

Co-funded by the European Union



REPUBLIC OF SLOVENIA MINISTRY OF THE ENVIRONMENT, CLIMATE AND ENERGY





# Status Quo of existing A2PT infrastructure and services in the Danube region

Ministry of the Environment, Climate and Energy (MOP)

Author: Tina Rajh Version: 1.0

https://interreg-danube.eu/projects/active2public-transport

## Active2Public Transport | Better combining cycling, walking and public transport in the Danube region

https://interreg-danube.eu/projects/active2public-transport

## Contact

Coordinator: Österreichische Energieagentur – Austrian Energy Agency Irene Bittner Email Address: <u>irene.bittner@energyagency.at</u> Web: <u>www.energyagency.at</u>

#### Authors: Ministry of the Environment, Climate and Energy Tina Rajh Email: <u>tina.rajh@gov.si</u> Web: <u>https://www.gov.si/drzavni-</u> <u>organi/ministrstva/ministrstvo-za-okolje-podnebje-</u> <u>in-energijo/</u>

Credit photo: © All photos used are owned by partners.

More information about Active2Public Transport and the project activities & results are available on: <u>https://interreg-danube.eu/projects/active2public-transport</u>





REPUBLIC OF SLOVENIA MINISTRY OF THE ENVIRONMENT, CLIMATE AND ENERGY





## **Table of contents**

1	Executive summary4				
2	Focus regions				
3	Selected PT stations6				
4	SWOT analysis7				
	4.1	General facilities at stations	7		
	4.2	Walking routes in the surrouding of PT stations	12		
	4.3	Cycling routes in the surrouding of PT stations	15		
5 Recommendations		mmendations	21		
	5.1	General facilities	21		
	5.2	Infrastructure and services for cyclists	22		
	5.3	Walking routes to the station	23		
	5.4	Cycling routes to the station	24		
	5.5	Policy and campaigns	25		



Active2Public Transport

## **1 Executive summary**

This report summarizes the findings of on-site assessment of public transport stations carried out by 9 A2PT partners all over the Danube region. It tries to consolidate the findings of SWOT analysis done by the partners for 45 stations, highlighting good and bad examples for A2PT services and infrastructure at the station and its surrounding.

Most regions rely on rail as the primary mode of long-distance transport, complemented by buses for access to areas without rail coverage and last-mile connectivity. Urban centres feature dense PT networks with integrated metro and tram systems, while rural areas focus on connections to the closest regional/national centres which they consider as positive, strongly represented, but often struggle with insufficient coverage (lack of frequency and adequate connections). While some regions successfully integrate tourism into transport planning, others lack the necessary infrastructure to support seamless mobility for both commuters and tourists. The analysis showed that high-frequented public transport stations in urban areas offer modernized facilities, whereas rural stations lack adequate amenities.

**Strengths** include modernized PT facilities with well-integrated rail, bus, tram, and metro systems, predominantly in urban areas and increasing integration of cycling with public transport, although outdated infrastructure, insufficient signage, and inconsistent real-time information in some areas persist as **weaknesses**. **Opportunities** lie in government driven long-term modernization projects, an increasing priority in improving cycling and walking infrastructure around stations and enforcing traffic speed limits. **Threats** such as funding limitations, car-centric policies, and limited coordination between the relevant stakeholders hinder progress.

To address above mentioned challenges the report outlines a list of recommendations, such as establishing secure and accessible bike parking, improving signage and realtime information systems, creating safe and direct walking, and cycling paths, and implementing policies that promote active mobility. The report emphasizes the importance of strategic investment, sustainable planning, and community engagement to enhance public transport systems and foster more sustainable mobility options.





## **2 Focus regions**



Map of partner regions. Credit photo: © Janez Škulj

Majority of the analyzed regions have rail as the primary mode of long-distance transport, supported by local and intercity bus services for last-mile connectivity and areas without train access. They offer a range of transport modes, including trains, buses, trams and bike rentals. Many regions serve commuter populations, with many residents traveling to larger nearby cities for work (Vienna/Austria, Bratislava/Slovakia, Budapest/Hungary). Some regions integrate tourism within their public transport plans (e. g. Bled/Slovenia, Golubac/Serbia, Sopron/Hungary). More rural regions (e. g. Burgenland region, Krško/Slovenia, Golubac/Serbia) face challenges providing comprehensive coverage across sparsely populated areas.

Urban centers focus on dense urban transport systems, while rural regions primarily provide intercity connections and focus less on intra-regional urban mobility, instead connecting residents to nearby cities (Vienna/Austria and Budapest/Hungary). Larger PT networks (e. g. Bucharest/Romania and Bratislava/Slovakia) offer well-developed transit systems that include multiple metro lines, extensive tram routes, and bus networks. Smaller PT networks (e. g. Medvode/Slovenia, Krško/Slovenia and Golubac/Serbia) have smaller stations with fewer transit options, tailored to local needs or tourism rather than extensive commuter service. Some analyzed transit points have recently seen upgrades to improve accessibility, connectivity, and rail services, while others still lack significant infrastructure upgrades.





## **3 Selected PT stations**



Map of selected 45 stations in partner regions. Credit photo: © Janez Škulj

Some of the selected PT stations have high traffic volumes and frequent connections, supporting both commuter and tourist traffic with additional features like bike rentals. Other stations act as central hubs but have less emphasis on cycling infrastructure (e. g. Belgrade/Serbia, Novi Sad/Serbia). In Bucharest/Romania, the Gara de Nord station integrates well with the metro, reflecting urban transport needs, while in the Czech Republic, stations like Olomouc support local employment hubs. Rural stations like Krško/Slovenia, and smaller stations, like Ölbő-Alsószeleste/Hungary have limited facilities and lower passenger volumes, catering mostly to local needs and specific tourist routes. Some stations emphasize future developments, focusing on improved cycling and pedestrian access.





## **4 SWOT analysis**

This SWOT analysis brings together internal characteristics (strengths and weaknesses of the PT stations in the partner regions) with external characteristics (opportunities and threats influencing the developments of the PT stations in the partner regions) regarding general A2PT facilities at the station, its connection with other PT services as well as walking and cycling routes connecting the station with its surrounding.

The cross-analysis collected from partners' individual reports aims to point out the most frequent mentioned specifics and most significant noted differences. Consolidated SWOT analysis was organised into broad categories aligned with the criteria partners used for on-site assessment of public transport stations (checklists). We used specific examples from reports (good or bad practices) to illustrate key points. SWOT analysis is reflecting both common findings and unique contributions from individual partners.

	Positive	Negative
	for reaching the objectives	for reaching the objectives
	Strengths	Weaknesses
	Accessibility: Barrier-free	Accessibility: Lack of access for
	platform access for cyclists,	cyclists, inadequate access for
	commuters with disabilities	mobility-impaired users (lack of
	(elevators, e. g. Székesfehérvár	elevators, ramps, tactile
	railway station, tactile markings,	markings).
Internal	e. g. Celje).	Outdated infrastructure: Lack of
characteristics		
	Comprehensive amenities: Wi-	seating areas, ticket machines,
	Fi, heating, real-time monitors (e.	uncovered bike parking – e. g.
	g. Tomerdingen), seating	Tomerdingen, lack of weather
	possibilities, weather protection,	protection at waiting areas – e.g.
	lighting (visibility).	Stegersbach).
	Cyclist-friendly: rentals, parking	Information: insufficient
	(e.g. Olumouc, Ulm) – secure and	signage/orientation, inconsistent

## 4.1 GENERAL FACILITIES AT STATIONS





Active2Public Transport

Status Quo – Conclusions

covered options, garages, bicycles allowed on metro station (e. g. Aviatorilor and Eroilor), bike services with repair facilities (e. g. Eroilor).

**Modernization:** high-standard, modernized facilities supporting commuters and tourists.

**Integration:** National rail and bus companies merged under a single entity, which should facilitate cooperation on issues such as ticketing, mobile apps, travel information integration.

**Opportunities** 

**Planned modernization** 

projects: New Belgrade's

Bike&Ride, installation of new

real-time monitor upgrades (e.g.

Marianka), renovation of stations (e. g. Ljubljana main station, Ulm

main station, Egertweg).

**Tourism potential:** Facilities

enhancements to attract

international tourists.

Cyclist support: Bike rental

option expansion and safer

storage solutions development

in tourist hubs.

real-time information, lack of digital monitors, missing information/maps about surrounding cycling/walking routes.

Insufficient parking and services: Limited bike parking at PT stations and scarce repair stations or rental services.

#### Threats

Investment and planning process constraints: Funding limitations (restricted budgets), lack of integration of PT services.

#### New infrastructure projects:

- Standards and planning processes defined by ÖBB – hard to influence by local and regional authorities (Burgeland).

- Prioritization of road infrastructure, impacting public transport funding.

External characteristics









Tactile markings (Celje/Slovenia). Credit photo: © Janez Škulj



Elevators on every train platform (Székesfehérvár railway station/Hungary). Credit photo: © Tamás Strommer



Bike service stations with repair facilities/air pump (Eroilor metro station/Romania). Credit photo: © Emanuela Dimitriu-Bidilică









Digital departure monitor (Tomerdingen bus station/Germany). Credit photo: © Annika Morath



Insufficient weather protection at waiting areas (Bus station in Stegersbach/Austria). Credit photo: © Andreas Friedwagner



Uncovered bike parking (Tomerdingen/Germany). Credit photo: © Annika Morath











Covered and high-capacity bike parking facility (Ulm main station/Germany). Credit photo: © Annika Morath





Bicycle access allowed in metro stations - from Monday to Friday after 8:00 p.m. and on weekends & public holidays from 5:00 a.m. to 11:00 p.m (Aviatorilor and Eroilor/Romania). Credit photo: © Emanuela Dimitriu-Bidilică



## 4.2 WALKING ROUTES IN THE SURROUDING OF PT STATIONS

The partners were asked to assess the most important walking routes to access the stations e. g. the route city center to the station. Criteria for the assessment were summarized under the categories: directness, orientation and routing, type of infrastructure and design, crossings/crossing assistance, shading and wind protection, surroundings and complementary infrastructure, condition, maintenance, and winter service.

	Positive	Negative
	for reaching the objectives Strengths	for reaching the objectives Weaknesses Insufficient signage/orientation: Lack of/inconsistent clear
Internal characteristics	<ul> <li>markings. Good maintenance of sidewalks in winter, continuous lighting in some areas.</li> <li>Pedestrian amenities: Well-lit pedestrian areas with amenities around stations (shops, restaurants, shaded areas, seating areas), green and scenic</li> </ul>	signs/orientation points. <b>Poor infrastructure/street</b> <b>design:</b> street curbs are too high in some areas, long waiting times for pedestrians at the intersections/traffic lights, lack of weather protection, insufficient shading, narrow sidewalks – not appropriate for wheelchairs/prams.
		<ul> <li>Shared space challenges: Shared walking and/or cycling</li> <li>infrastructure - often cause conflicts due to narrow widths, cars parked irregularly, cyclists biking on sidewalks (e. g. Obor, Neu-Ulm).</li> <li>Safety gaps: Limited pedestrian safety features – lack of safe and protected crossings, lack of</li> </ul>









continuous lighting along walking routes, lack of organized and safe walking routes (e. g. Medvode, Tomerdingen).

#### Threats

Motor traffic prioritization:

Replacing pedestrian zones with parking lots and roads, limitation to rearrange/improve the space in favor of pedestrians (e. g. on street parking), increased traffic could decrease pedestrian safety.

**Poor maintenance/adaptation:** 

local or regional authorities not being actively involved.

Political unwillingness to prioritize or equalize active transport with motorized transport.

**Environmental concerns:** Rising summer temperatures could discourage walking.

External<br/>characteristicsSignage, real-time information<br/>and shaded seating areas could<br/>enhance pedestrian routes.Replacing per<br/>parking lots ar<br/>rearrange/in<br/>favor of pedes<br/>parking), include<br/>decrease pExternal<br/>characteristicsTraffic reduction strategies:<br/>Enforcing traffic speed limits,<br/>promotion of walking as a viable<br/>alternative to car travel,Poor mainter<br/>being ac<br/>Pointical upwing

**Opportunities** 

Enhanced wayfinding: Improved







Scenic car-free routes near tourist hubs for pedestrians (Bled station to the lake/Slovenia). Credit photo: © Janez Škulj



Irregularly parked cars and the quality of the asphalt make it difficult for pedestrians to pass (Obor to the city centre/Romania). Credit photo: © Emanuela Dimitriu-Bidilică



Lack of clear and safe paths for all users between the station and nearby bus stops (Medvode/Slovenia). Credit photo: © Janez Škulj









Signposts and parked cars narrowing or even blocking the sidewalk (Tomerdingen/Germany). Credit photo: © Annika Morath

## 4.3 CYCLING ROUTES IN THE SURROUDING OF PT STATIONS

The partners were asked to assess the most important cycling routes to access the stations e. g. the route city center to the station. Criteria for the assessment was summarized under the categories: network/consistency, directness, design and construction, crossings/crossing assistance, shading and wind protection, surroundings and complementary infrastructure, orientation, condition, maintenance, and winter service.

	Positive for reaching the objectives	Negative for reaching the objectives
Internal characteristics	Strengths Direct, accessible routes: Direct cycling routes to PT stations on flat terrain, enhancing accessibility	Weaknesses Gaps in route connectivity: Lack

External

characteristics





Active2Public Transport

Status Quo -Conclusions

pedestrian paths and year-round usability in many areas.

Favorable conditions at work: Some workplaces offer guarded parking, showers, changing rooms and other incentives for cyclists (e. Limited signage and orientation: g. in Bucharest, Ljubljana).

**Tourism-friendly cycling:** Tourist-oriented cycling, connections to EuroVelo routes.

Accessibility: Lack of direct bike crossings in over- and underpasses at PT stations (e. g. Krško), challenging access to the PT station due to hilly terrain (e. g. Bled).

Inadequate maps, signage, and route markings across regions.

Shared path conflicts: Shared walking and/or cycling infrastructure (Neu-Ulm); narrow lanes, and street congestion increase accident risks.

Lack of lightning, shading and **protection:** Lack of continuous lighting along cycle routes, lack of adequate shading and weather protection.

#### Threats

#### Motor traffic prioritization:

Motorized traffic still often takes priority - competing priorities may limit resources for cycling infrastructure upgrades and improvements.

Traffic conflicts/safety: Poorly designed infrastructure may increase conflicts and discourage cycling.

Limited PT Integration: Lack of coordination between cycling and public transport.

#### **Opportunities**

**Plans for expanding** infrastructure: Adding signage, rentals, repair stations, and bike parking at PT stations (e.g. Infrastructure project 'Regio S-Bahn Donau-Iller' aims at better PT connections in the region and connectivity to cycling routes).

#### Cycling growth potential:

incentives to increase the numbers of cyclists in many European cities and regions.





Active2Public Transport

Status Quo -Conclusions

incentives to boost cycling tourism, especially along EuroVelo routes – finding synergies from investments in cycle tourism for everyday cycling.

#### **Commuting integration:**

better connecting cycling routes with public transport for seamless, longer distance commuting; established safe, direct cycling routes around major stations to increase accessibility and encourage multi-modal transportation; fully utilized Park&Ride facilities making cycling an attractive alternative.

**Political and financial support:** Growing political backing and financial support can lead to significantly improved cycling infrastructure.

Tourism route enhancements: Cultural and legislative gaps: Car-

centric attitudes and incomplete cycling regulations hinder development.

#### Mindset and behaviour:

Population predominantly favours car travel, often overlooking the Expanding use cases for cycling by advantages of cycling or consider it unsuitable as a mode of transport.











Separated bike lane (Bratislava/Slovakia). Credit photo: © Šimon Juřík



Designated cycle lane with clear marking in front of a traffic light, but at the same time, the lane is blocked by cars (Neu-Ulm/Germany). Credit photo: © Annika Morath











The route travelled is not part of a velo infrastructure network. Therefore, guidance and orientation elements such as bicycle-specific markings and signs, maps, static or animated info panels, etc. are missing (Gara de Nord to the city centre/Romania). Credit photo: © Emanuela Dimitriu-Bidilică



Lack of safe bicycle infrastructure (Hauptstraße Stegersbach/Germany). Credit photo: © Annika Morath

19









Narrow unsafe road for cyclists (Miloslavov/Slovakia). Credit photo: © Šimon Juřík



Overpass over railway tracks with no ramps/access for bikes/mobility-impaired users (Krško/Slovenia). Credit photo: © Janez Škulj





## **5** Recommendations

These recommendations were developed as a result of a SWOT analysis, focusing particularly on opportunities identified during on-site assessment of public transport stations carried out by partners all over Danube region. They aim to address the weaknesses and build on the strengths highlighted in the analysis. Targeted at local, regional and national authorities, along with external experts, contractors, infrastructure operators, and other relevant public and private stakeholders, these recommendations provide actionable insights for updating policies and planning new infrastructure projects aimed at modernizing and enhancing public transport stations and their surrounding areas. Some recommendations are repetitive; we suggest consolidating them for implementation on the local, regional, and national levels.

The recommendations will serve as a basis for shaping the A2PT Regional Action Plans, which will take up the policy recommendations for discussion at the regional level. The findings from this analysis will inform tailored solutions to address specific opportunities identified during the infrastructure assessment. The good practices identified during the assessment align with the topics adressed in the A2PT Toolbox, providing valuable input for its development.

## **5.1 GENERAL FACILITIES**

Information and customer service

- Improve signage systems across stations, integrating clear, consistent, and highquality directional signs for cyclists and pedestrians.
- Provide maps and information about surroundings of stations (safe and attractive walking and cycling routes).
- Implement digital boards at stations with real-time information on train/bus schedules, bike rentals, and route availability.
- Provide static information boards with station maps and bus schedules.
- On digital information boards integrate trains and connecting inter-urban and local bus departures for easier information access to stations.



- Utilize apps or platforms for seamless access to real-time route and transport information.

Accessibility – usability for all

Active2Public Transport

- Make entrances/exits to stations fully accessible, with ramps, tactile markings, and elevators for mobility-impaired users and cyclists.
- Ensure regular maintenance of services such as elevators.

General condition and cleanliness

- Define common standards for the equipment and design of PT stations depending on the importance/quality of service (weather protection, sufficient, shaded or sheltered waiting and seating areas, lightning, ticket machines, availability of public and barrier-free toilets, availability of Wi-Fi, bike parking).

### 5.2 INFRASTRUCTURE AND SERVICES FOR CYCLISTS

Parking facilities

- Define or update standards for the facilities at PT stations in regard to cycling, related to size/passenger volume: e. g. minimum number of uncovered and covered bike parking facilities, bike boxes, bike services, e-charging stations, lockers in direct vicinity to the bike parking facilities.
- Ensure high-capacity, secure and accessible bike parking at all major stations.
- Enhance security through surveillance cameras (around bike storage areas).

Positioning, signposting and information

- Provide maps and information about surroundings of stations (safe and attractive cycling routes).

Additional services, sharing services

- Major hubs should offer additional amenities like bike rentals (short and long-term) and repair stations.
- Increase bike rental and secure storage capacity at PT stations and at Park&Ride facilities.



- Ensure continuous safety and security measures, including regular maintenance and inspections.

## 5.3 WALKING ROUTES TO THE STATION

Directness

- Develop and maintain dedicated, continuous, and well-marked walking routes connecting stations with key destinations.
- Develop scenic accessible walking routes linked to nearby attractions.

Orientation and routing

Active2Public Transport

- Provide signage with real time duration of walking to main destination.
- Improve signage systems across stations, integrating clear, consistent, and highquality directional signs for pedestrians.

Type of infrastructure and design

- Ensure paths are wide, safe, and separate from cyclists and car traffic to reduce conflicts.
- Update standards for the (re)construction of walking routes preventing the installation of signposts in a way that reduces space for walking.
- Enhance security through surveillance cameras around pedestrian paths.

Crossings/crossing assistance

- Provide longer intervals at traffic lights allowing pedestrians to cross.
- Define standards for the design of crossings (at the higher and lower level road network) to better reflect the safety requirements of pedestrians.
- Ensure safe crossings and lowered curbs where pedestrian paths intersect with traffic.

Shading and wind protection

- Invest in green urban development around stations to provide natural shade and wind protection.



Active2Public Transport

Surroundings and complementary infrastructure

- Create traffic-calmed zones for a better user experience
- Install continuous lighting across walking routes.

Condition, maintenance and winter service

- Ensure maintenance of walking routes regardless of the season and weather conditions.

## 5.4 CYCLING ROUTES TO THE STATION

Network/consistency, directness

- Develop and maintain dedicated, continuous, and well-marked cycling routes connecting stations with key destinations.
- Develop scenic accessible cycling paths linked to nearby attractions.

Design and construction

- Ensure paths are wide, safe, and separate from pedestrian traffic to reduce conflicts.
- Update standards for the (re)construction of bicycle routes preventing the installation of signposts in a way that reduces space for cycling.
- Where possible, implement separate cycle lanes in order to increase the security for cyclists.

Crossings/crossing assistance

- Ensure safe crossings and lowered curbs where cycling paths intersect with traffic.

Shading and wind protection

- Ensure paths are comfortable regardless of weather conditions.
- Invest in green urban development around stations to provide natural shade and wind protection.

Surroundings and complementary infrastructure

24



- Install continuous lighting along cycling routes.
  - Create traffic-calmed zones for a better user experience.

#### Orientation

Active2Public Transport

- Improve signage systems across stations, integrating clear, consistent, and highquality directional signs for cyclists.

Condition, maintenance and winter service

- Ensure maintenance of walking routes regardless of the season and weather conditions.
- Enforce a prohibition on car parking on designated cycle lanes.

### 5.5 POLICY AND CAMPAIGNS

- Promote transport policies encouraging cycling and walking over motorized traffic.
- Integrate cycling and pedestrian (infrastructure) planning in urban planning and prioritize it within local government agendas.
- Clear commitment of the political decision makers for equalizing or even prioritizing active and public transport in relation to motorized individual traffic.
- Emphasize the integration of active mobility with public transport in related key policy documents (local public transport plans, climate action plans, tourism concepts etc.).
- Allocate dedicated budgets for cycling and pedestrian infrastructure and reduce reliance on external subsidies.
- Encourage local service providers to open repair and rental facilities at or near stations.
- Define uniform standards for station equipment and infrastructure design, ensuring consistent quality in amenities, such as bike parking, seating, lighting, accessibility features.
- Conduct campaigns in schools, community centers, and workplaces to promote the benefits of active mobility.
- Host events and workshops to engage the community in sustainable transportation practices.



- Include citizen participation in decision making and exchange with relevant groups on a regular basis.





# **APPENDICES**





## **Appendix 1**

- Summary Reports per partner region:
- A2PT\_1.3. Summary Report\_BID.docx
- <u>A2PT\_1.3. Summary Report\_Burgenland.docx</u>
- A2PT\_1.3. Summary Report\_DOU.docx
- A2PT\_1.3. Summary Report\_GYSEV.docx
- A2PT\_1.3. Summary Report\_KTI.docx
- A2PT\_1.3. Summary Report\_PUM\_CZ.docx
- A2PT\_1.3. Summary Report\_SERBIA F (005).docx
- <u>A2PT\_1.3. Summary Report\_Slovenia\_MOPE.docx</u>
- A2PT\_1.3. Summary Report\_VNC\_Bucharest.docx