of public space, in some cases consequently to general safety.

Many towns have introduced various ways to calm traffic in their residential areas. The most popular are “Zone 30” areas, which limit the speed at which cars can travel to 30km/h. Other forms include the “Residential Area” and “Shared Space” concepts, the latter of which is a relatively new concept in managing speed and urban design.

Results

Studies show that the safety benefits of traffic-calming engineering measures and area-wide traffic calming differ considerably. Area-wide measures on average reduce the number of accidents by about 15 % (by 25 % on local roads, and 10 % on main roads). However, sometimes a properly applied, simple engineering

In brief

Examples

Results

measure changes the black spot to a place without accidents.

Beside safety benefits, good pedestrianisation can also prevent crime and improve the comfort of pedestrians. Its ability to reduce noise and improve the aesthetics of public space contributes to quality of life of local residents, and in some cases, increases the price of nearby real estate.

Technical and financial considerations

Cities can apply pedestrian-friendly measures separately or in various combinations, ways and extents according to a municipality's specific situation, needs and financial possibilities. The technical and financial demands of the measures, however, differ considerably. For example, applying a basic form of Zone 30 is highly effective and low-cost (the costs include only traffic signs at each entrance to the Zone, and small local information campaign). On the other hand, traffic-calming measures that include physically reconstructing a street and use of various structural elements (central islands, elevated surfaces, extended pavements, greenery...) is highly effective as well, but requires more time, effort and financial resources.

Prices also differ by chosen material, accessories and initial state of the road. Using a residential area as an example, the cost of 1 m² can range from about €55 – €185, according to type and quality of road surface and street furniture.

Policy/legislation

A basic condition for successful traffic calming and pedestrian-friendly measures is national and municipal policies oriented to the needs of vulnerable road users instead of individual car traffic. Traffic safety must be an integral part of an efficient and sustainable urban traffic system. Municipalities should revise legislation and technical norms so that they support modern forms of arranging streets and public spaces, and enable safe pedestrian traffic and humanising urban space. First, municipalities should consider the proportions of traffic space (the width of road lanes and pavements). Legislation must also define various modern forms of traffic space (e.g. shared space).

Institutions

The institutions involved in the process differ by country. Generally, the ministry of transport is the guaran-

Technical and financial considerations

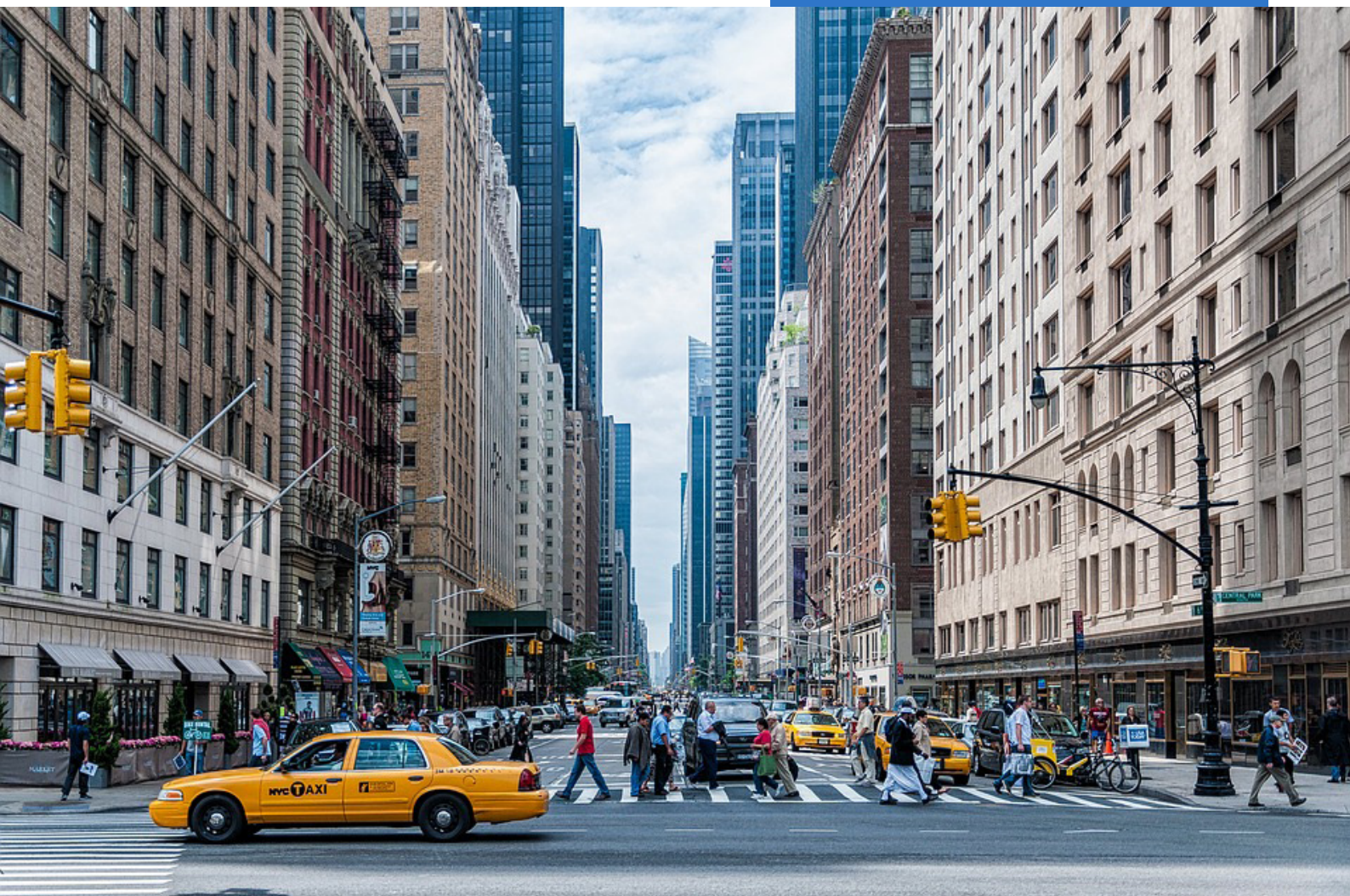
Policy/Legislation

tor of technical rules concerning the arrangement of traffic space, while municipalities decide on concrete measures and usually finance them (sometimes with support of various EU funds). A city's planning office will usually design the measures. Municipalities should also involve the traffic police, where appropriate.

Transferability

Many cities in Europe and other parts of the world have implemented such solutions and they are easily transferable to other cities. The necessary legislation and technical norms are crucial to success, as is political will. Nevertheless, cities must tailor the measures to local circumstances rather than simply replicating them. Municipalities should assess the areas where they wish to introduce their measures, taking into account their main functions, the intensity and relationship of traffic, and public opinion.

Transferability



Case study: Reducing heavy traffic in Lužice (Czech Republic)

Context

Lužice is a village in South Moravia with around 2800 people. About half of working people in the municipality, which has an area of about 752.40 ha, commute by train, bus, car and bicycle. Mostly locals and people from neighbouring villages use the main road that goes through the village, and before the municipality reconstructed the road in 2006, heavy traffic used it, too. The road was in poor technical state, but also in terms of its design and safety. The carriageway was too wide, pavements were missing in places, and there was no cycling infrastructure. About three to four accidents occurred on the road every year.

In action

The municipality decided to reconstruct a section of the road completely to reduce heavy traffic, calm general traffic, increase road safety, provide more comfort for cyclists and pedestrians, and cultivate public space. The project included reducing the width of the road from eight to six metres; installing central islands; rearranging bay bus stops into stopper stops; creating two small roundabouts; reorganising parking places; constructing a cycling path; and providing barrier-free pedestrian crossings. The municipality also completely renovated a nearby park and renewed street furniture. The overall budget was 45 million CZK (€ 1.66m) of which 30 million CZK (€1.1m) was covered by the Ministry of Transport and the South Moravian Region, and 15 million CZK (€554 000) by the municipality. The project started in 2006 and finished in 2008.

Results

The reconstruction project improved the comfort of pedestrians and cyclists; provided safe crossings (especially for pupils of local school); encouraged lower speeds; produced less heavy traffic; and promoted the safe use of bus stops. At time of writing, there have been no accidents since the reconstruction. Moreover, the project connected local cycling paths to regional cycle routes, and ensured appropriate conditions for a project that addressed traffic signs in the town and organised residential areas. An analysis after the reconstruction showed that drivers are observing the speed limits in the streets. The project won the Best Traffic Project prize in the Ways Through Towns competition.

Results



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More Information

Implementing
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