



Best practice bicycle safety – improvement fact sheet

Organisational measures

Overview

While exact definitions of organisational measures to foster cycling and the safety of cyclists can vary depending on the source, it can be summarised that organisational measures are those for which no significant investment in infrastructure projects is required for their implementation. [1] defines following examples for legal and organisational measures:

- » **Time windows** for trucks and delivery vans in city centre areas
- » Possibility to **take bicycles on trains, trams or buses**
- » **Lowered speed limits** throughout the city (e.g., Graz), 30 km/h zones
- » **Parking regulations** for different areas (residential, commercial, city centre, etc.)
- » **Enforcement** of parking regulations
- » **Mobility management plans**

Organisational measures such as these can be applied to **improve cycling conditions**, and consequently, **safety**. In the following chapters, some examples of organisational measures that can contribute to solving issues related to cycling are provided: **30 km/h zones** in combination with changes in the street environment and other traffic calming measures, **public transport access** and **vehicle parking measures**.

30 km/h-Zones




When several road user types use the same traffic space, more work is necessary to ensure that the safety level is adequate. One popular measure is introducing zones with speed limits which are set at 30 km/h or lower (20 km/h or walking pace). The major benefits of 30 km/h zones are **more pleasant street environment** and **positive social perception** [1].

A well-designed 30 km/h zone generally **has a positive road safety effect** [2]. At the speed of 30 km/h the risk of a fatal crash is extremely low. Introducing 30 km/h zones and 30 km/h roads should be accompanied by providing the zones with **suitable layouts**, which will make 30 km/h limit more **credible** and, where still necessary, **traffic enforcement** can be utilised. [3].

Characteristics

Measure	Costs	Treatment life	Effectiveness
30 km/h zone [2, 4]	€—€€€	🕒🕒🕒	🚲🚲🚲

Implementation benefits

	Positive effect on road safety
	Better street environment
	Positive social perception

Related fact sheets

RISKS

- » Network issues
- » Speed differences in mixed spaces with pedestrians, E-Scooters etc.
- » Speed differences in mixed spaces with motorised traffic

References and links

1. Institute for Social-Ecological Research (2021). Handbook On Cycling Inclusive Planning And Promotion. In: https://mobile2020.eu/fileadmin/Handbook/M2020_Handbook_EN.pdf
2. Lindenmann, H.P. (2005), The effects on road safety of 30 kilometer-per-hour zone signposting in residential districts. Institute of Transportation Engineers. ITE Journal, 75(6), 50.
3. SWOV (2018). 30 km/h zones. SWOV Fact sheet. In: <https://www.swov.nl/en/facts-figures/factsheet/30-kmh-zones>
4. Bassani M., Rossetti L., Catani L. (2020). Traffic accident pattern modification as a result of a 30 km/h zone implementation. A case study in Turin (Italy). Transportation research procedia, 45, 402-409.

Public Transport Access


Bicyclists can expand the length of their journeys by merging cycling with train or bus service. The **catchment area** of a bus stop or train station is **expanded to around 4 to 5 kilometres** for cyclists. **Bike carrier racks** installed on buses are the most common way for public transport services to carry bicycles. Depending on the design, train wagons can hold dozens of bikes, which is especially important along heavily populated commute corridors [2].

Successful integration of public transport and cycling networks carries **significant benefits** for both cycling and public transport. Public transport and cycling are generally **complementary modes**. They can easily be combined as links in a **door-to-door trip chain**. In the Netherlands, about 40% of train passengers arrive by bicycle, and 10% of train passengers continue their trip by bicycle. In addition, 14 % of bus passengers use the bicycle as access mode [1].


Characteristics

Measure	Costs	Treatment life	Effectiveness
Public transport access	€ – € €	⌚ ⌚ ⌚	🚲 🚲 🚲

Implementation benefits

	Promotes bicycling by greatly expanding the range of accessible destination
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Implementation issues

	Bicycling portion of the trip becomes less feasible if there is no place to safely park the bicycle before transit/if there is no space in transit
	Bicycle access is often prohibited during peak travel times

Examples



*Train in Croatia - **folding seat area** near entrance/exit door serves as a place for placing bicycles [3]*



***Ship transits** for islands in Croatia often support bicycle transfers [4]*

Related fact sheet

RISKS

» Network issues

References and links

1. *Institute for Social-Ecological Research (2021): Handbook On Cycling Inclusive Planning And Promotion. In: https://mobile2020.eu/fileadmin/Handbook/M2020_Handbook_EN.pdf*
2. *https://www.interregeurope.eu/fileadmin/user_upload/tx_tevprojects/library/file_1630597001.pdf*
3. *<https://www.tportal.hr/pedaliranje/clanak/konacno-vlak-koji-voli-bicikle-uzitak-na-liniji-zagreb-sisak-20150424>*
4. *<https://www.rogjoma.hr/hr/blog/bicikl-trajekt-najjeftinija-opcija/>*

Vehicle parking measures

Safer bicycling conditions can be facilitated by certain policy, design, and configuration practices for on-street parking for motor vehicles. **Reducing parking spaces** for vehicles is one of several viable options for **reducing conflicts between bicyclists and vehicles** driving into and out of parking, or with vehicle occupants entering or exiting parked cars. Completely eliminating or limiting a parking lane on one or both sides of the road is also an option for **obtaining functional room for cycling infrastructure**, for example, to build a cycling lane [1]. In addition, eliminating or reducing parking will **improve sight distance** along a corridor and may be **particularly useful for segments with numerous busy driveways or conflict areas** [2].

Analysis performed in [3] displayed that there was an **association between the presence of on-street parking and the risk of injury**. However, the results of the adjusted odds ratio analysis were significant only in the case of major street routes without parked cars and bike infrastructure. It was concluded that riding on a major street route without parked cars and bicycle infrastructure is associated with a statistically significant **37% decrease** in the risk of experiencing an injury **when compared to the same type of road, but with on-street parking**.


Characteristics

Measure	Costs	Treatment life	Effectiveness
Reducing vehicle parking	€€€	⌚⌚⌚	🚲🚲🚲

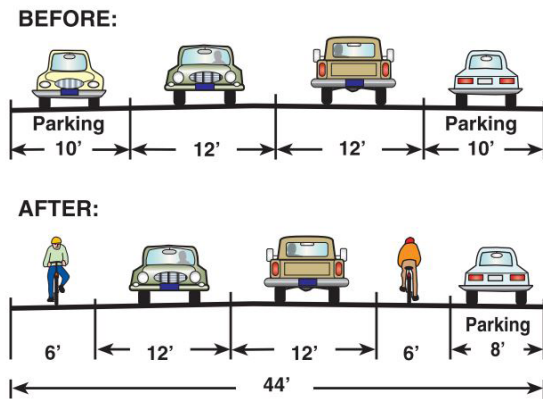
Implementation benefits

	Reduces conflicts between bicyclists and parking-related incidents (pulling into and out of parking spaces, dooring)
	Provides more space or facilities for bicyclists
	Improves sight distance along a roadway

Implementation issues

	Removing parking might result in an increase in vehicle travel speeds
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Examples



Example of a cross section where parking is removed from one side in order to add bike lanes [4].



Example of back-in angle parking with shared-lane markings – USA [2].

Related fact sheet

RISKS

» Narrow Infrastructure

References and links

1. Institute for Social-Ecological Research (2021). Handbook On Cycling Inclusive Planning And Promotion. In: https://mobile2020.eu/fileadmin/Handbook/M2020_Handbook_EN.pdf
2. http://www.pedbikesafe.org/BIKESAFE/countermeasures_detail.cfm?CM_NUM=5
3. Teschke, K., Harris, M. A., Reynolds, C. O. O., Winters, M., Babul, S., Chipman, M., Cusimano, M.D., Brubacher, J. R., Hunte, G., Friedman, S. M., Monroe, M., Shen, H. Vernich, L., Cipton, P. A. (2012). Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study. American journal of public health, 102(12), pp. 2336-2343.
4. Oregon Department of Transportation (2011). Oregon Bicycle And Pedestrian Design Guide. In: https://www.oregon.gov/odot/Engineering/Documents_RoadwayEng/HDM_L-Bike-Ped-Guide.pdf

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