Best practice bicycle safety – improvement fact sheet

Planning principles

Overview

Cycling infrastructure, ideally, should be planned according to **regional master plans**, plans which are developed **on a local level**, and **traffic safety guidelines**. For each plan, clearly defined **targets, timeline** and a **financial plan** should be defined. It is generally a good idea to apply for external financing from regional, national or EU level funds which are available. Commonly, regional master plans contain a **road network** and the plan for a **bicycle network**, and, if not, this should be a good starting point for planning, so the cycling network can be incorporated in the future documentation. Usually, the principles for road network, elaborations and solutions are written down within **local-level plans**, and are generally connected with road classification, street function and road designs. The cycling infrastructure which needs to be elaborated and planned includes cycle tracks, cycle lanes, separated cycling paths, intersection solutions, mixed traffic areas where special attention is given to cyclists (sharrow zones, shared spaces, 30 km/h traffic calming zones), signage, bicycle parking solutions, and other infrastructure measures for cycling.

Types of problems that the solution can solve

According to *[1]*, in Denmark, cycling infrastructure planning is based on:

- a survey of **cyclist issues and wishes**;
- collected knowledge about **existing bicycle traffic**;
- identification of **key traffic corridors**;
- access to **major cyclist destinations** (workplaces, schools, service, shops,)
- and **connections** between collective transport, recreation, etc.

In addition, cycling plans for infrastructure often include safety objectives. The main priority of traffic **safety objectives** is to prevent accidents and their severity, and not to improve the modal share for cyclists. However, these two issues are interlinked, and most often the cyclist's **subjective safety** (feeling safe/unsafe) is the **crucial factor for deciding whether/when to cycle.**

A bicycle traffic plan is usually based on the prevailing local situation and varies from location to location based on the cycling infrastructure level of development. The existing situation and circumstances (reflected e.g., by cycling traffic volumes, **share of commuter and recreational cycling, urban** vs. **rural** setting) usually require **different approaches**. For example, planners need to ask themselves what the main objective for a rural cycling route should be: ensuring that **locals have adequate facilities for their daily commuting** or **placing the focus on cycling tourists**, ensuring that their needs are satisfied?

An initial **starting point** regarding analysing the current situation for developing a bike plan can be an **investigation of existing cycling traffic volumes**, which can be taken by traffic counts, either automatically or manually *[3]*.

In addition, the **potential for cycling** can also be assessed and utilised for prioritising cycling infrastructure development. For example, the potential of **workplace commuting by bicycle** if appropriate safe cycling facilities are provided, or the potential of children switching from being driven by parents to cycling on their way to school. **Traffic modelling** can also play a part in determining cycling potential by forecasting the number of trips generated for certain establishment/facility developments.

Sections with high annual average daily traffic (AADT) and operative speeds should have **dedicated cycle tracks or lanes**, assuming that the density of cyclists is appropriate. If cyclists on the sections are scarce, the potential for future increases of cyclist flows should be the deciding factor when assessing appropriate measures.

In addition, knowing the **destinations** which need to be linked is important, as well as feasibility options for cycling infrastructure implementation. Taking the **destination attributes** instead of bicycle volumes as the starting point for planning is important in order to identify where the **missing links** in the cycling infrastructure are, and to consider **other solutions** than the conventional cycle lanes along road sections.

Vehicle AADT, operating speed and in some cases also the **age distribution** of cyclists can (and should) affect the choice between cycle track, cycle lane and mixed traffic lanes. A high standard for principles of **intersection design** is crucial *[1]*.

Regarding **cycle tourism**, it is imperative to **connect strategic cycling infrastructure** in urban areas with cycle **routes along rural road** sections and **planned cycle infrastructure**, which includes separated cycle tracks. While **attractiveness** of the route is an essential element for tourist experience, tourists also cycle in urban areas for recreational purposes and to carry out activities like shopping or eating and drinking in restaurants, cafés and bars. In this regard, it is recommended to also respect and consider the **European Certification Standard Manual** *[2]* within the development of the bicycle traffic plan, e.g., allow cyclists to reach accommodation such as campsites, hostels and hotels over a span of a daily cycling section, while avoiding road sections with high AADT and vehicle speeds.

Implementation benefits

	Demonstrates the cycling infrastructure benefits to the community
	Enables **prioritisation** of the infrastructure interventions
	Promotes and stimulates cycling within an area
	Promotes **safety awareness**

Implementation issues

	A poorly thought-out plan might miss the potential for implementing adequate cycling infrastructure improvements
	The greatest part of the **budget** for planning and implementation must be f**inanced locally**, which might deter smaller municipalities from attempting implementation
	Considerable **uncertainty during the planning stage** regarding financing. If it turns out that funding is insufficient, the project may be adjusted for cheaper solutions

Examples

Action plan for improving and upgrading of existing cycling within Medvednica National Park, Croatia.

The **action plan** envisages the upgrading and improvement of 9 existing bicycle routes in the Medvednica Nature Park by 2029 based on the results of the analysis (which incorporated existing initial state of the route system and the current needs of cyclists). The changes are being introduced so that the best parts of the existing route system are **retained and gradually upgraded** towards the future network of routes in the Medvednica Nature Park. In accordance with the recommendations of the Medvednica National Park strategy, the document recommends that development of routes needs to be accompanied by **periodic checks of user reactions** to these changes and, if necessary, adjusting the plan to possible new circumstances *[4]*.

Cycling action plan, Making London the world's best big city for cycling

London's action plan is aimed at borough officers, local decision-makers, community groups, the business sector, planning and delivery authorities and everyone else who is interested in how cycling can help make London a more successful city. It sets out **actions until 2024** with the **goal of enabling more Londoners to cycle**. According to the document, presented actions will provide the foundation for London to become a city where cycling is accessible for all, regardless of age, gender or ability *[5]*.

Related fact sheets

RISKS

- Network issues
- Narrow infrastructure
- Speed differences in mixed spaces with pedestrians, E-Scooters etc.
- Speed differences in mixed spaces with motorised traffic
- Objects on/aside infrastructure

References and links

1. *Cycling Embassy of Denmark (2019). Cycling infrastructure – planning for the future of cyclists in your city. In: https://cyclingsolutions.info/cycling-infrastructure-planning-for-the-future-of-cyclists-in-your-city/*
2. *European Cycling Federation (2018). European Certification Standard Handbook for route inspectors. In: https://eurovelo.com/download/document/ECS-Manual-2018_04_16.pdf*
3. *NSW (2012). How to prepare a bike plan. In: https://roads-waterways.transport.nsw.gov.au/business-industry/partners-suppliers/lgr/downloads/programs/documents/bikeplanv2.pdf*
4. *Sindikat Biciklista, Zeleni Osijek, Oikon (2020). Action plan for improving and upgrading of existing Cycling within Medvednica National Park*
5. *Transport for London (2018). Cycling action plan, Making London the world's best big city for cycling. In: https://content.tfl.gov.uk/cycling-action-plan.pdf*

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SABRINA: No fears about safety on two wheels.

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