

## SOLUTIONS Knowledge Sharing Kit Cluster 2: Transport Infrastructures

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#### **About SOLUTIONS**

SOLUTIONS aims to foster knowledge exchange and boost the uptake of innovative sustainable urban mobility solutions through the further exploitation of existing knowledge. The main focus of the SOLUTIONS project is on the exchange between cities from Europe, Latin America and the Mediterranean.

The project looks at the following thematic areas:

- public transport
- transport infrastructure
- city logistics
- integrated planning / sustainable urban mobility plans
- network and mobility management
- clean vehicles



#### **Introduction to Cluster 2: Transport Infrastructures**

#### **Transport Infrastructures:**

- public transport: tramways, bus lanes, passenger waiting and boarding areas
- soft modes: e.g. cycle routes, pedestrian facilities
- urban freight systems (this element will also include better sharing of road-space)
- **Issues:** improving the quality and safety of road infrastructure, design of cycle ways etc.

#### Main focus:

- information and recommendations about design of urban streets (sharing of road space)
- and the design for the cycling infrastructure improving the safety of infrastructure.



#### Overview of selected solutions

SOLUTIONS for	Type of impact
Dedicated bus lanes	Improve
Intermodal interchanges	Improve
Pedestrians infrastructure	Improve (avoid)
Improving non-motorised infrastructure – improving public space and urban road designs for cycling and walking	Improve (avoid)
Cycle infrastructure I - Innovative safe cycling infrastructure	Improve (avoid)
Cycle Infrastructure II – cycle highways	Improve (avoid)
Infrastructure for car and bike sharing	Improve (Shift)
Pedestrianisation of city centres and streets	Improve (Avoid)



## Solution 2.1: Dedicated bus lanes Objectives and implementation



- Dedicated lanes for buses (emergency Lille, France and some other designated vehicles) separated from other traffic
- Counter flow bus lanes, especially in congested urban areas have been shown to be effective in some places
- Can be combined with improvements to public space and improving pedestrian and cycling infrastructure
- Low effort compared to rail bound public transport
- Makes services more reliable and help deliver fuel saving due to smoother driving



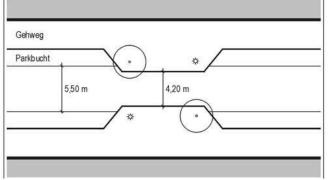
#### **Solution 2.2: Intermodal interchanges**

- Allows people to change from one mode of public transport to another
- Provide passengers with convenient & more seamless journeys
- Different types: large and complex (connecting international travel with regional & and local transport); small (bus based route interchanges)
- Crucial for success: understand the requirements of the users, both existing and potential new ones



### Solution 2.3: Pedestrian infrastructure Objectives and implementation

- Improve safety and comfort of pedestrians
- Increase their visibility
- Examples: central protective islands on roads, extended pavements, narrowing of the roadway, elevated surface of roadway, improved placement of information signs and lighting
- Measures can be implemented individually or combined



Directives for the Design of Urban Roads (RASt 06), Germany

# solutions

#### **Solution 2.4: Improving non-motorised infrastructure**

- Provide guidelines and common standards on the planning and design of urban roads and public space
- Balance the needs of users (motorised, mechanised and pedestrian)
- Planning and design must be based on liveability and quality of life
- Create a culture of shared space and tolerance
- Keeping speeds reasonable for the safety of all users
- (New) materials, colours and designs can be used to enhance the urban transport environment



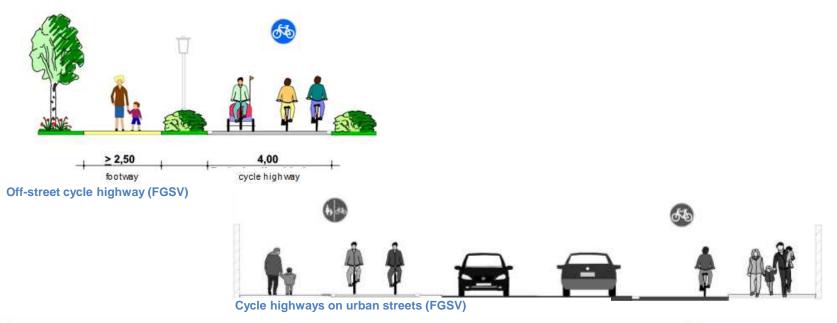
# Solution 2.5: Cycle infrastructure I - Innovative safe cycling infrastructure

- Helps to increase the modal share of cycling by improving safety
- Provides innovative cycle infrastructure
- Segregated cycle lanes, separated lanes using different materials, contraflow lanes, Dutch-style roundabouts, cycle counters
- high and low level cycle signals dealing with 'rightturn' traffic/'left-turn' traffic (UK)



### Solution 2.6: Cycle Infrastructure II – cycle highways Objectives and implementation

- Part of a cycling network in a municipality or an urbanrural region
- Link major target areas over long distances with safe and attractive cycle routes allowing high speeds





#### **Solution 2.7: Infrastructure for car and bike sharing**

- Make car and bike sharing attractive
- Planning and allocation of space in highly visible areas of city centres for car and bike sharing stations
- Usually involves removing parking



# Solution 2.8: Pedestrianisation of city centres and streets

#### **Objectives and implementation**

 Improve safety, air quality and liveability of public spaces



Munich, Germany (Harald Schiffer)

- Restrict access of cars and commercial vehicles to areas or roads in a city
- Allow public transport, emergency vehicles and deliveries (at certain times)
- Restrictions can be implemented by infrastructure measures, retracting bollards or electronic devices



## Thank you!

## **Contact us:**

info@urban-mobility-solutions.eu

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