



**WHAT CAN A MUNICIPALITY DO
TO DEVELOP URBAN CYCLING?**

**COST-EFFECTIVE,
EASY SOLUTIONS**

WHAT CAN A MUNICIPALITY DO TO DEVELOP URBAN CYCLING?

There are many kinds of bicycle-friendly transport facilities that can be implemented with a little effort yet support urban cycling and the development of a liveable city in an effective way. In this publication, we present a variety of examples.



WHY IS CYCLING GOOD FOR A CITY?

According to the Hungarian Cyclists' Club, cycling should be a mainstream, safe and civically supported mode of transport that enhances the liveability, mobility and economic vitality of the community. Bicycles, used as a complement to public transport, walking and conscientious car use, can become a key mode of local transport. Cycling causes neither noise nor air pollution and takes up little space compared to motor vehicles. In this way, it can improve the quality of air and urban

life. Our aim is to make every destination quickly and safely accessible by bicycle. For this, it is not necessary to create separate cycling facilities. Cities can accomplish the same thing by modifying the existing road network in a bicycle-friendly way. By introducing bicycle-friendly traffic management solutions, even roads that are currently unattractive to cyclists can be made inviting. In densely built-up environments with heavy car traffic it is especially worth promoting cycling.

When compared to the high costs of motorised transport, cycling can be developed significantly with minimum expenditure. Appropriate investment can increase cycling levels substantially.

It is important to know that the bicycle-friendliness of a community is not measured solely by the length of separated cycling facilities (cycle tracks), but by the size of its bicycle-friendly area. When making bike-friendly improvements, we should not just consider new cycle tracks, because many existing roads are already bicycle-friendly. It is sufficient to improve their bikeability while eliminating critical problems at the same time. As a first step it is advisable to map the bicycle-friendliness of the town, the condition of the existing road network and its suitability for cycling and future development plans.

COST-EFFECTIVE, EASILY APPLIED SOLUTIONS

INVESTMENTS THAT CAN BE IMPLEMENTED FOR NO MORE THAN EUR 35,000

CONSTRUCTING APPROXIMATELY
250 M OF NEW CYCLE TRACKS

VS.

- DESIGNATING UP TO 1,500 M OF CYCLE LANES
- OPENING 20 TO 40 KM OF BUS LANES TO CYCLISTS
- PAINTING UP TO 50 KM OF SHARROWS
- PAINTING APPROXIMATELY 45 BIKE BOXES

WHY IS CYCLING GOOD FOR CAR USERS?

- When more people cycle, congestion decreases, therefore those who really need to drive can do so more easily.
- Visibility is the foundation of traffic safety. With clear and integrated traffic management solutions, motorists and cyclists can see each other and predict each other's presence.



ACCORDING TO A STUDY BY THE AUSTRIAN TRAFFIC CLUB

THE COSTS
OF ESTABLISHING
A PARKING SPACE FOR A
CAR VS. FOR A BICYCLE



EUR 100



EUR 3,000



COVERED
PARKING SPACE



EUR 1,000



EUR 8,000



PARKING SPACE
IN A PARKING GARAGE



EUR 3,000



EUR 16,000



CYCLING IS QUICK IN A CITY FOR TRIPS OF UP TO 5 KM, CYCLING IS THE QUICKEST MODE OF TRANSPORT, AS CYCLISTS DO NOT NEED TO FIND A PARKING SPACE, WAIT IN TRAFFIC JAMS OR WAIT FOR THE BUS.

The costs of setting up a car park and a bike park can differ by a factor of 10. Creating a bike parking spot costs between EUR 70 and 130, while a car parking space may cost EUR 1,300 to 1,500

BIKE BOXES

A bike box, also called an advanced stop line, is a road marking at a signalised road junction that gives cyclists a head start when the traffic signal changes from red to green. The bike box helps the cyclist to start and to turn left. Cyclists start slowly and their movement is more insecure. With a bike box they can start in front of other vehicles, and their safety is improved because car drivers can see them. Proceeding on the right also becomes safer as drivers expect the cyclist to arrive. It is worth establishing a separate traffic light for cyclists. These allow cyclists to start a couple of seconds earlier than the motorists.

WHY ARE BIKE BOXES GOOD?

- The cyclist becomes visible to the driver and does not have to wait and start next to the car, behind it, or in the blind spot.
- When starting, cyclists are less stable, and it is safer when the motorist can see them well.
- Starting in front of the cars helps the cyclist to get up to the speed of the traffic.
- From the bike box it is possible to turn left, and it also helps those proceeding straight or turning right.



Example from Brussels



Example from Budapest

WHERE AND HOW CAN BIKE BOXES BE IMPLEMENTED?

- At any intersection with traffic lights.
- A 15 to 20 m cycle lane or sharrow should be established in front of it.
- It is necessary to revise the traffic signal plan of the intersection and the placement of a separate signal for cyclists can be considered.

CYCLING IS HEALTHY

CYCLING IS THE BEST WEIGHT LOSS REGIME AND THE CHEAPEST HEALTH MAINTENANCE TOOL. IT DECREASES THE RISK OF HEART ATTACK AND OTHER DISEASES, REDUCES STRESS AND PROMOTES WELL-BEING.

PROPOSITION FOR MUNICIPALITIES:

If possible, set up bike boxes to improve cycling and make it safer. Bike boxes should be considered on the busiest roads. Roadwork projects are a good opportunity to mark bike boxes at intersections.

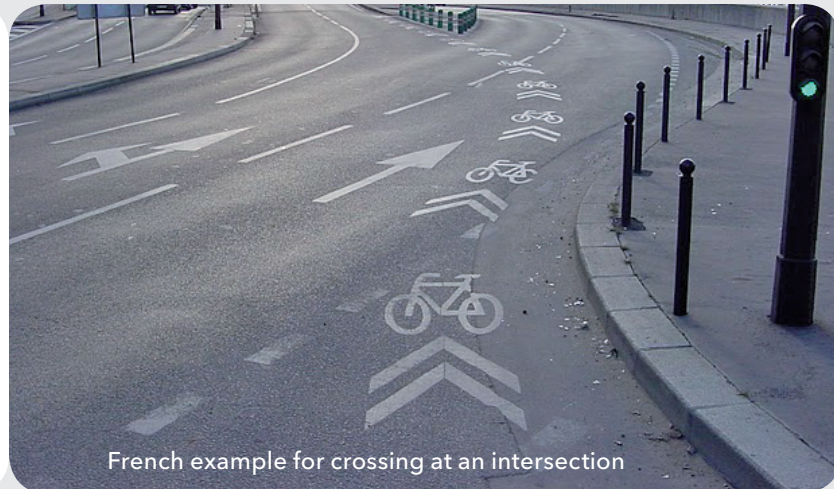
SHARROWS



A sharrow marks the position recommended for cyclists to ride on the carriageway. This sign makes road users aware of the presence of cyclists, increases cooperation and encourages bike use.

WHY ARE SHARROWS GOOD?

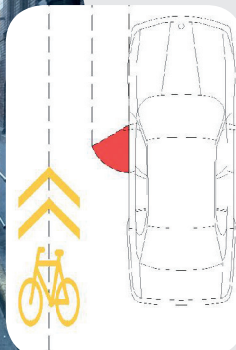
- They indicate to cyclists the recommended position and direction for riding.
- They help road users in motor vehicles and on bicycles to see where they should be on the carriageway, especially where there is not enough space to install a cycle lane or its use is not justified.
- They improve the cooperation of all road users and enhance the joint use of carriageways in a safe manner.
- They reduce the risk of dooring in the parking lane.



French example for crossing at an intersection



Example from Budapest



WHERE IS IT GOOD TO INSTALL A SHARROW?

- Mostly in inhabited areas on roads with a speed limit of up to 50 km/h.
- On the side of a wide traffic lane, or in the middle of a narrow traffic lane.
- On a service road next to the parking lane, at a safe distance from cars.
- At crossings and intersections in the priority direction.
- On one-way streets opened for contraflow cycling.
- In combination with advanced stop boxes.
- On a road parallel to a bicycle track, where using the bicycle track is not compulsory.



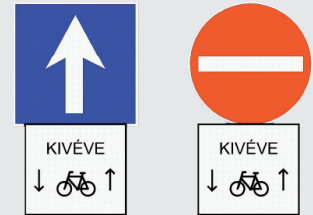
Example from Brussels

PROPOSITION FOR MUNICIPALITIES

Sharrows should be considered along the main roads of a settlement used by cyclists.

OPENING UP ONE-WAY STREETS FOR CONTRAFLOW CYCLING TRAFFIC

One advantage of a bicycle is that we can reach our destination quickly, without detours. However, this can only be done when the total road network is permeable in every direction. One-way streets cause detours, thus the journey is longer and cycling is less attractive. Besides, one way streets eliminate alternative routes for cyclists seeking to avoid heavy traffic areas. Cyclists may ride opposite the signed direction only when it is designated as shown. The cyclist can ride on the cycle lane on the carriageway, or, when there is no cycle lane, on the right of the carriageway.



WHY IS CONTRAFLOW CYCLING GOOD?

- Cycling is promoted when cyclists are given the shortest distance to their destination.
- It can be implemented with minor intervention and at low cost.
- On most streets there is enough space for cyclists and car drivers to travel side by side. Where there is a bottleneck, one can pull over to the side of the road and let the other pass. Therefore this solution enhances cooperation.
- There is less risk of an accident as cyclists and drivers are face to face and can see each other.



Example from Budapest



Usage of a supplementary sign



Example from Budapest

RECOMMENDED ELEMENTS:

Appropriate changes of road markings, street refuges, intersections.

APPLICATION PARAMETERS:

In one-way streets contraflow cycling traffic can be approved based on the width of the free carriageway, the speed limit and the volume of traffic.

WHERE AND HOW CAN CONTRAFLOW CYCLING BE USED?

- In speed-reduced zones it is advisable to introduce this regulation in a uniform manner on every street.
- When a street is designated for contraflow cycling, the width of the carriageway and the order of parking should be revised.
- Signposts with additional signs exempting cyclists are compulsory elements.

PROPOSITION FOR MUNICIPALITIES:

Carry out surveys in neighbourhoods with one-way streets, and examine which ones can be adapted for contraflow cycling. To open up one-way streets to contraflow cycling it is advisable to create a plan for the community's entire road network.

TRAFFIC CALMING AND SPEED REDUCTION

To make a street or a zone bicycle-friendly, countless cost-effective traffic calming methods are available and easily applied. By reducing the speed of motor vehicles, not only is cycling more attractive, but the atmosphere of the street becomes more friendly and liveable. Slower speeds reduce noise and air pollution and lessen the risk of accidents, while residents reclaim the streets. The space previously occupied by loud car traffic is taken over by pedestrians and cyclists.

WHY IS TRAFFIC CALMING GOOD?

- A smaller difference in speed significantly decreases the risk of accidents.
- By reducing environmental impacts, the street becomes more liveable, the atmosphere of the city improves and the turnover of retail outlets increases.
- Conditions for walking and cycling improve.
- Such measures benefit not only road users, but local residents as well.



WHAT TOOLS ARE AVAILABLE?

- Reduced-speed zones
- Home zones
- Zones for pedestrians and cyclists
- Access restrictions
- Various physical and optical traffic calming measures



PROPOSITION FOR MUNICIPALITIES:

When applying traffic calming measures, take care not to hinder cyclists (e.g. use bicycle-friendly barriers). Banning cycling is only permissible where it is justified and unavoidable.

IMPLEMENTING BUS AND CYCLE LANES

Bus lanes allow public transport vehicles to avoid congestion and keep to their timetables. The dedicated infrastructure is by default used only by buses, taxis and motorcyclists. However, based on Hungarian and international experience, in most cases cyclists do not disturb bus traffic. We therefore propose opening up bus lanes to cyclists. For this, the sign “bus and cycle lane”, in accordance with the road code, should be used.



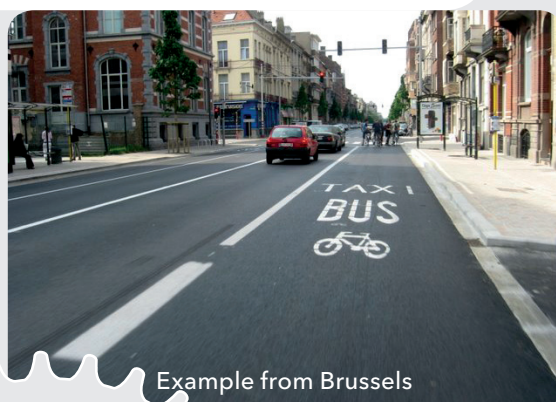
Example from Budapest

UNDER WHAT CONDITIONS CAN THEY BE USED?

- When the width of a bus lane is at least 4.25 m (or 4.5 m in the case of a slope of over 4 percent), then joint use is allowed, no matter how dense the bus traffic is.
- When the width of the bus lane is less than the value above, the shared lane can be implemented after taking into consideration traffic density and the available space.

WHY ARE BUS-CYCLE LANES GOOD?

- They help to integrate cycling into traffic.
- They are a low-cost investment.
- There is no need for construction, just signposts and road painting.



Example from Brussels

SAFETY IN NUMBERS

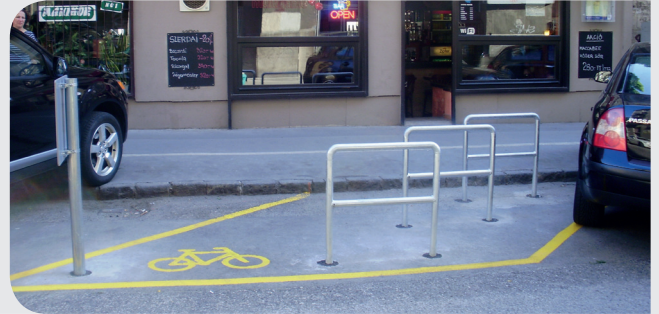
SEVERAL INTERNATIONAL STUDIES SHOW, THE MORE PEOPLE CYCLE, THE BETTER TRANSPORT SAFETY IS: THE NUMBER OF ACCIDENTS OVER A GIVEN DISTANCE DECREASES

PROPOSITION FOR MUNICIPALITIES:

The possibility of opening up all bus lanes for cyclists has to be examined. Based on international experience, cyclists do not hinder bus traffic.

INSTALLING BIKE PARKS AND MAKING STAIRS ACCESSIBLE

Cycling levels won't grow without good parking opportunities. Installing appropriate bike racks not only improves bike security, it enhances the orderliness and image of the street, as instead of relying on benches, trees or posts, cyclists can lock their bikes to racks. The most tried and tested, and thus the most recommended bike rack is the so-called U-rack (basically a U-shaped tube turned upside down).



WHY ARE BIKE RACKS GOOD?

- The image of the street will be more orderly, and street furniture is not damaged by constant locking.
- Bike parking takes far less space than car parking: a single car space can accommodate six to eight bicycles

WHERE SHOULD RACKS BE INSTALLED AND WHAT TYPE SHOULD BE USED?

- Any facility attracting significant traffic should have sufficient bike parking capacity.
- Racks must be suitable for parking any type of bicycle.
- It should be possible to lock the frame of the bicycle and at least one wheel.
- The rack must be fixed in order to avoid removal.
- For longer-term parking rain is also a concern.

PROPOSITION FOR MUNICIPALITIES:

A long-term, scheduled bicycle parking plan covering the whole area of the settlement should be compiled. Bike-and-ride parking for intermodal transport should be given special consideration. We propose the revision of the parking order and the installation of bicycle parking spaces at the expense of existing car parks.



To make underpasses or overpasses accessible, a very cost-effective solution is available – the so-called bicycle stair ramp. Ramps with two rails can also be used by people pushing prams or trolleys.

WHY ARE CYCLE RAMPS GOOD?

- A big advantage of cycling is quick access, and this advantage can be increased by eliminating detours.
- Ramps can be useful to others, not just cyclists.

PROPOSITION FOR MUNICIPALITIES:

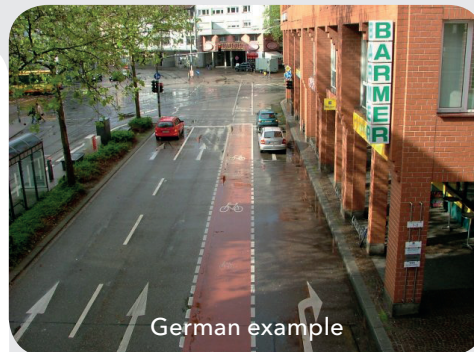
If possible, any steps in the settlement should be fitted with bicycle stair ramps so that bicycles can be pushed. Where accessibility is already ensured by other means (e.g. lifts), it is still worth considering installing ramps, which are quicker and simpler to use.

CYCLE LANES

Cycle lanes are separate traffic lanes dedicated to bicycles, and separated from other traffic by a solid or broken line. By implementing cycle lanes, all participants in traffic can see each other clearly and are less likely to confront unexpected situations. Cycle lane sections marked with a solid line can only be used by cyclists, while merging with car traffic is indicated by a broken line. A cycle lane can be installed by redistributing the width of the existing carriageway, or widening the carriageway if necessary.

WHY ARE CYCLE LANES GOOD?

- On carriageways of sufficient width and conditions, only road markings have to be repainted.
- An optically separated but physically integrated surface dedicated to cyclists allows a quick and unobstructed ride, even when there is congestion.
- In inhabited areas, the number of accidents is significantly lower compared to separated cycle tracks, as participants in the traffic can see each other at all times.
- Cycle lanes prevent pedestrian-cyclist conflicts.
- In built-up areas, cycle lanes can be installed even on roads with multiple lanes, irrespective of the density, content and speed of vehicle traffic. The regulation of cycle lanes can be different country to country (see national design manuals).



German example

WHERE ARE CYCLE LANES ADVISABLE?

- Where optically separated space for cycling is necessary due to heavy car traffic or where congestion is frequent.



Merging section of a cycle lane in Budapest



Cycle lane in Budapest

BOOSTING LOCAL ECONOMY
ACCORDING TO SURVEYS,
CYCLISTS SPEND MORE WHEN
SHOPPING THAN MOTORISTS.

PROPOSITION FOR MUNICIPALITIES:

Regulations for parking and goods delivery need to be revised in order to prevent cars from parking in cycle lanes. Lanes that meet the expectations and needs of cyclists should be implemented and placed at a safe distance from the door zone of parked cars.

LET'S ACT TOGETHER FOR CYCLING!

The independent status of the Hungarian Cyclists' Club, our extensive membership and our committed paid staff and volunteers allow us to contribute to bicycle-friendly city development and the formation of liveable, better cities. Our strength lies in our cooperation with our professional working groups and local organisations, together we support municipalities. Our professional working groups include volunteers who are skilled and experienced professionals in the fields of transport, communication and marketing. Our local units can connect local experience and needs all over the country. It is always an honour for us when we are contacted to provide professional consultation or civil support. We are also open to closer professional cooperation.

LET'S THINK TOGETHER!

POSSIBLE WAYS TO COOPERATE WITH MUNICIPALITIES:

- Cycling Transport Day - organising roundtable discussions
- Presenting good examples, identifying possibilities for local application
- Counselling for bicycle-friendly settlement development
- Contributing to concept plans for cycling transport, consultation for study plans
- Assisting in plan conciliation when designing cycling transport facilities
- Issuing professional opinions on the finished plans
- One-time commissioning for the elaboration of a specific measure
- Carrying out demand analysis for cycle parking and cycle transport
- Undertaking BYPAD audits*

This publication was compiled by the Hungarian Cyclists' Club to offer recommendations to municipalities.

The photos are from the public album of the Hungarian Cyclists' Club, and the website of the BICY (www.bicy.it) project.

References: W. Rauch (1995) *Straßen zum Radfahren*, VCÖ (Roads for Cycling)

Further professional materials to consult:
www.kerekparosklub.hu/szakmanak

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MEMBERS OF THE TRANSPORT WORKING GROUP OF THE HUNGARIAN CYCLISTS' CLUB ARE AT YOUR DISPOSAL.

MEMBERS OF THE WORKING GROUP:

- are mostly engineers or other professionals who work in the transport field or study transport-related issues;
- are familiar with domestic and international cycling developments, and are continuously studying and updating their knowledge;
- support the development of cycling in their work; and
- use bicycles as their primary mode of transport.

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* A BYPAD (Bicycle Policy Audit) is an auditing procedure that maps and evaluates cycling transport facilities and development in town management. The basis of the procedure is self-assessment. During the audit, stakeholders (town leaders, decision makers, politicians, local NGOs, residents) can evaluate the current situation based on a series of questions prepared beforehand. The result of the auditing process is an evaluation document and an action plan, which highlight local strengths and weaknesses. The audit is an excellent tool for assessing the situation and defining the direction of development for the future.



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