Interreg
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Transdanube.Pearls

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EuroVelo 6 – Atlantic-Black Sea
Transdanube.Pearls

Route Assessment of EuroVelo 6 Atlantic-Black Sea

in Germany, Austria, Slovakia, Hungary and Romania
Final Report

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1 Background

EuroVelo 6 – Atlantic - Black Sea is a long-distance cycle route connecting Nantes in the west of France with the Black Sea. In the context of the Transdanube.Pearls project, the European Cyclists' Federation has been subcontracted by the project partners West Pannon Regional and Economic Development Public Nonprofit Ltd., Hungary, and the City of Vukovar, Croatia, to do a survey of the stretch of EuroVelo 6 along the Danube river. The purpose of this report is to present the results of this route assessment. The report is also available online at **https://tinyurl.com/ydc8625d**. Please refer to the digital version of this report to access the links.

Owing to contractual requirements, this report only covers the countries Croatia, Serbia and Bulgaria in the country chapters. A second report covers the remaining countries. Both reports are available online under the link above.

The Danube region is one of Europe's most promising tourism destinations. However, most of the trips in that region are still carried out by car, negatively affecting the environment and inhabitants. The Interreg/EU project Transdanube.Pearls wants to address these challenges by developing socially fair, economically viable, environmentally-friendly and health-promoting mobility services for the visitors of the Danube region.

Cycling plays an important role in this context. It is an excellent means of sustainable mobility that meets all these challenges. Moreover, it allows the economy of the small and larger towns along the Danube to benefit from cycle tourism, while cyclists can enjoy the rich culture, food and nature that this region has to offer. EuroVelo 6, especially along the Danube, is one of the most popular routes in the EuroVelo network and it is little wonder why: coasts, rivers, castles, top-class infrastructure and a nice flat topography make the route every cycle tourists' dream journey.

This report will first set out to define the itinerary of the assessed route (chapter 2) and the sources of information and methodology (chapter 3), before summarizing the key findings of the route assessment (chapter 4). Chapter 5 will then contain recommendations for quality improvements per country for reaching the European Certification Standard, a methodology developed by the ECF to identify strengths and weaknesses of a route and to motivate decision-makers to invest in solutions to the identified problems or to promote the route. This is followed by a comparison of the route on the two river banks (chapter 6) and conclusions (chapter 7).

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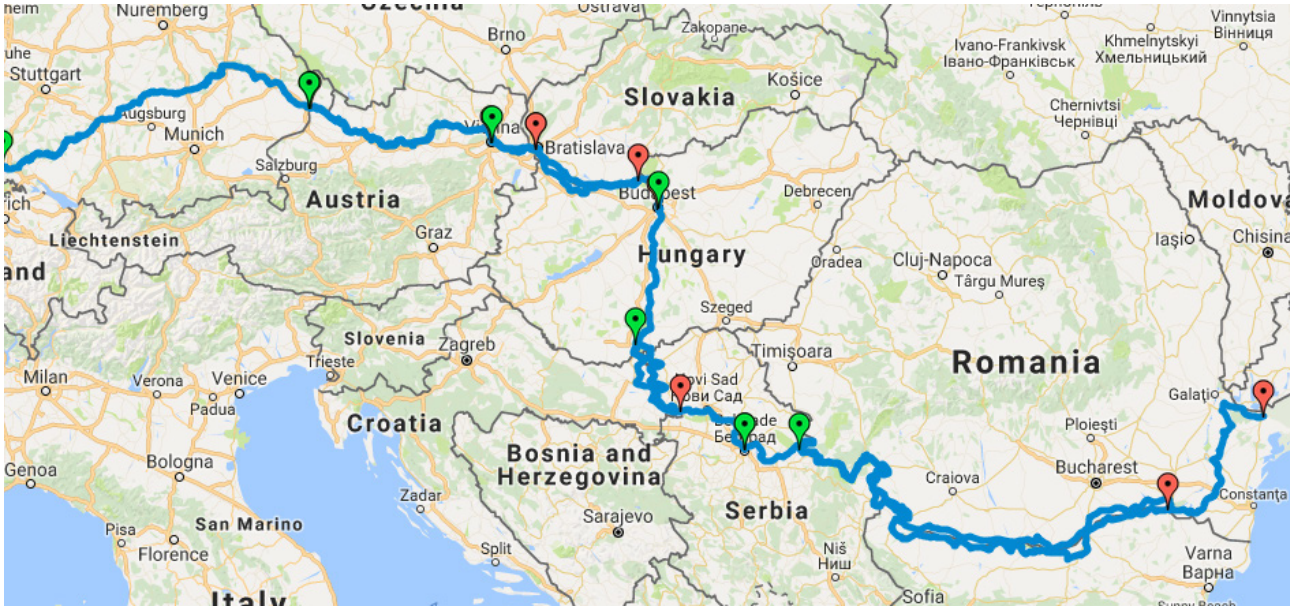
2 Itinerary

The itinerary of the route assessment has been established in consultation with the partners of the Transdanube.Pearls project. It can be viewed online at **https://tinyurl.com/y7l8rga2**. The evaluated route has a total length of 4,636 km, which is significantly longer than the Danube itself (2,850 km), as there is often a route on both banks of the river.



Itinerary of the surveyed route

Starting in Donaueschingen (Germany), the route first leads through Germany and then through Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria and Romania up to Tulcea (Romania).
The route as it was surveyed and recorded by the route inspectors can also be viewed on Google Maps at https://tinyurl.com/y8l4pfrn. It includes diversions owing to construction sites and therefore differs slightly from the route shown above. It is based on the GPX tracks recorded during the survey (see further below).

2.1 Overview of sections

A total of 4,636 km, divided into 97 daily sections, have been surveyed:

Region	Start section	End section	Daily sections	km
Germany	1 22.1	14.1 22.1	14	630

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Austria	14.2	29.1	15	744
Slovakia	29.2	32	4	171
Hungary	33 51.1	46.1 51.1	11	505
Croatia	46.2	48	3	169
Serbia	51.2 87	63.1 90	15	690
Romania	63.2	86	23	1,134
Bulgaria	91	103	12	593
Total			**97**	**4,636**

While a daily section is usually defined as a stretch of about 50-60 km, the ECF has divided the border sections into two sections that are sometimes significantly shorter to allow the partners in the project to have a complete and clear overview of their part of the route (please refer to the country chapters below). In cases of doubt, please refer to the itinerary online at **https://tinyurl.com/y8l4pfrn**.

Large parts of the route are available on both banks of the Danube:

- Passau - Linz - Vienna - Hainburg an der Donau
- Cunovo - Esztergom
- Mohács - Backa Palanka
- Stara Palanka/Bela Crvka - Drobeta-Turnu Severin - Giurgiu/Ruse – Silistra

The options are compared in chapter 6.

3 Sources of information and methodology

The ECF collected data on infrastructure, services and promotion between July and September 2018. When it was possible, the ECF has referred to existing data sources. When valid data has not been available, the ECF has conducted new research.

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The field work and desktop research were based on methodology developed by the ECF. This methodology is described in the **European Certification Standard** (ECS), which was last updated in April 2018. This report includes methodological explanations for the most important elements of this standard.

The authors would like to highlight the need to verify the data collected in this report with other data sources, especially in the case of critical data such as high or very high traffic, insufficient width of cycle paths / painted cycle lanes, the lack of services etc. The route inspectors might have missed certain services along the route, or they counted the traffic at a particularly busy time. The public authorities in the respective regions might, for instance, be able to provide official traffic volume data from counters etc. Please note in this context the methodology for counting traffic explained further below and other methodological explanations for services etc. in the **long version of the ECS manual**.

The route operators should also verify whether planned or ongoing construction works, which might have led to diversions of the route during the survey (see "Diversions" further below), will fix critical problems. The data in this report includes certain diversions, as the official route was in some instances not accessible because of construction works.

The basic units in this report are so-called minor sections, i.e. stretches of 1 km, and daily sections, i.e. stretches of about 50 km. A certain phenomenon on a minor section will be noted in the data if it appears on a continuous stretch of at least 200 m. If a minor section includes a few different infrastructural components or for example public roads with varying amounts and speeds of traffic, the route inspectors will have picked the one (at least 200 m in length) that is the most problematic or challenging for users. The data for infrastructure type, width, traffic volume and traffic speed for one minor section will then refer to the same infrastructure component, which can measure between 200 and 1,000 m in length on a minor section but can of course also continue on the following minor sections.

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3.1 Distinction route survey / certification

It is important to note the difference between a route survey and the formal certification:

- Survey is the process of collecting and evaluating route data. A survey is always required for the certification of EuroVelo routes, but it can also be used outside the EuroVelo network or at an early development stage to identify investment needs.
- Certification is confirmation that the route meets at least the minimum criteria set in the ECS. Only EuroVelo routes in their entirety or their major sections (at least 300 km long and with clearly defined origins and destinations) can be certified.

3.2 Different user groups

The criteria laid down in the ECS vary according to the user groups. A distinction between Essential, Important and Additional criteria has been made to reflect the different needs of three different user groups. The basic assumptions are:

Essential criteria	Catering to *regular* cycle tourists.	Must be met along the *entire* route for certification.
Important criteria	Catering to *occasional* cycle tourists.	Must be met *along at least 70%* of the route for certification.
Additional criteria	Catering to *demanding* cycle tourists.	Meeting the criteria is optional and depends on the aspiration level. Can be used for promotion.

3.3 Data collection

The route has been divided into 97 daily sections, i.e. stretches of about 50-60 km each. For the field work, the route inspectors collected the data using an app developed by the ECF for this purpose. On each daily section, they stopped after each kilometre and entered the data into the app. The data was then uploaded to the ECF server and later analysed. The route inspectors also took photos during the field work. The collected data covered information such as:

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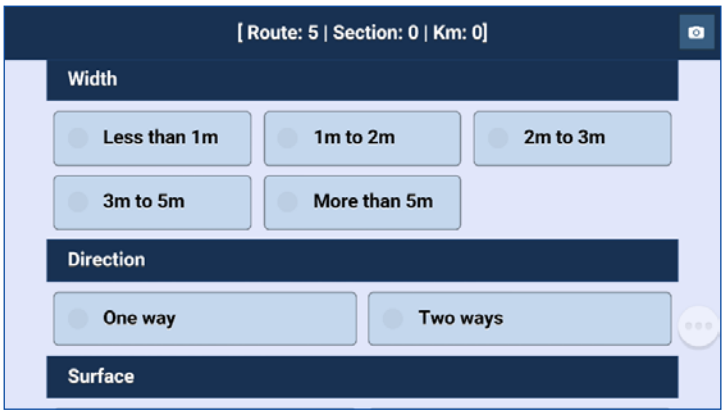
- Infrastructure (traffic, surface, gradients, ...)
- Attractiveness, signing, public transport
- Services (accommodation, food, bike repair, ...)
- Marketing



This work was accompanied by desktop research, which also included information on services and promotion. The desktop research involved the use of all kinds of websites and online sources on the route, such as the **"danube.travel"** website, as well as printed material, such as the high-quality guides by the publishers Esterbauer **(Danube Bike Trail 1-5)** or Huber (**Basel-Budapest** and **Budapest-Black Sea**).

The data collected refers to the following fields for each kilometre of the surveyed route:

Field	Type
Route number	integer
Daily section number	integer
Kilometre	integer
Route component type	enumerated
Width	enumerated
Direction	enumerated
Surface type	enumerated
Surface quality	enumerated
Traffic volume	enumerated
Traffic speed	enumerated
National signing conformity	enumerated

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Signing readability	enumerated
EV signing conformity	enumerated
Attractions: Highly attractive area / landscape	boolean
Attractions: Cultural natural attractions - points (Note)	boolean
Attractions: Noise dust and smell	boolean
Attractions: Crime infected / Wild dogs	boolean
Attractions: Monotonous / unattractive landscape - area	boolean
Attractions: Resting areas	boolean
Legal: riding prohibited?	boolean
Legal: obligation to dismount	boolean
Crossings: Very dangerous	boolean
Crossings: Dangerous	boolean
Route: High kerb single steps	boolean
Route: Multiple steps - easy	boolean
Route: Multiple steps - difficult	boolean
Barriers: Chicane pole etc. with <130 m	boolean
Barriers: Other obstacles	boolean
Content: Next main town/final destination name	boolean
Content: Direction confirmation	boolean
Content: Distances	boolean
Content: Attractions/Villages names	boolean
Signing: Missing sign	boolean
Signing: Wrong place	boolean
Tourist Information Centre	boolean
Tourist Information Panel	boolean
Public Transport: Bus	boolean
Public Transport: Ship ferry	boolean
Public Transport: Train	boolean
Service Food: Gourmet restaurant	boolean
Service Food: Standard restaurant/bar	boolean
Service Food: Budget restaurant/snack-bar/bar	boolean

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Service Food: Cyclist friendly (certified)	boolean
Accommodation: Luxury or high-quality hotels	boolean
Accommodation: Medium and standard hotels	boolean
Accommodation: Budget (hostel youth hostel...)	boolean
Accommodation: Camping	boolean
Cyclist Friendly Accommodation: Cyclist friendly (certified)	boolean
Service Bike: Bike repair shop	boolean
Service Bike: Vending machine / self service station	boolean
Service Bike: Shop with spare parts	boolean
Service Bike: E-Bike charging facility	boolean
Service Bike: Bicycle pedelec rental	boolean
Service Bike: Helpline (signalized)	boolean
Note	text
Upload Date	date + time
Uploader	text
Device	text
Version	text
Latitude	float
Longitude	float
Pictures	JPG

3.4 GPX tracks

The cycled route was recorded in GPX tracks during the route assessment. This has been used to add or verify elevation data and to generate gradient-related data (cumulative elevation gain/change, average/maximum gradient, etc.) for the various sections. The recorded GPX tracks can be accessed at **https://tinyurl.com/yaayp49w**.

4 Key findings regarding the route as a whole

The surveyed part of EuroVelo 6 generally offers amazing nature, cultural highlights, plenty of accommodation in all price ranges, excellent food, good signing and panels as well as the opportunity to meet many other cyclists. This chapter will provide general observations about the entire route as well as key findings by country.

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Deficiencies exist primarily when it comes to high traffic and sometimes inadequate surface. While there was a total of 12 km with very high traffic in Germany and Austria (1,374 km), there were 187 km with very high traffic in Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria (3,262 km).

If these findings lead to construction activities to improve the route, the ECF would like to encourage the authorities in question to consider installing counters for monitoring purposes as well. Counters or other monitoring tools are not required by the European Certification Standard, but they are useful to measure the number of cyclists and help estimate the economic impact of a route.

4.1 Existing route infrastructure

When assessing the survey data based on the ECS, the results show that 93.3% of the evaluated route meet the Essential criteria in terms of continuity, route components, surface and attractiveness. 84.3% also meet the Important criteria, while 55.1% already meet the Additional criteria, covering the needs of the most demanding users.

Existing EuroVelo 6 infrastructure varies greatly between the different countries and regions. For example, around 60% of the route already runs on dedicated cycle paths or greenways in Germany and Austria, while this share is just 2% in Romania and Bulgaria. In Germany and Austria, 99% of the route already meet all the Essential ECS criteria, while 97% (DE) and 96% (AT) also meet the Important criteria. By contrast, on daily section 66 between Orsova and Drobeta Turnu-Severin in Romania, the route meets the Essential criteria only on 17% of its length.

In this chapter, we will look at the route as a whole and examine its level of compliance with the ECS by criteria type.

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4.2 Continuity

The basic aspect for any cycle route is the continuity of the ride. The route should not contain any legal or physical disruptions that make the route illegal or impossible to travel on. All natural (river, cliff etc.) or artificial (railway, motorway etc.) barriers should be crossed with adequate cycling infrastructure (bridge, ferry, subway etc.)

The legal disruptions identified on the route include one-way streets with no contraflow cycling allowed. These cases exist in Hungary, Bulgaria and Romania. In Germany and Austria there were some locations where cyclists were required to dismount.

Notable physical disruptions include:

- Stairs: The fittest cyclists, travelling with light luggage, can carry their bike up or down stairs, but for the majority of potential users, this is an important obstacle that might even be insurmountable.
  A total of three stairs were encountered during the route survey, including two in Germany and one in Croatia. However, these stairs were equipped with ramps, so they can be climbed with standard bikes.
- Chicanes and other bottlenecks with less than 1.3 m clearance: Such chicanes make it difficult to use the route with bicycles with trailers or with tandems, hand-bikes etc. They were encountered from time to time in most of the countries, slightly more often in Germany and Slovakia.
- Non-rideable surface (deep sand, mud, big rocks etc.) – this will be covered in the section on surface.

Maierhof, west of Passau, DE

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Continuity disruptions by region:

Region	Entry for-bidden	Dismount	Stairs - difficult	Stairs - easy	Chicanes <1.3m
DE	0	2	1	1	16
AT	0	9	0	0	11
SK	0	0	0	0	3
HU	**1**	0	0	0	10
HR	0	0	1	1	1
RS	0	0	0	0	2
RO	**1**	0	0	0	17
BG	**1**	0	0	0	0
TOTAL	**3**	**11**	**2**	**2**	**60**

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

4.3 Route components

Different kinds of infrastructure components can be combined and integrated to form a continuous EuroVelo route. The survey process has been designed to monitor the share of different components on the route under assessment and to give veritable evidence of whether the chosen course is suitable for the assumed groups of users (again related to the three different levels of experience). Hence the occurrence of varying types of infrastructure components (e.g. public roads, cycle lanes, cycle paths) and relevant parameters (width, volume and speed of motorised traffic) that have been monitored down to the scale of a single kilometre. In addition, safety on crossings was evaluated as well. Note that the "Route components" criterion focuses on the risk of collision with motorised vehicles. Other elements of road safety are included in the Continuity, Surface and Width criteria, while social safety is considered as part of the Attractiveness criteria.

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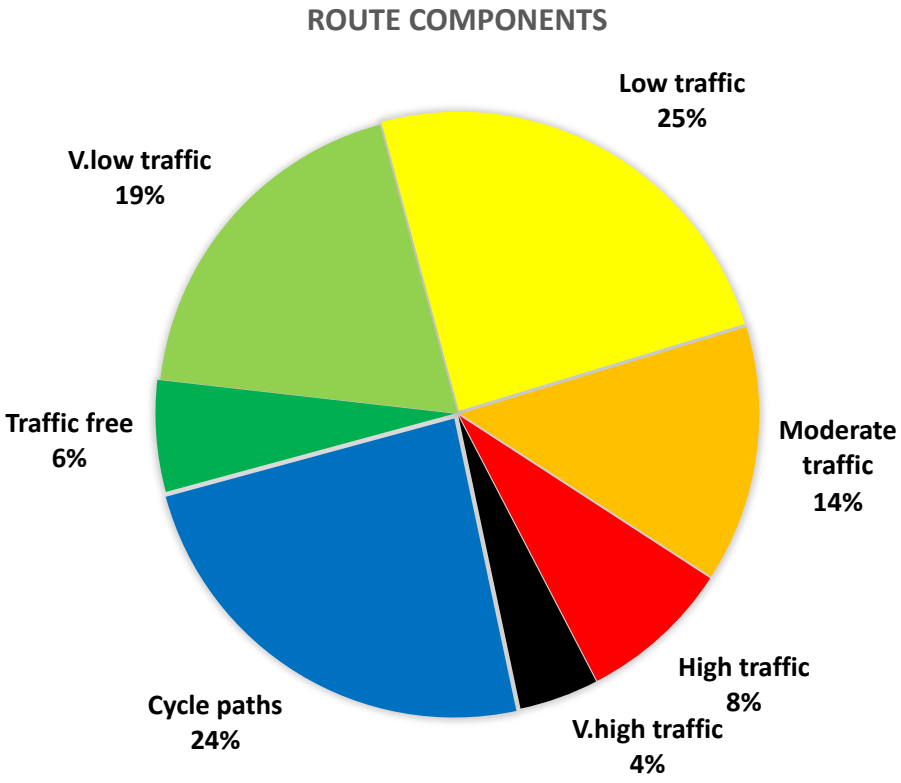

24% of the surveyed distance run on dedicated cycle paths or greenways, and 6% on traffic-free roads (e.g. water management or forest roads). Another 44% lead over roads with very low to low traffic, also perfectly usable for cycle tourism. The focus in action planning should be on sections with very high (4%) or high traffic (8%). The highest share of those sections was identified in Romania and Croatia.

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Traffic volume and speed

Traffic is categorised as a function of the volume of cars and speed. During the survey, the ECF has counted traffic units, i.e. four units for trucks and large busses, two units for vans and one unit per car or motorcycle.

The following table shows which shares of the route fall in which traffic category, depending on the different levels of traffic volume and speed. The traffic categories range from traffic-free/very low (green) to very high (black):

	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
Traffic-free / cycle paths	30.1%			
1-500 units/day	5.7%	6.1%	5.7%	1.3%
501-2 000 units/day	1.5%	7.1%	15.9%	1.7%
2 001-4 000 units/day	0.2%	4.1%	7.9%	1.0%
4 001-10 000 units/day	0.2%	3.3%	3.9%	1.5%
>10 000 units/day	0.0%	1.3%	1.2%	0.3%

= traffic-free / very low traffic = low traffic = moderate traffic = high traffic = very high

In addition, two very dangerous and 56 dangerous crossings were identified by the route inspectors. Common challenges and safety hazards for cyclists on crossings included large roundabouts, conflicts with heavy traffic, limitations of visibility or cyclists having to turn left across several lanes of traffic to follow the route. Many of the them were registered in Austria, around the Slovakian/Hungarian border and in Romania.

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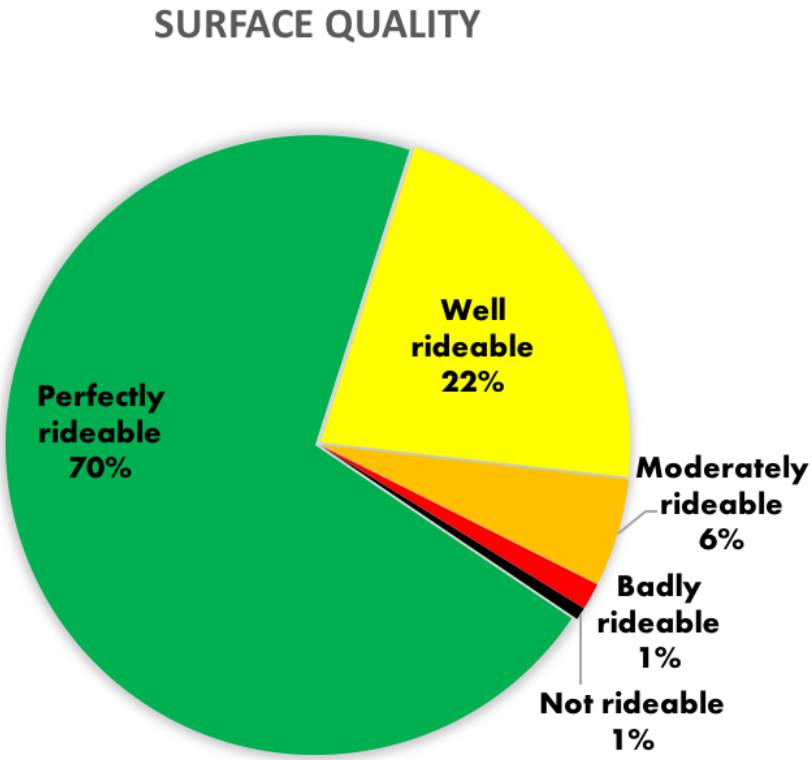
4.4 Surface



Road surfaces of EuroVelo routes under assessment have to be built according to the relevant (national / regional) technical standards and prescriptions. Considering that EuroVelo routes should play a major role within national cycle networks, certified EuroVelo routes should provide consolidated, high quality surfaces. The surface should be suitable for use by cyclists with any type of trekking or touring bike in normal weather conditions during the local cycling season. It should be smooth and solid enough to ride, so it should either be asphalted or paved with another resistant material. In exceptional circumstances loose material may be used but must be consolidated.

For each kilometre of the surveyed route, both surface material and quality were noted by the route inspectors.

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Most of the route runs on perfectly (70%) or well rideable (22%) surfaces. 6% were classified as moderately rideable, and therefore acceptable for experienced users of touring bikes in most weather conditions but challenging for less experienced users, those with special needs, or in specific very dry or wet weather. The focus in action planning should be placed on sections that are badly rideable (1%) or not rideable at all (1%). The highest share of those sections was identified in Slovakia (west of Komarno), but there were also long badly or not rideable sections in Hungary (between Ráckeve and Harta) and Serbia (especially between Belgrade and Kovin).

4.5 Gradients

It is much harder to ascend vertically or to go uphill than to cycle on flat sections. The cumulative elevation gain or loss on any daily section should therefore not exceed 1,000 m, and in most sections, it should not exceed 500 m. No slopes should be too steep to ride for the target groups.

As the route follows the Danube river valley, the cumulative gains or losses on the daily sections are not excessive, except for some sections at the beginning of the route in Germany, as well as sections in Romania and Bulgaria. On these sections, both the cumulative elevation gain and cumulative elevation loss exceed 500 m, making the route too steep for occasional or demanding cycling tourists. In two instances (daily section 2: Fridingen-Scheer in Germany, and daily section 102: Tutrakan-Srebarna in Bulgaria) the route was even quite challenging for regular cycle tourists, with the cumulative elevation gain/loss exceeding 1000 m. While the rest of the route is relatively flat, some short sections can be too steep for some of the demanding users, e.g. families with children.

While it is not always possible to avoid 'ups and downs', this can be compensated with adequate service density, allowing cyclists to split the route into shorter daily sections, therefore making it feasible for a wider range of users.

4.6 Attractiveness

EuroVelo routes should offer a pleasant and interesting cycling experience. They should lead through attractive landscapes, connect important cultural and natural attractions, provide satisfactory social safety and not be exposed to nuisances such as excessive noise.

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The Danube section of EuroVelo 6 leads through very attractive areas and has therefore a high potential for cycle tourism. Attractions on the route include eight UNESCO sites directly located on (or close to) the Danube river and **16 protected natural areas.**

The eight UNESCO sites along the river comprise:

- the **Frontiers of the Roman Empire** (DE),
- the **Old town of Regensburg with the Stadtamhof** (DE),
- the **Wachau Cultural Landscape** (AT),
- the **Historic Centre of Vienna** (AT),
- the **Srebarna Nature Reserve** (SK),
- **Budapest, including the Banks of the Danub**e (HU),
- the **Rock-Hewn Churches of Ivanovo** (BG)
- and the **Danube Delta** (RO).

9.9% of the route were classified as highly attractive areas and 88.6% as attractive. Only 1.6% of the route were considered monotonous or unattractive.

Environmental nuisances (noise, dust or unpleasant smell) were encountered on 2.2% of the route.

An important aspect of attractiveness is social safety. Along the entire route, 11 km with social safety challenges were identified, all of them in Romania and almost exclusively related to wild or shepherd dogs behaving aggressively towards cyclists.

4.7 Signing

EuroVelo routes should be signed in line with national standards (if they exist) and EuroVelo guidelines (obligatory). No signs should be missing at major crossings or turning points. Ideally, there should be regular confirmation and distance signs.

The varying levels of coverage with signs often reflect varying levels of route development, but there are also sections where a well-developed route is missing EuroVelo signs and sections with very good signs and poor surfaces or high traffic.

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It should also be noted that there are also cases where a lack of signage is related to a lack of relevant national legal frameworks (no legal basis for putting up the signs on public roads, no defined standards/regulations etc.) As far as we could determine, this applies to Romania, possibly also to Bulgaria and Croatia.

4.8 Public transport

It should be possible to access the route by public transport carrying bicycles. The route survey included the evaluation of:

- how often it is possible in terms of distance,
- how many connections are available in different locations,
- what is their capacity in terms of number of bicycles transported,
- what kinds of bicycles can be transported (e.g. tandems, handbikes, trailers…)

As it might be difficult to carry a touring bicycle with luggage up or down the stairs, the accessibility of public transport stops and stations was also considered (e.g. whether a platform on a train station is accessible only by stairs or also by ramps or lifts).

Almost all regional train connections along the Danube provide suitable services for cycle tourists. Transporting bikes to a specific location in long-distance trains is also possible, but limits apply more often in this case. More detailed information on public-transport options is available in the country chapters (chapter 5).

In the Balkan countries along the route, bicycle tourism is only starting to develop, and public transport companies have not yet defined clear policies towards transporting bicycles on trains or busses. The possibility to carry the bike can be dependent on the willingness of the bus driver or train conductor, which does not offer a desirable level of public transport reliability.

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In addition to trains, long-distance bike transport is also offered by several bus companies across Europe. The most important include:

Company	Network	Bike transport – routes	No. of bikes per bus	Price (in €)	Registration / Reservation
Flixbus	Most of Europe	Many, but not during the whole year	Up to five	9	Directly via booking platform
Deinbus	Western Europe, Southern Europe	Many	?	9	Possible, via contact form
Czech-Transport	Germany, Czech Republic, Hungary, Poland, Netherlands, Belgium, France, Sweden, Italy, Austria, Switzerland	Many	Depending on capacity	?	Possible, via contact form; bike needs to be wrapped
Roaltassib	Germany, Romania	Many	Upon request	?	Possible, via contact form or per telephone via agency

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Flixbus bike transport

4.9 Planned route infrastructure / Diversions

Several construction sites have led to diversions of the route:

Section	Country	Start (km)	End (km)	Location	Comment
1	DE	19	20	Between Hausen and Hintschingen	Bridge construction
4	DE	4	5	Rottenacker	Closed bridge
4	DE	28	29	Behind Ersingen	Construction works
7	DE	13	14	Behind Stepperg	Construction works
8	DE	38	40	Kehlheim	Route doesn't lead through Sittling because of construction works

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11	DE	34	46	Behind Deggenau, up to Winzer	A3 - Diversion starting before bridge crossing A3. It's a long detour mostly on moderately rideable gravel, through the fields. The dam is being raised and reconstructed after a flood. Construction works scheduled to take until September 2019.
16	AT	2	3	Linz	Bridge construction
17	AT	38	39	Krummnussbaum	Cycle path construction
18	AT	40	45	Behind Krems to behind Theiss	5-km detour ahead of B304 because of dam reconstruction
20	AT	25	50	Between Schönau and Bad Deutsch-Altenburg	25-km detour because of cycle path construction along Danube; construction is scheduled to be finished in 2020
23	AT	54	54	Linz	Construction site at the beginning of this km. This situation is expected to continue until 2019.
24	AT	42	43	Umspannwerk Wallsee	Large electric transformation station. No passing, short detour signposted.
26	AT	60	61	Danube power plant Altenwörth, southern stretch	Going through HE power plant was not possible (gate closed), detour was signposted.
26	AT	64	64	Before Zwentendorf an der Donau	Marshland, detour is signposted.
28	AT	18	21	Orth	Narrow road on the dam to Orth is officially temporarily closed due to construction work, but is possible to ride. This will continue until 2020.
31	SK	42	47	Nová Stráz	Signposted (photos at next km) detour via the main road - the road on the dam is closed towards Komarno due to construction of a new bridge.
42	HU	17	19	Szigetszentmiklós	Part of the official route leads along a one-way street in the wrong direction.

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Some of these diversions are linked to current cycle route improvements. This is especially true for a 25-km detour between Schönau and Bad Deutsch-Altenburg in Austria.

The data collected on these stretches represents the official detour and not the official EuroVelo 6 cycle path. This should be kept in mind when looking at the GPX tracks and potential route improvements.

4.10 Critical deficiencies

Weaknesses along the route are considered critical in this report if the route does not meet the essential or important criteria in these occasions:

- Between Grein and Sarmingstein on the northern bank of the river, the route runs on a road with significant heavy traffic and speeds exceeding 80 km/h. There are cycle lanes, but these are only moderately rideable and too narrow to guarantee a safe passing distance.
- 10 km of badly and non-rideable surface west of Komarno (Slovakia) on the northern side of the river: loose gravel, concrete plates with big gaps in between. This is followed by 3 km of public road with very high traffic.
- A total of 26 km of high traffic between Acs and Esztergom (Hungary).
- 53 km on busy roads with varying levels of traffic between Dalj and Backa Palanka (cross-border Croatian/Serbian section).
- 14 km of very high traffic and 5 km of high traffic between Surduk and Belgrade.
- 6 km of very high traffic, 7 km of high traffic and 15 km of badly/not rideable surface between Belgrade and Kovin.
- 24 km of very high traffic between Orsova and Drobeta-Turnu Severin in Romania, including 9 dangerous crossings.
- Another 14 km of very high traffic between Drobeta-Turnu Severin and Tiganasi.
- 21 km of very high traffic between Garla Mare and Calafat.
- 15 km of very high traffic and 9 km of heavy traffic between Bujoru and Daia. Also two dangerous crossings and a stretch of badly rideable surface.
- 37 km of high traffic between Cascioarele and Mânastirea.

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- 4 km of very high traffic and 22 km of high traffic between Mânastirea and Silistra.
- 132 km on busy roads with varying levels of traffic between Traian and Tulcea. Also two locations that are not rideable.

4.11 Services

The opportunities for accommodation and food are extremely varied and rich along large parts of the route but there are some sections in Serbia, Romania and Bulgaria where they can be more difficult to find.

Repair shops are repeatedly missing on the various sections, except for Germany and Austria.

Please refer to the more detailed tables in the following country chapters for more information on services at the country and regional level.

4.12 Promotion

There is a good offer of promotional material on the route as a whole.

Websites providing general information about the route include:

- **EuroVelo.com**
- **Mobile application on EuroVelo 6**
- **danube.travel**
- **Open Street Map**
- Websites by individual users, such as **Crazyguyonabike**

The general printed material includes the high-quality and highly recommended guides by the publishers Esterbauer (**Danube Bike Trail 1-5**) and Huber (**Basel-Budapest** and **Budapest-Black Sea**).

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Other guides:

- **DuMont Reise-Taschenbuch Reiseführer Donau**, 2011 (in German)
- Cicerone Cycling Guides:
  - **The Danube Cycleway Volume 1: From the source in the Black Forest to Budapest**, 2014
  - **"The Danube Cycleway Volume 2: From Budapest to the Black Sea"**, 2016
- **Eurovelo 6 from Nantes to Budapest cycling guide**, 2017 (in French)
- **EuroVélo 6 Atlantique-Mer Noire : de Bâle à Nevers**, 2010 (in French)
- **Eurovelo 6 guides (books 2 and 3)**, 2013
- **Danube Cycle Path from Passau to Bratislava**, 2018 (e-book)

Maps:

- **EuroVelo 6, Set 1: Atlantic - Basel, Cartographie Huber**
- **EuroVelo 6, Set 3: Budapest - Black Sea Danube Cycletrail 1:100.000 (8 Maps), Cartographie Huber**
- **Eurovelo 6, Kartenset Rhein und Donauradweg 1:100 000: Basel - Budapest, by BVA Bielefelder Verlag GmbH** (in German)

For country-specific information on promotion and marketing, please refer to the following country chapters.

5 Key findings per country and recommendations

Route managers will have to look into the detailed per-km data provided by the ECF to identify the critical kilometres in question. This table is available at **https://tinyurl.com/y885xbde**.

The ECF also recommends to develop Action Plans based on these findings. Action Plans are a list of activities and measures aiming to improve the route, referring to the critical parts in particular. The ECF has provided a template including a list of possible actions and cost estimates. This Action Plan template, which should be discussed with national and regional authorities, is available at **https://tinyurl.com/y8vdydz7**.

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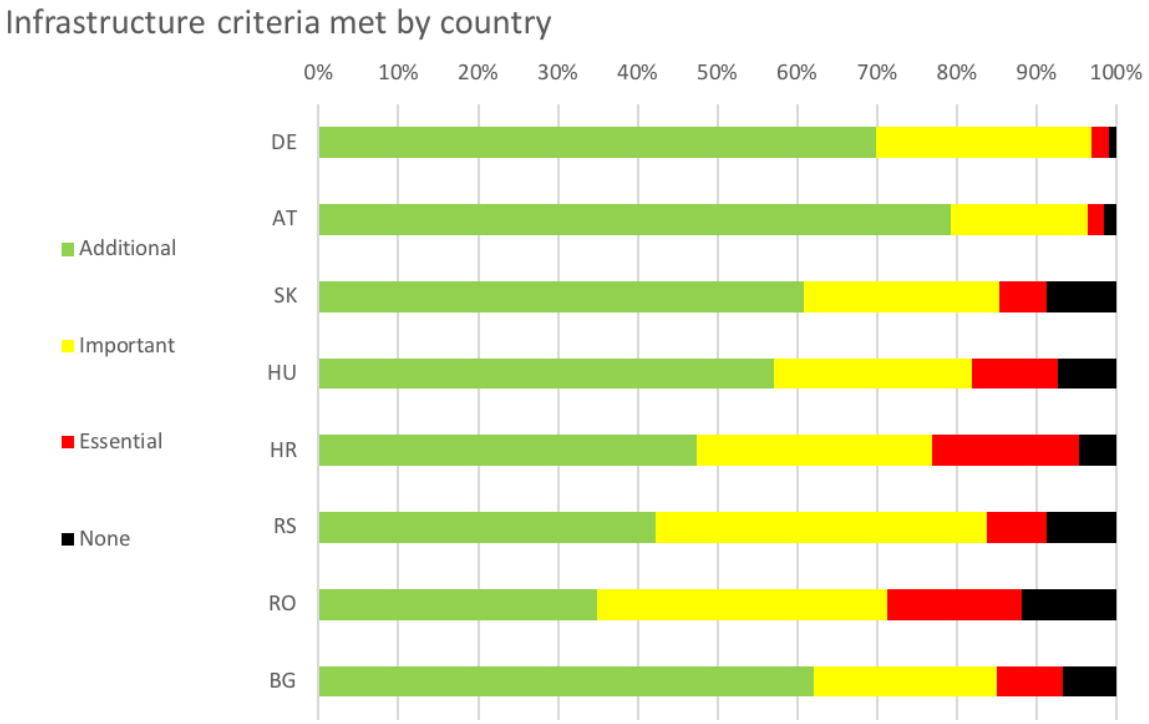
The order of the countries covered in this chapter is based on the flow of the Danube from east to west. Each country chapter includes both key findings and recommendations for quality improvements to meet the ECS. The focus lies on critical deficiencies where the route does not meet the essential or important criteria of the ECS.

5.1 Infrastructure criteria met by country

The following table shows the shares of the route in the various countries that meet or do not meet the Essential, Important and Additional criteria of the European Certification Standard.



As an example, in Slovakia, the route meets the Essential criteria on 91% of its length, while 86% meet the Essential and the Important criteria and still 61% meet all the criteria, i.e. the Essential, Important and Additional criteria combined. Black-coloured parts show which share of the route does not meet any of the criteria, illustrating whether this part of the route does not fulfil the minimum requirements for certification (100% of the Essential criteria must be met). In this case, the Slovakian part does not meet the Essential criteria on 9% of its length.

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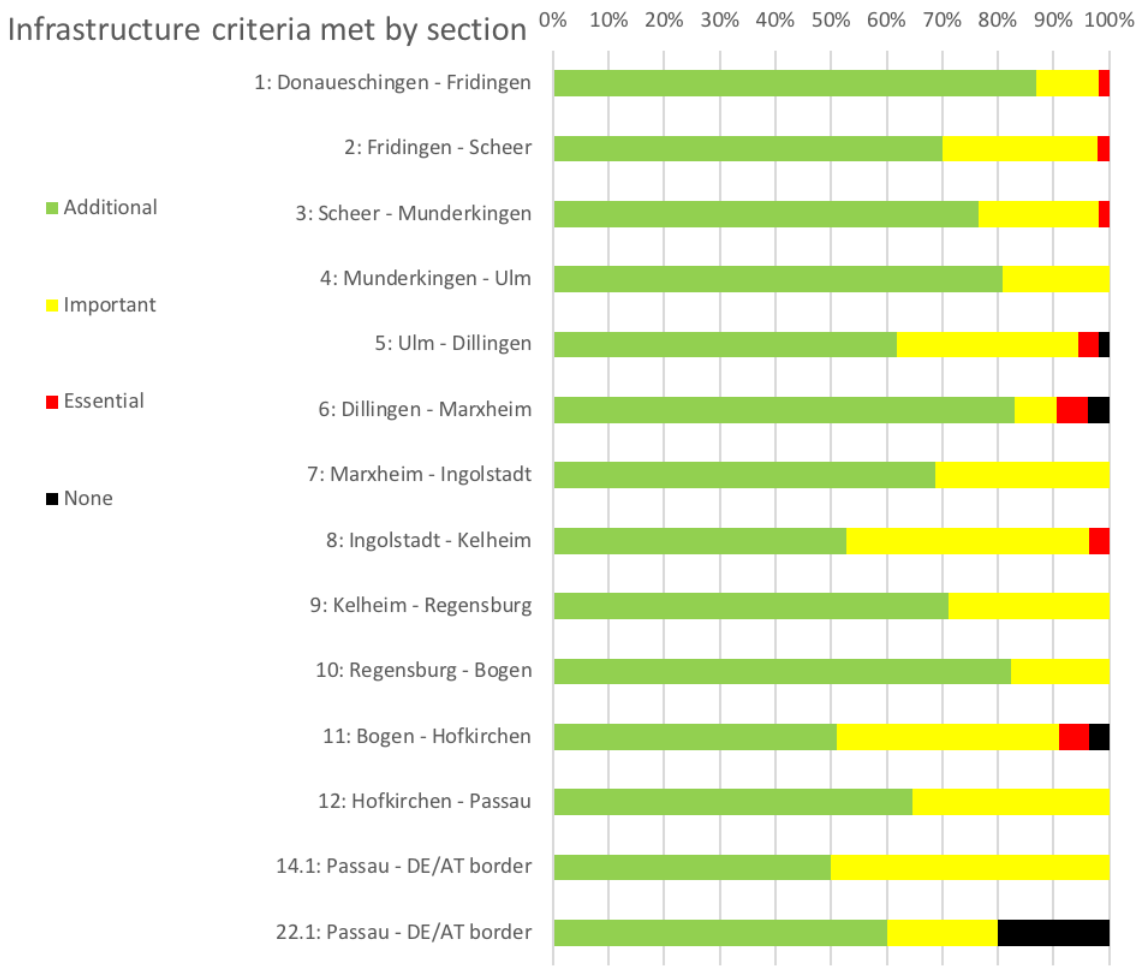
5.2 Germany

5.2.1 Infrastructure



This table shows the shares of Germany's 14 sections that meet or do not meet the essential, important and additional criteria of the European Certification Standard. For instance, section 6 (Dillingen-Marxheim) meets the essential criteria on 96% of its length, while 90% meet the essential and the important criteria and 83% meet all the criteria, i.e. the essential, important and additional criteria combined. Black-coloured parts of a section show which share does not meet any of the criteria, illustrating which sections do not fulfil the minimum requirements (100% of the essential criteria must be met). In this case, the section does not meet the essential criteria on 4% of its length.

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The following table shows which shares of the route fall in which traffic category, depending on the different levels of traffic volume and speed. The traffic categories range from traffic-free/very low (green) to very high (black):

	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
traffic free & cycle paths	62.4%			
1-500 units/day	9.4%	6.5%	3.3%	0.5%
501-2 000 units/day	4.4%	4.4%	0.8%	1.3%
2 001-4 000 units/day	0.6%	2.2%	0.6%	0.6%
4 001-10 000 units/day	0.5%	1.3%	0.2%	0.2%
>10 000 units/day	0.0%	0.8%	0.0%	0.0%

= traffic-free / very low traffic = low traffic = moderate traffic = high traffic = very high

About 62% of the route is already composed of segregated cycle paths, greenways, or similar traffic-free route segments, and another 24% consist of roads with very low traffic. Only 3% of the route in Germany feature high or very high traffic, which should be targeted by action planning.

The following table combines the different traffic categories and surface qualities:

	perfectly rideable	well rideable	moderately rideable	badly or not rideable
traffic free & cycle paths	31.9%	22.4%	8.1%	
very low traffic	16.2%	6.3%	1.1%	
low traffic	2.7%	3.0%	0.6%	
moderate traffic	3.8%	0.8%		
high traffic	1.1%	1.0%		
very high traffic	0.8%	0.2%		

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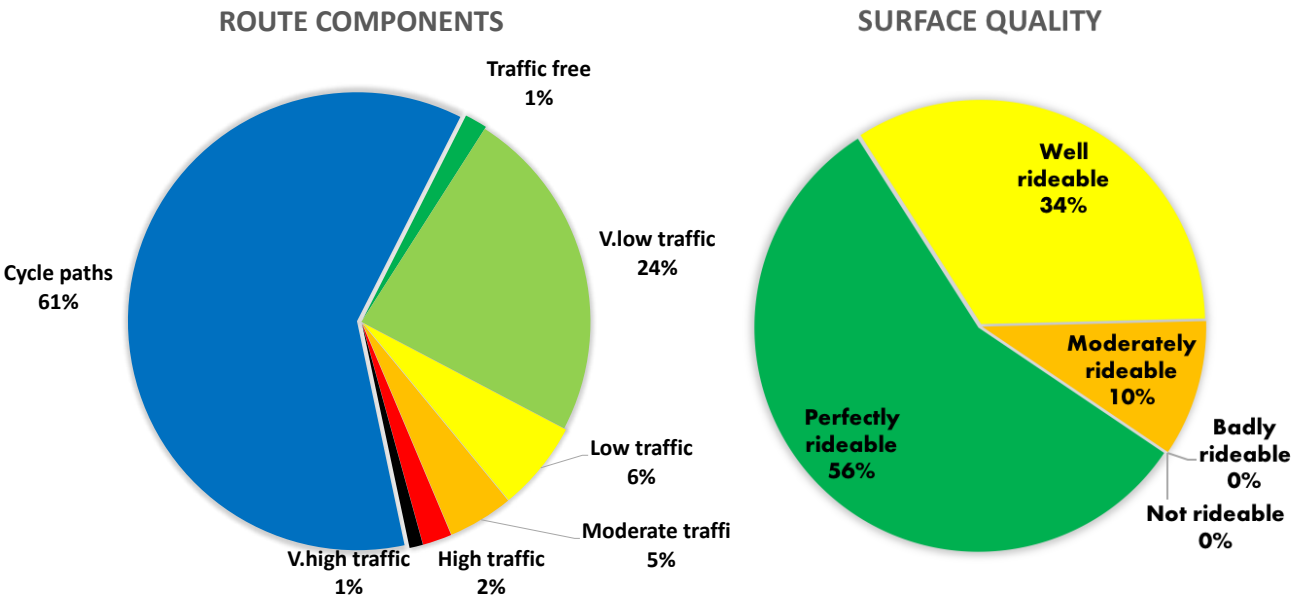

Most of the route (56%) consists of perfectly rideable stretches, while another 34% are well rideable. The remaining 10% were assessed as moderately rideable. There is not a single kilometre that is badly or not rideable, which testifies to the good surface quality in Germany.

Quiet cycle path between Donaueschingen and Fridingen (section 1).

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Public road with low traffic behind Grünau castle (section 7).

Stabilised-gravel cycle path behind Pondorf (section 10) next to beautiful floodplain area.

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Public Transport

In **Germany**, bicycles are usually accepted on regional and long-distance trains, but the number of bikes is limited, especially on IC trains. This should be considered during the high season of cycle tourism along the Danube. There are cyclists who reserve their bike tickets one year in advance. The regional "Donautalbahn" train in **Baden-Württemberg** and **Bavaria** provides plenty of space for bike carriage and is an excellent public-transport option for cyclists.

5.2.2 Services

Based on the survey data, the following services exist along the route:

Daily section	Accommodation					Food/ rest areas			Bike services		
	luxury	standard	budget	camping	cyclist-friendly	food on daily section	food/rest every 15 km	repair shops	self-service	spare parts	e-bike charging
1	2	10	1	2	9	17	Yes	4	0	0	2
2	0	13	2	3	7	15	Yes	1	0	0	0
3	0	16	1	4	8	16	Yes	3	0	0	0
4	0	13	1	4	6	11	Yes	4	0	0	0
5	2	15	4	3	9	18	Yes	8	1	0	1
6	0	13	5	2	3	17	Yes	2	0	0	0
7	0	10	4	5	4	10	Yes	2	0	0	0
8	1	7	9	4	3	11	Yes	7	1	0	2
9	1	9	4	9	5	11	Yes	2	0	0	1
10	1	14	8	3	4	15	Yes	4	1	0	3
11	0	8	7	4	2	9	Yes	**0**	**0**	**0**	1
12	1	8	3	3	3	8	Yes	3	0	0	2
14.1	1	8	2	4	2	11	Yes	2	0	0	1
22.1	1	3	2	1	0	4	Yes	2	0	2	1

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

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The table above shows that the services offer is quite good in Germany. Only on section 11 (Bogen-Hofkirchen), there is a lack of bike repair services (essential criterion).

Traditional „Wirtshaus" in Marxheim (section 6).

5.2.3 Marketing / Promotion

There are several useful websites for cyclists planning to explore the German part of EuroVelo 6. **Deutsche Donau** has published a website with plenty of information in German and English, including descriptive information on the route and POIs, an interactive map, accommodation, links to printed guides and bike repair shops or bike rental options. The website also provides an overview of **e-bike charging stations**. Deutsche Donau has also published a list of **pdf information material**.

More information is available from the **ADFC**, which has given four out of five stars for this stretch of the route and also provides an excellent search engine for certified cyclist-friendly accommodation as part of the **"bett + bike"** scheme. The **Federal Ministry for Economic Affairs** provides additional information on the route.

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Existing promotional tools

Category	Promotional tool		Criteria met?	Comments
Web	National/ regional website, including information on:	Information on the route, including a detailed map	Yes	
		Info on signing	Yes	
		Info on accommodation	Yes	
		Info on PT connections	Yes	
		Interactive maps	Yes	
		POIs	Yes	
		Accommodation online databases	Yes	
		PT timetables	No	
		GPS track downloads	Yes	
	Overview info about the route on eurovelo.com		Yes	
Print	Guidebook		Yes	Esterbauer and Huber cover Germany as well
	Detailed printed map		Yes	
Other	Information boards / centres on every daily section		Yes	

■ = Doesn't meet essential criteria ■ = Doesn't meet important criteria

The following tourist information centres and panels exist, based on the route survey:

Tourist information centres / panels per section*

Daily section	info center	info panel
1	5	13
2	3	12
3	5	5
4	4	7
5	8	11
6	2	10

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7	3	4
8	7	6
9	4	8
10	4	9
11	3	8
12	4	9
14.1	2	3
22.1	1	0

*Based on the route survey.

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

5.2.4 Critical deficiencies

- Out of the route's 630 km in Germany, 19 km (3%) are located on roads with very high or high traffic. These stretches are usually located in bigger towns on public roads, sometimes equipped with painted cycle lanes.

Very high traffic:

Section	Km	Area/town/comments
5	49	Lauingen (>10,000 traffic units per day / painted cycle lane with less than 1.5 m of width)
6	1	Dillingen (4,000-10,000 / 80 km/h or higher / public road)
	10	Hoechstadt (>10,000 / public road / for 500m with many trucks)
11	29-30	Deggenau (>10,000 / 31-50 km/h / painted cycle lane with less than 1.5 m of width)
22	2	Marienbrücke in Passau (> 10,000 traffic units per day, painted cycle lane with less than 1.5 m width)

The longest stretch with very high traffic (2 km) is located on section 11 (Bogen-Hofkirchen) close to Deggenau (see picture below).

- Section 22: steep and difficult (15-20 steps) stairs in Passau between Marienbrücke and the southern bank of the Inn river (Schiffmühlgasse).
- The first 350-400 km of the route (daily sections 1-7/8) are quite hilly, with four daily sections exceeding 500 m of cumulative elevation gains and one exceeding 1000 m.

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- As there is an abundance of services in this part, this could be addressed by adjusting the daily sections split to recommend shorter daily distances for tourists.
- Please note that on daily section 8: Ingolstadt-Kehlheim, the official and recommended route continues with the ship from Weltenburg. It was not possible to take this ship during the survey on 15 July 2018 because of low water levels. An alternative route was therefore surveyed, leading over a quite steep mountain pass (about 200 m climb on just 3 km of route). In the data, this stretch represents km 50-55. As EuroVelo route should always be available during the cycling season, this should be either integrated in the official itinerary (and signposted) or another solution for this part of the route proposed. Extremely dry summers like the one in 2018 could become more frequent in the future.

- There is a lack of bike repair services on section 11 (Bogen-Hofkirchen).
- Public-transportation timetables should be included in the website promoting EuroVelo 6 in Germany.

Very high traffic on public road close to Deggenau (section 11). Painted cycle lane/paved shoulder with width of less than 1.5 m.

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5.2.5 Planned route improvements

During the field work, several construction sites were observed:

Section	Country	Start (km)	End (km)	Location	Comment
1	DE	19	20	Between Hausen and Hintschingen	Bridge construction
4	DE	4	5	Rottenacker	Closed bridge
4	DE	28	29	Behind Ersingen	Construction works
7	DE	13	14	Behind Stepperg	Construction works
8	DE	38	40	Kehlheim	Route doesn't lead through Sittling because of construction works
11	DE	34	46	Behind Deggenau, up to Winzer	A3 - Diversion starting before bridge crossing A3. It's a long detour mostly on moderately rideable gravel, through the fields. The dam is being raised and reconstructed after a flood. Construction works scheduled to take until September 2019.

5.2.6 Proposed actions

1. To bring the route in line with the Essential and Important European Certification Standard criteria, the following improvements should be made:
    - 5 km of cycle path in several sections to avoid very high traffic:
        - 1 km of cycle path close to Lauingen (section 5).
        - 1 km of cycle path in Dillingen and 1 km in Hoechstadt (section 6).
        - 2 km of cycle path in Deggenau (section 11).
    - Wider cycle lanes or reduction of speed limit on Marienbrücke in Passau.
    - An alternative route for the steep stairs in Passau between Marienbrücke and the southern bank of the Inn river (Schiffmühlgasse).
    - 13 km of cycle path to avoid high traffic in several sections, especially on section 6: Dillingen-Marxheim, and section 11: Bogen-Hofkirchen, but also on section 5: Ulm-Dillingen and section 8: Ingolstadt-Kelheim.
    - There were 14 instances of missing or wrong signs.

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- In terms of services, cyclists would benefit from the installation of some form of bike repair service on section 11: Bogen-Hofkirchen.

2. If the German part of route is to be communicated as suitable without restrictions to all user groups (Additional criteria, depends on the level of aspiration of the route operator), the following issues should also be addressed[1]:
    - 6 dangerous crossings.
    - 62 km with moderately rideable surface.
    - 29 km of cycle path to avoid moderate traffic
        - Alternatively, on most (22 km) of these kilometres, safety could also be improved by applying traffic-calming measures.
    - 91 km where the path is not wide enough.
    - 16 chicanes (<1.3m) that can be difficult to pass with trailers, trikes etc.
    - Two instances where cyclists have to dismount.
    - One stair where cyclists have to push their bikes up and down a ramp (see picture below).
    - E-bike charging facilities on sections 2-4 and 6-7.

[1] Please keep in mind that these numbers also include the diversions mentioned in the introductory chapters. Some of these issues might get fixed through ongoing construction works.

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In Tuttlingen (daily section 1), cyclists have to dismount.

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Quite narrow cycle path at entry to Scheer (section 2).

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Stairs with ramp but barely visible sign close to Passau (section 12).
Dark underground passage could also be a social safety challenge.

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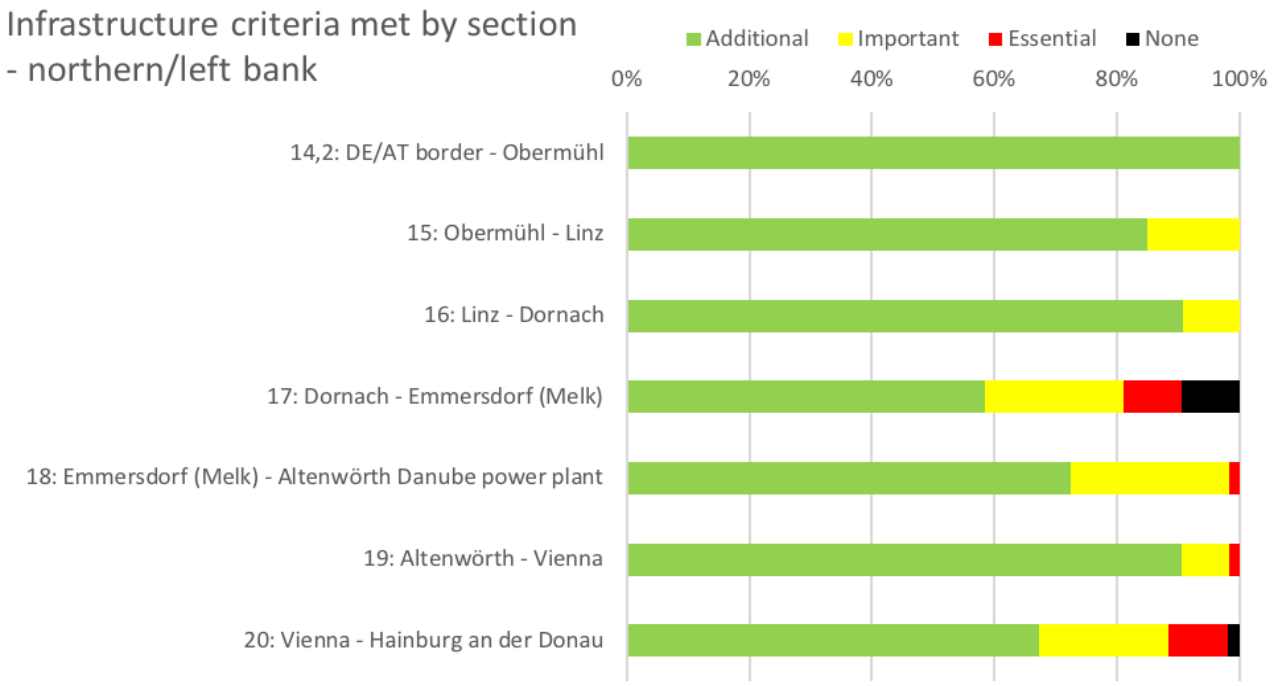
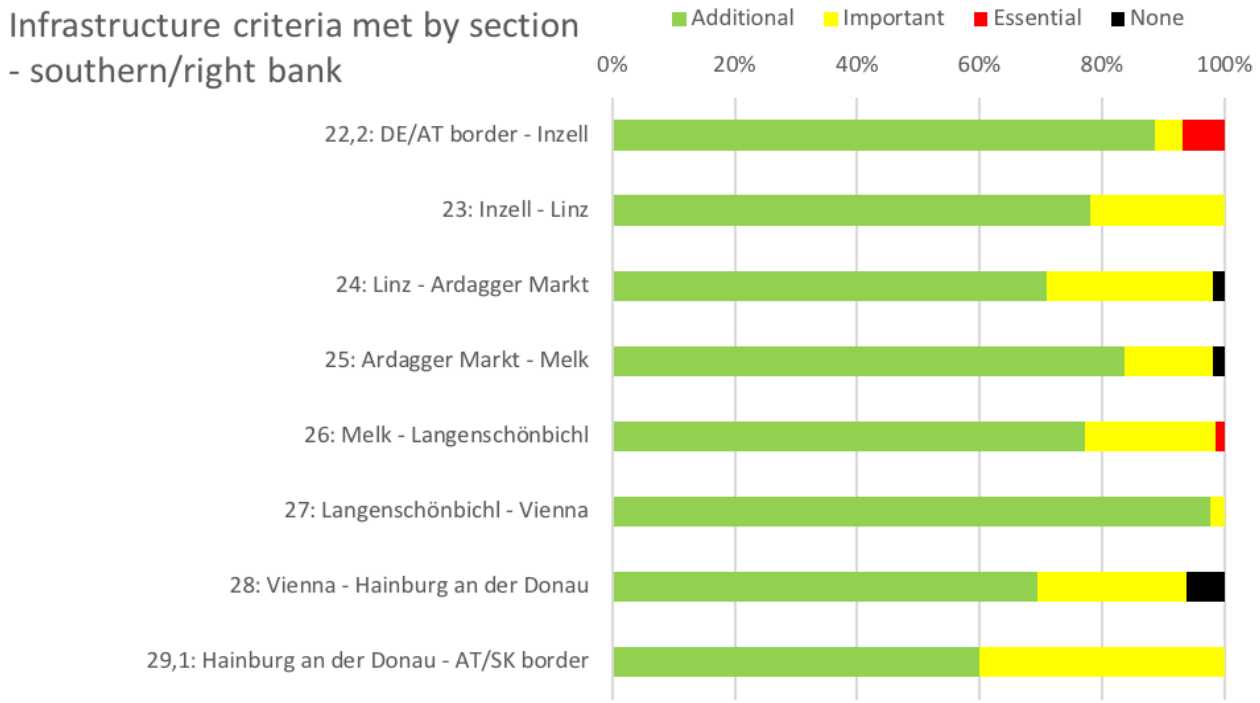
5.3 Austria

5.3.1 Infrastructure





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The two tables above show the shares of Austria's 15 sections that meet or do not meet the essential, important and additional criteria of the European Certification Standard. For instance, section 17 (Dornach-Emmersdorf/Melk) meets the essential criteria on 91% of its length, while 81% meet the essential and the important criteria and 58% meet all the criteria, i.e. the essential, important and additional criteria combined. Black-coloured parts of a section show which share does not meet any of the criteria, illustrating which sections do not fulfil the minimum requirements (100% of the essential criteria must be met). In this case, the section does not meet the essential criteria on 9% of its length. It is worth noting that section 14 (from the German border until Obermuehl) already meets all the infrastructural criteria on all levels.

The following table shows which shares of the route fall in which traffic category, depending on the different levels of traffic volume and speed. The traffic categories range from traffic-free/very low (green) to very high (black):

	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
traffic free & cycle paths	63.3%			
1-500 units/day	11.3%	8.3%	3.8%	0.0%
501-2 000 units/day	1.9%	3.2%	2.0%	0.1%
2 001-4 000 units/day	0.9%	1.5%	0.5%	1.3%
4 001-10 000 units/day	0.1%	0.4%	0.4%	0.7%
>10 000 units/day	0.0%	0.0%	0.0%	0.1%

= traffic-free / very low traffic = low traffic = moderate traffic = high traffic = very high

Already more than 63% of the route are composed of segregated cycle paths or similar traffic-free route segments. Another 25% follow public roads with very low traffic. However, there is still a 3% share of the route that features high or very high traffic, which should be targeted by action planning.

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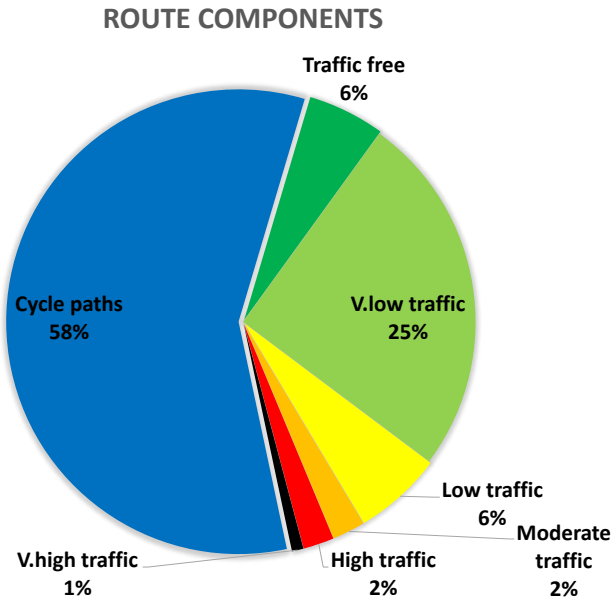
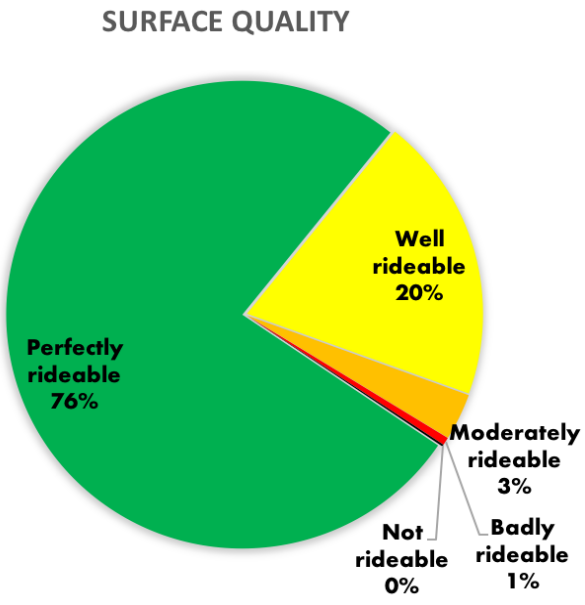
The following table combines the different traffic categories and surface qualities:

	perfectly rideable	well rideable	moderately rideable	badly rideable	not rideable
cycle paths	48.3%	9.1%	0.5%		
traffic free	2.0%	2.0%	0.9%	0.4%	
very low traffic	18.7%	5.1%	1.2%	0.1%	0.1%
low traffic	3.8%	2.3%	0.1%		
moderate traffic	1.7%	0.5%			
high traffic	1.6%	0.4%	0.1%		
very high traffic	0.3%	0.3%	0.3%		





Most of the route (76%) consists of perfectly rideable stretches and another 20% are well rideable. Five minor segments were assessed as badly or not rideable.

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Most of the route already meets a high-quality standard.

EuroVelo logo integrated in the upper, but not in the lower sign.

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Public Transport

In **Austria**, bikes can be transported in most regional and long-distance trains. As in Germany, travellers need to reserve a bike port in long-distance trains. This also applies to special or bigger bikes, such as tandems. The regional **railjet trains** also offer bike transport.

Within Austria, cycle tourists will need a special bicycle ticket, which costs 10% of a full-price ticket in the second class for the route (a minimum fee of €2 applies). In addition to this, cycle tourists can also purchase weekly or monthly tickets for their bicycle. For international routes, Austrian rail service provider ÖBB offers the Biking International Ticket at a price of €12. See **https://tinyurl.com/y7v6aqud** for more details.

5.3.2 Services

Based on the survey data, the following services exist along the route:

Daily section	Accommodation					Food/ rest areas			Bike services		
	luxury	standard	budget	camping	cyclist-friendly	food on daily section	food/rest every 15 km	repair shops	self-service	spare parts	e-bike charging
14.2	0	2	1	1	3	6	Yes	**0**	**0**	**0**	0
15	1	9	6	4	4	13	Yes	4	0	0	4
16	1	14	6	6	4	18	Yes	1	1	0	4
17	0	15	5	2	5	19	Yes	2	0	0	1
18	0	19	8	1	12	25	Yes	3	1	0	1
19	3	18	5	2	3	22	Yes	3	0	0	1
20	2	6	6	0	1	12	Yes	5	0	0	3
22.2	0	9	6	6	5	13	Yes	1	0	0	1
23	0	7	3	1	1	13	Yes	2	2	2	2
24	0	2	4	2	3	5	No	1	0	1	1
25	0	6	9	3	1	17	Yes	1	0	0	1

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26	1	3	13	4	0	15	Yes	1	0	1	1
27	0	4	5	2	9	20	Yes	1	2	2	1
28	0	4	4	1	3	13	Yes	4	0	4	1
29.1	0	4	1	0	1	2	Yes	**0**	**0**	**0**	0

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

The table above shows that Austria offers cycle tourists a lot in terms of services. There are all kinds of accommodation, with plenty of cyclist-friendly offers. Not counting the border sections, there are no sections lacking bike repair services. While the border sections 14.2 and 29.1 lack bike services, there are two bike repair shops available on section 14.1 (German part) and four bike repair workshops available on the Slovakian side, i.e. daily section 29.2. So the lack of bike services in the border sections is not problematic.

5.3.3 Marketing / Promotion

The main website for promoting EuroVelo 6 in Austria can be found at **https://www.donau-oesterreich.at/donauradweg/**. It provides a description of the route, interactive maps, stages with comprehensive data such as gradients profiles, downloadable GPX tracks, info on how to access the route and its various stages with public transport etc. The website also provides information on hiking, cultural highlights, culinary highlights and events, cyclist-friendly accommodation (**bett + bike**), ferries etc. It is an excellent planning and information tool for cycle tourists.

Another fine website promoting EuroVelo 6 in Austria can be found at **https://www.eurovelo.at/en/ev6.html**. The website was published by Austrian cycling advocacy organisation Radlobby Österreich. It is new and provides a description of the route, videos, points of interest, and links to "donau-oesterreich.at".

There are even separate websites for cycling in Upper Austria and Lower Austria, each again including plenty of information and links to printed material as well:

- Upper Austria: **https://www.donauregion.at/radfahren-am-donauradweg.html**
- Lower Austria: **https://www.donau.com/de/donau-niederoesterreich/ausflug-bewegen/bewegung/donauradweg/**

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The only elements that could be improved is the integration of public-transport timetables into these websites and explanations on signing.

Existing promotional tools

Category	Promotional tool		Criteria met?	Comments
Web	National/ regional website, including information on:	Information on the route, including a detailed map	Yes	
		Info on signing	**No**	
		Info on accommodation	Yes	
		Info on PT connections	**No**	
		Interactive maps	Yes	
		POIs	Yes	
		Accommodation online databases	Yes	
		PT timetables	No	
		GPS track downloads	Yes	
	Overview info about the route on eurovelo.com		Yes	
Print	Guidebook		Yes	Esterbauer and Huber cover Austria as well
	Detailed printed map		Yes	
Other	Information boards / centres on every daily section		Yes	

■ = Doesn't meet essential criteria ■ = Doesn't meet important criteria

The following tourist information centres and panels exist, based on the route survey:

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Tourist information centres / panels per section*

Daily section	info center	info panel
14.2	1	3
15	6	6
16	4	14
17	6	10
18	8	7
19	5	10
20	5	3
22.2	1	11
23	3	14
24	1	14
25	2	13
26	0	25
27	1	9
28	1	14
29.1	0	3

*Based on the route survey.

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

5.3.4 Critical deficiencies

- 22 km of the route (3%) lead over roads with very high or high traffic:
  - Most of these (18 km) were identified on the northern (left) bank of the Danube.
  - Probably the most dangerous segment is a 10-km stretch on road number 3 between Grein and Hirschenau (daily section 17). There is heavy traffic (trucks, but also e.g. motorcycles), high speeds (more than 80 km/h) with only a moderately rideable and too narrow cycle lane. Motor vehicles do not pay attention to sufficient passing distance when overtaking cyclists.

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- One minor section in Vienna's city centre (daily section 19), shortly before the Stephansdom (public road, 4,000-10,000 units per day, 31-50 km/h).
- Narrow cycle lane on road no. 49 leading to the Andreas Maurer bridge.
- 3 km on daily section 22 between Engelhartszell and Wesenufer;
- One minor section in Mautern an der Donau (daily section 26).

- 5 minor segments (0.7% of the route) have been classified as comprising badly or not rideable surface, all of them on the southern (right) bank of the Danube:
  - Short stretch at the ferry access near Enghagen am Tabor
  - Cobblestones in the centre of Ybbs an der Donau
  - 3 stretches around Haslau an der Donau (daily section 28) with pebbles, sand, cobblestones, up to 25% gradient.
- 78 junctions with missing or confusing signs have been identified on the route.
- Public-transport timetables and explanations on signing are not yet included in the otherwise excellent Austrian websites promoting EuroVelo 6.

Paved shoulder on road number 3 between Grein and Hirschenau (daily section 17) – too narrow for safe cycling outside built-up area, effective width further reduced by safety barrier.

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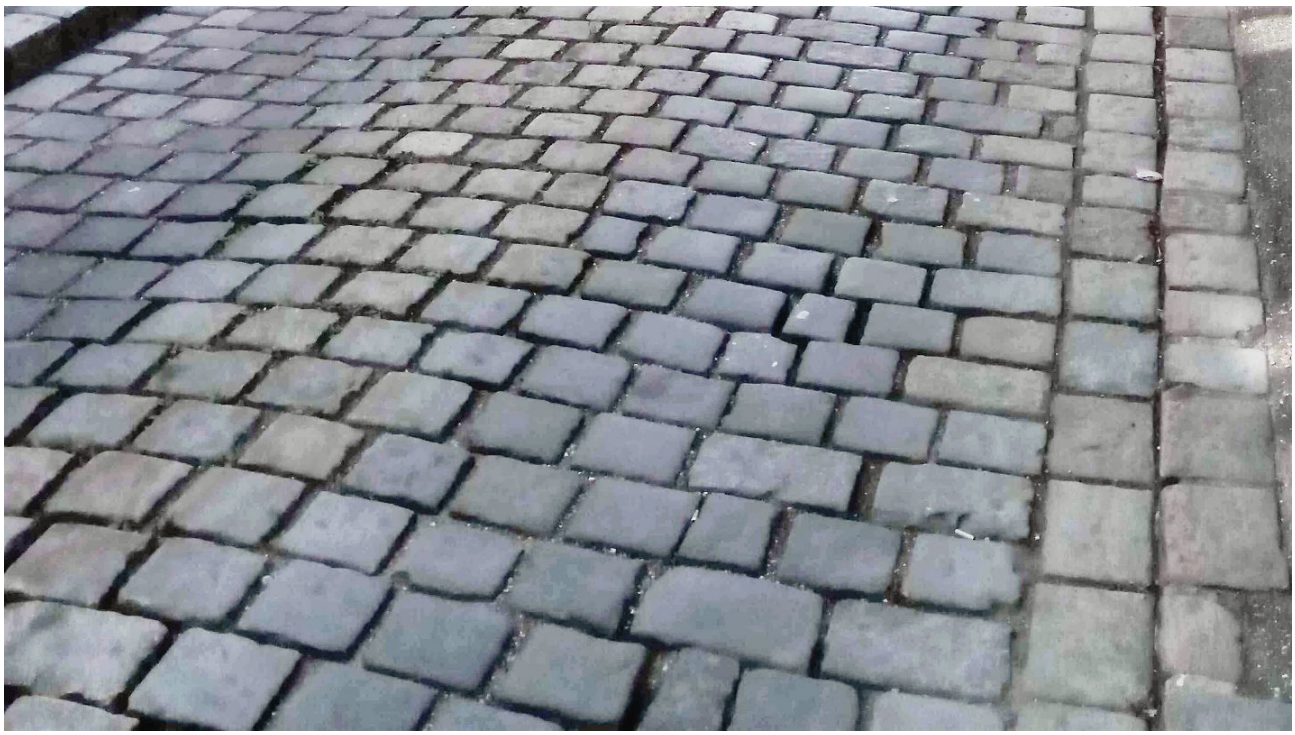
Narrow cycle lane on road nr 49 leading to the Andreas Maurer bridge (daily section 20).



Cobblestones with big gaps in between in the centre of Ybbs an der Donau (daily section 25).

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Difficult access to ferry in Haslau an der Donau (pebbles, sand, cobblestones, up to 25% gradient after taking the ferry).

5.3.5 Planned route improvements

- One minor section of high traffic in daily section 18 (near Krems) and 6 km of high and very high traffic in daily section 20 (very high traffic between Stopfenreuth and Bad Deutsch-Altenburg at the end of the detour; >10,000 units / painted cycle lane) were related to temporary detours because of a dam or cycling path reconstruction (Between Schönau and Bad Deutsch-Altenburg, a 25-km detour was necessary because of a cycle path construction along the Danube. The construction is scheduled to be finished in 2020.)
- On 2 km of badly rideable surface in daily section 28, preparation works for asphalting were observed.

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The following additional measures are planned or ongoing in Upper Austria:

Measure: Closing a gap on the R1 Danube Cycle Route

- Location: B130, Nibelungen street
- Section 22.2: DE/AT border - Inzell
- Stretch: Ronthalerhof - Saag
- Length: about 870 m
- Period: following the Oberranna - Ronthalerhof construction lot
- Details: 2.5 m wide cycle and pedestrian path with 1 m wide green strip separated from the roadway.

Measure: Closing a gap on the R1 Danube Cycle Route

- Location: B130, Nibelungen street
- Section 22.2: DE/AT border - Inzell
- Stretch: Oberranna - Wesenufer
- Length: about 2 km
- Period: currently preliminary planning and feasibility studies
- Details: this approx. 2 km long section requires particularly complex measures, whereby rock blasting on the slope is probably less cost-intensive as half bridges along the slopes to the Danube. At the moment there is no date for completion. This could fix some of the high traffic in the area.

Measure: New construction of the pedestrian and cycle paths in the course of the construction of the bypass bridges.

- Location: A7 Mühl district highway, Vöest Bridge
- Sections: 15: Obermühl-Linz and 16: Linz-Dornach
- Period: March 2018 - March 2020
- Details: The R1 Danube cycle path will never be interrupted during the construction. Protective scaffolding is erected in the area of the construction site, with temporary restrictions to be expected. The pedestrian and cycle path on the west side across the Danube will be closed for approx. 20 months from March 2018. The pedestrian and cycle path on the east side will remain open during this period. The new pedestrian and cycle paths will be moved outward to the new bypass bridges, with transparent noise barriers separating them from the roadways.

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Significant parts of the main route were under reconstruction during the field survey.

5.3.6 Proposed actions

To bring the route on both banks of the Danube in line with the Essential and Important European Certification Standard criteria, the following improvements should be implemented:

1. Around 10 km of cycling path along road number 3 between Grein and Hirschenau.
2. Adjusting the itinerary in the centre of Vienna to avoid the busy streets Marc-Aurel-Straße and Tuchlauben (section 19, km 63-64). The EuroVelo 6 route could simply follow the Danube bank and across the Prater part.
3. 3 minor sections of cycling paths between Engelhartszell and Wesenufer along roads with high traffic in daily section 22.
4. Improving surface on the access to ferry Enghagen am Tabor.
5. One minor section of cycling path or traffic calming in Mautern an der Donau (daily section 26)
6. Filling the gaps in between cobblestones in the centre of Ybbs an der Donau or finding an alternative route with better surface.

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7. Better access to the ferry in Haslau an der Donau; alternatively, the option of developing a cycle route on the southern side of the Danube also between Vienna and Haslau an der Donau (not surveyed) could be explored.
8. Adding missing signs on 78 junctions (most of them in daily sections 17, 19-20 and 28).
9. Integrating EuroVelo logo on signs where it is missing – mostly in daily sections 14-16, 22-23 and 29.
10. Integrate public-transport timetables and explanations on signing into the Austrian websites promoting EuroVelo 6.

Bike friendly cobblestone treatment in Freiburg im Breisgau – similar measures could be applied in Ybbs an der Donau.

If the Austrian part of the route is to be communicated as suitable without restrictions to all user groups (Additional criteria, depends on the level of aspiration of the route operator), the following issues should also be addressed:

- 12 dangerous crossings;
- 9 locations where cyclists are required to dismount;
- 24 km of moderately rideable surface (in addition to the sections mentioned above);

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- 75 km of the route with insufficient width for comfortable bidirectional traffic of bicycles with trailers etc. (partially overlapping with moderately rideable surface);
- 11 chicanes or similar obstacles difficult to navigate by tandems, trailgators etc.
- Cyclist-friendly accommodation on section 26.
- E-bike charging facilities on sections 24, 25 and 28.
- More rest areas with roofs, toilets and drinking water to provide a comfortable stopping possibility every 15 km, especially on section 24.

It is also worth noting that the completion of the Freedom Cycling Bridge between Schloßhof and Devínska Nová Ves has created an excellent opportunity to extend the northern variant of the EuroVelo 6 route by another section, from Hainburg an der Donau to Bratislava. This is potentially a highly attractive section (e.g. Schloßhof, Devínsky Hrad). However, this part was not surveyed as a part of the contract, so the exact range of necessary actions is not known.

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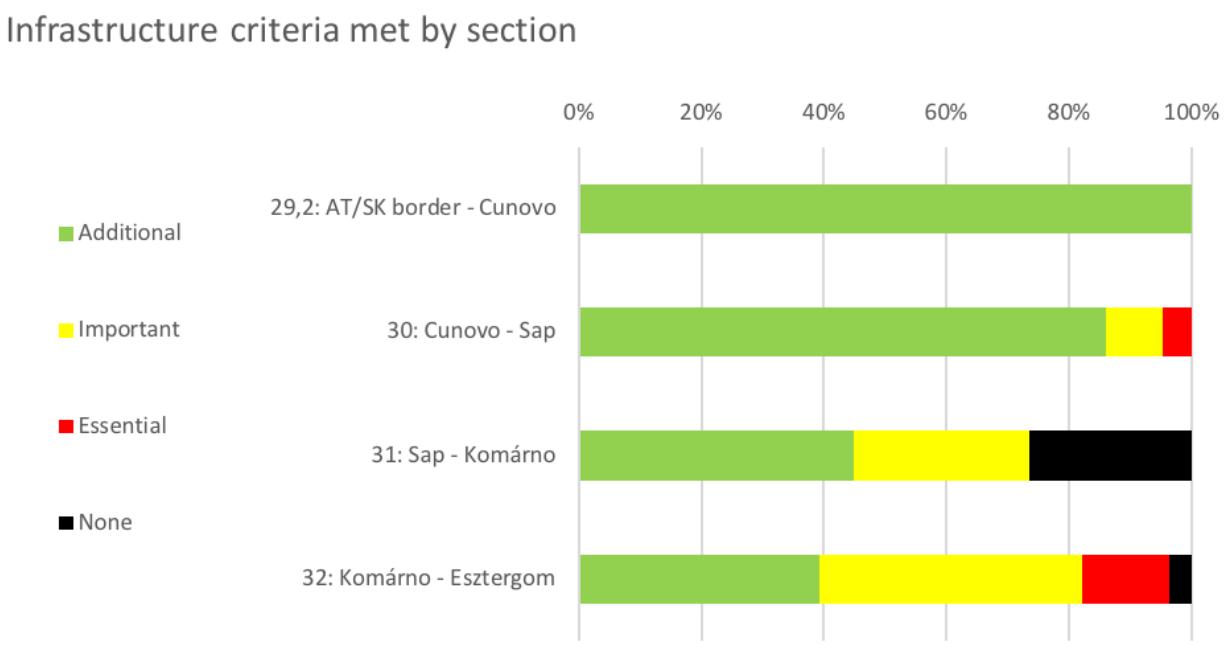
5.4 Slovakia

5.4.1 Infrastructure



This table shows the shares of the four sections in Slovakia that meet or do not meet the essential, important and additional criteria of the European Certification Standard. For instance, on section 32, 96% of the section's distance meet the essential criteria, while 82% meet the essential and the important criteria and still 39% meet all the criteria, i.e. the essential, important and additional criteria combined. Black-coloured parts of a section show which share does not meet any of the criteria, illustrating which sections do not fulfil the minimum requirements (100% of the essential criteria must be met). In the case of section 32, the section does not meet the essential criteria on 4% of its length.

The following table shows which shares of the route fall in which traffic category, depending on the different levels of traffic volume and speed. The traffic categories range from traffic-free/very low (green) to very high (black):

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	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
traffic free & cycle paths	67.3%			
1-500 units/day	2.9%	1.2%	2.9%	0.0%
501-2 000 units/day	0.0%	6.4%	11.1%	0.0%
2 001-4 000 units/day	0.0%	0.6%	0.0%	0.0%
4 001-10 000 units/day	0.0%	4.7%	1.2%	0.0%
>10 000 units/day	0.0%	0.0%	1.8%	0.0%

= traffic-free / very low traffic = low traffic = moderate traffic = high traffic = very high

The following table combines the different traffic categories and surface qualities:

	perfectly rideable	well rideable	moderately rideable	badly rideable
traffic free & cycle paths	49.1%	4.1%	8.2%	5,8%
very low traffic	4.1%	1.8%	0.6%	1.2%
low traffic	15.8%		1.2%	
moderate traffic	0.6%			
high traffic	5.8%			
very high traffic	1.8%			

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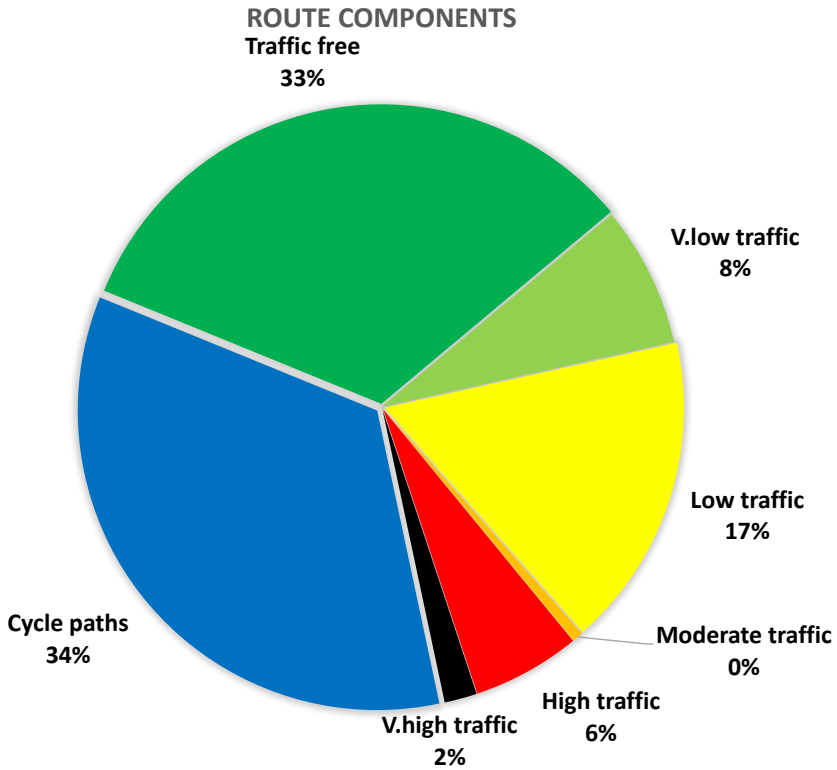
Most of the route in Slovakia already comprises high quality traffic-free or dedicated cycling infrastructure.



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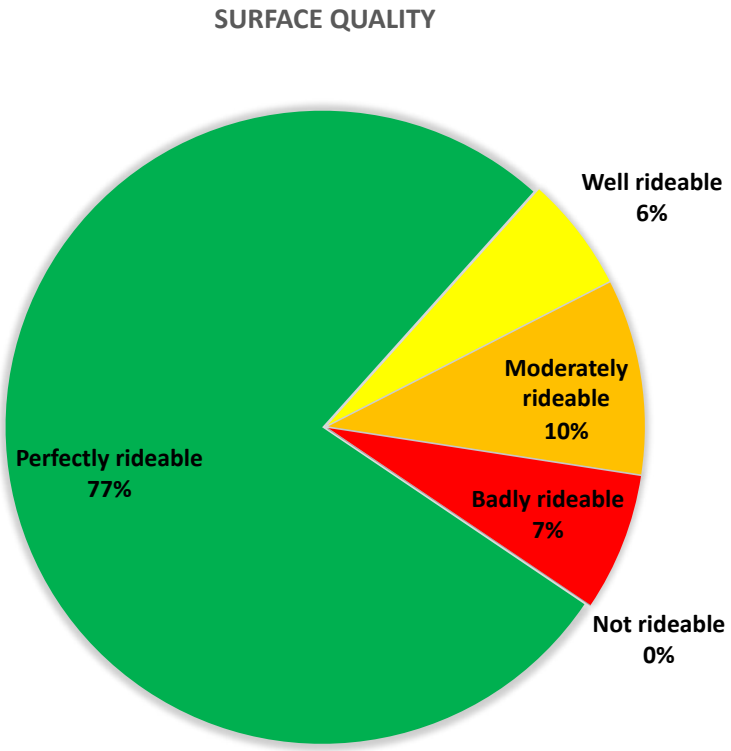
The table above shows that nearly 70% of the route are composed of segregated cycle paths, greenways, or similar traffic-free route segments. Moreover, there is still a significant share of the route featuring very low or low traffic. However, there is still an 8% share of the route that features high or very high traffic, which should be targeted by action planning.



Most of the route in Slovakia (77%) consists of perfectly rideable stretches, while another 6% are well rideable. However, there is also a 7% stretch of the route that was assessed as badly rideable and another 10% that are moderately rideable.

Public Transport

In **Slovakia**, Slovak Rail offers bike transport in most of its trains, but different conditions apply for different services. This includes where the bike can be placed, the number of bikes that can be transported, who loads and unloads the bike as well as if a bike reservation is necessary.

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5.4.2 Services

Based on the survey data, the following services exist along the route:

Daily section	Accommodation					Food/ rest areas			Bike services		
	luxury	standard	budget	camping	cyclist-friendly	food on daily section	food/rest every 15 km	repair shops	self-service	spare parts	e-bike charging
29.2	1	7	7	0	4	14	1	4	0	0	0
30	0	2	3	1	0	6	0	**0**	**0**	**0**	0
31	0	1	2	2	0	9	1	1	0	1	0
32	1	3	5	2	1	13	0	2	0	1	0

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

The table above shows weaknesses along the route when it comes to services. Bike repair services are missing between Cunovo and Sap. There is a lack of certified cycle-friendly accommodation on two sections (additional criterion).

5.4.3 Marketing / Promotion

EuroVelo 6 in the country is promoted by **Slovakia's EuroVelo webb site**. However, the website is not complete. It contains a map and GPX track, but not much more information. Marketing of the route in the country would benefit from updating this website. To meet the essential criteria, the website should also contain information on signing, accommodation and public transport connections.

The website **bratislavabikepoint.com** also provides a description of the route from Bratislava to Štúrovo (SK)/Esztergom (HU).

The printed material includes the map "Cyklomapa Trnavský kraj", which covers stages 29-30).

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Existing promotional tools

Category	Promotional tool		Criteria met?	Comments
Web	National/ regional website, including information on:	Information on the route, including a detailed map	Yes	
		Info on signing	**No**	
		Info on accommodation	**No**	
		Info on PT connections	**No**	
		Interactive maps	Yes	
		POIs	No	
		Accommodation online databases	No	
		PT timetables	No	
		GPS track downloads	Yes	
	Overview info about the route on eurovelo.com		Yes	
Print	Guidebook		Yes	Esterbauer and Huber cover Slovakia as well
	Detailed printed map		**No**	The map mentioned above only covers part of the route.
Other	Information boards / centres on every daily section		Yes	

■ = Doesn't meet essential criteria ■ = Doesn't meet important criteria

The following tourist information centres and panels exist on the route, based on the survey:

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Tourist information centres / panels per section*

Daily section	Info center	Info Panel
29.2	0	6
30	0	1
31	0	2
32	1	6

*Based on the route survey.

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

5.4.4 Critical deficiencies

- Out of 171 km of route in Slovakia, 13 km (8%) lead over roads with very high or high traffic:
  - The longest stretch (6 km) has been identified in section 32: Komárno – Esztergom (road 63 between Radvaň nad Dunajom-Žitava – Moča);
  - The busiest one (3 km with around 12000 vehicles/day) was part of an officially signposted detour in section 31: Sap – Komárno (road 63 between Nová Stráž and western border of Komárno); the road closer to the river was closed due to construction of a new bridge.
  - Gabčíkovo dam and approach to it (1.5 km);
  - Between Štúrovo train station and the city centre (around 2 km).
- 12 km (7%) has been classified as badly rideable:
  - In section 31: Sap – Komárno, there is a very long (16 km) stretch of mostly gravel surface, alternating between badly rideable and moderately rideable quality. Location: during the survey Veľké Kosihy – Nová Stráž, but without the detour (see above) it would probably be 3 km more, until the railroad bridge in Komárno.
  - Further 2 km of badly rideable surface were found in section 32, between Obid and Štúrovo train station.

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- The route is signed, but the number of signs is very limited, especially in sections 29-31. For instance:
    - Between the Austrian border and Cunovo, no signs with the EuroVelo logo have identified at all;
    - Between Cunovo and Sap, there were only two locations with signs.
    - In total, 22 crossings with missing signs have been identified.
- Bike repair services are missing on section 30, between Cunovo and Sap.
- The website needs to be updated.

Badly rideable, not consolidated gravel between Veľké Kosihy and Nová Stráž.

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Section on national road 63 between Radvaň nad Dunajom-Žitava and Moča.

Detour to busy road between Nová Stráž and western border of Komárno.

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5.4.5 Proposed actions

To bring the route in line with the Essential and Important European Certification Standard criteria, the following issues need to be addressed:

1. Approximately 30-31 km of cycle path need to be constructed:
    - The first and most essential action should be the construction of an asphalted cycling path along the Danube between Veľké Kosihy and Komárno, at a length of around 19 km. This will complete a continuous, high-quality route from the Austrian border to Komárno, where it is possible to switch to the Hungarian side or take a train.
    - 6 km of a cycling path are necessary between Radvaň nad Dunajom-Žitava – Moča. It should be verified whether the cycle path should be constructed along road 63, or whether it is possible to build it closer to the river.
    - Approximately 4-5 km of cycling path are needed at the entrance to Štúrovo. It should be discussed whether the cycle path should be constructed along the main road from the crossing with road number 1509 (from Obid) to the centre of Štúrovo (connecting with the train station on the way and probably more useful for local commuters), or closer to the river (more scenic, but it is not sure how feasible it is to bypass the industrial zone located next to the river in the south-western part of the city).
    - The busy stretch next to the Gabčíkovo dam could be probably solved by building a more direct ramp for cyclists on the northern side, so they do not have to climb up to the dam on road 1421 with a 70 km/h speed limit, and extending the stretch with the 30 km/h speed limit by 250 m to cover the whole dam (currently covering one half of the dam).
2. Signposting should be improved to meet the national and EuroVelo guidelines. In most cases it is possible to follow the route anyway, but clear and consistent signposting is important also for route branding and recognisability. Horizontal markings can be a particularly good solution for sections on dikes and dams.

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3. Some form of bike service, such as a self-service bike repair station, helpline or similar facility should be installed on section 30: Cunovo-Sap.
4. The EuroVelo 6 website in Slovakia should be updated. It should at least include information on the route (including a detailed map), signing, accommodation and public transport connections.

Further improvements of the route, especially bringing it in line with the Additional European Certification Standard criteria, might depend on the level of aspirations of the route operator. If the Slovakian part of the route is to be communicated as suitable without restrictions to all user groups, the following issues need to be addressed:

- 12 dangerous crossings;
- 11 km of moderately rideable surface (in addition to the sections mentioned above);
- 17 km of the route with insufficient width for comfortable bidirectional traffic of bicycles with trailers etc. (partially overlapping with moderately rideable surface);
- Three chicanes or similar obstacles difficult to navigate with tandems, trailers etc.
- Certification for cycle-friendly accommodation on each section
- Rest areas with roofs, toilets and drinking water to provide a comfortable stopping possibility every 15 km on sections 30 and 32.
- E-bike charging stations on each of the daily sections.
- On sections 30 and 32, food should be available every 15 km.

The completion of the Freedom Cycling Bridge between Schloßhof and Devínska Nová Ves has created an excellent opportunity to extent the northern variant of the EuroVelo 6 route by another section, from Hainburg an der Donau to Bratislava. This is potentially a highly attractive section (e.g. Devínsky Hrad). However, this part was not surveyed as a part of the contract, so the exact range of necessary actions is not known.

In daily section 31, between Medveďov and Veľké Kosihy the official route leaves the dam and follows a public road with approximately 1,700 vehicles/day. It seems that at least between Medveďov and Čičov, shifting the route to an existing cycle path on the dam itself would make the route safer (car-free) and more attractive (Čičovské mŕtve rameno nature reserve). Continuation from Čičov towards Komárno would require constructing another 10 km of cycling path (currently badly rideable gravel).

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One of the barriers that need to be adapted to meet the Additional European Certification Standard criteria.

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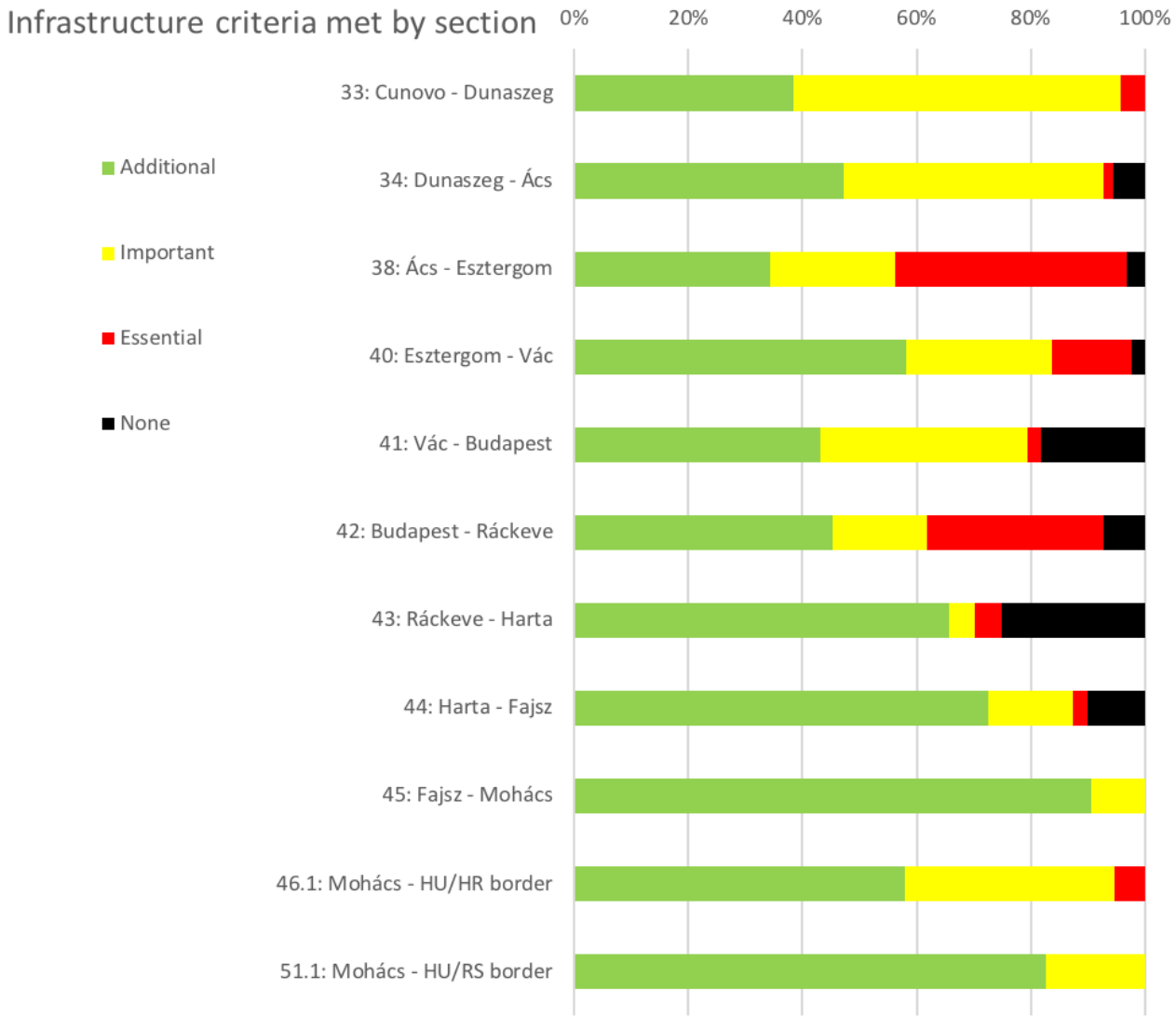
5.5 Hungary

5.5.1 Infrastructure



This table shows the shares of Hungary's 11 sections that meet or do not meet the essential, important and additional criteria of the European Certification Standard. For instance, section 43 meets the essential criteria on 75% of its length, while 70% meet the essential and the important criteria and still 66% meet all the criteria, i.e. the essential, important and additional criteria combined.

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Black-coloured parts of a section show which share does not meet any of the criteria, illustrating which sections do not fulfil the minimum requirements (100% of the essential criteria must be met). In this case, the section does not meet the essential criteria on 25% of its length.

The following table shows which shares of the route fall in which traffic category, depending on the different levels of traffic volume and speed. The traffic categories range from traffic-free/very low (green) to very high (black):

	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
traffic free & cycle paths	47.9%			
1-500 units/day	6.9%	3.2%	2.4%	
501-2 000 units/day	4.0%	9.5%	9.7%	0.6%
2 001-4 000 units/day		1.6%	2.6%	
4 001-10 000 units/day	0.2%	4.2%	6.5%	
>10 000 units/day		0.8%		

= traffic-free / very low traffic = low traffic = moderate traffic = high traffic = very high

Nearly half of the route is already composed of segregated cycle paths, greenways, or similar traffic-free route segments. However, there is still a 10% share of the route that features high or very high traffic, which should be targeted by action planning.

The following table combines the different traffic categories and surface qualities:

	perfectly rideable	well rideable	moderately rideable	badly or not rideable
traffic free & cycle paths	15,8%	5,0%	1,0%	5,7%
very low traffic	28,5%	5,3%	2,4%	0,6%
low traffic	16,2%	2,4%	0,6%	
moderate traffic	4,4%	0,2%	0,4%	
high traffic	10,3%	0,4%		
very high traffic	0,8%			

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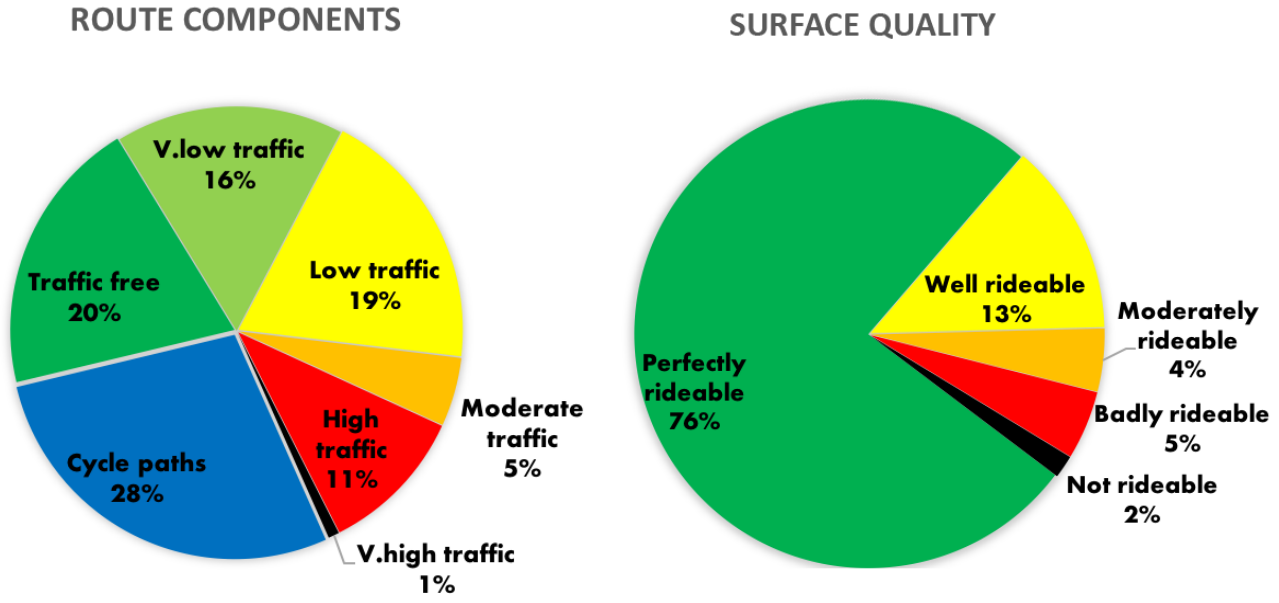

Most of the route (76%) consists of perfectly rideable stretches, while another 13% are well rideable. However, there is also 7% share of the route that was assessed as badly rideable or not rideable at all and a further 4% that is moderately rideable.

High-quality cycle path, but the maintenance could be improved to prevent the edges from being overgrown.

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Section 41 – approaching Budapest.

Section 45 near Mohacs – good example of long-distance route branding.

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Bicycle-friendly services in Komárom.

Public Transport

In **Hungary**, bicycles can be transported on almost all trains. The Hungarian railroad network is quite extensive and regional trains also reach many very small villages. Bicycles can be transported by train within Hungary for a small surcharge on routes marked by a bicycle icon on the timetable. Bicycle places are limited, and **different rules** apply to the **different trains**. Group bicycle transport (at least six bikes) should be planned and reserved at least seven days in advance. Only small bikes can be transported without an additional ticket. The **fares** also depend on the distance.

There are also several ferries available along the route (Szob, Vac). The timetables are only available in Hungarian **(http://www.vacikomp.hu/)**. The last ferry leaves early (8 pm), and the ferry at Szob does not operate in winter (it does not operate from 15 October onwards, see **http://www.ipolytours.hu/komp.php**).

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5.5.2 Services

Based on the survey data, the following services exist along the route:

Daily section	Accommodation					Food/ rest areas			Bike services		
	luxury	standard	budget	camping	cyclist-friendly	food on daily section	food/rest every 15 km	repair shops	self-service	spare parts	e-bike charging
33	0	3	6	4	0	10	Yes	3	0	0	0
34	0	4	3	1	0	19	No	3	0	2	0
38	0	4	11	5	1	26	Yes	4	1	2	0
40	1	3	8	4	0	17	Yes	4	0	3	0
41	3	11	9	2	0	22	Yes	8	0	8	0
42	1	2	9	1	0	14	No	3	0	1	0
43	0	2	3	1	0	9	No	1	0	0	0
44	0	1	1	1	0	9	Yes	**0**	**0**	**0**	0
45	0	1	3	1	0	7	No	1	0	1	0
46.1	0	0	1	0	0	3	Yes	1	0	1	0
51.1	0	0	1	0	0	3	Yes	1	0	0	0

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

The table above shows weaknesses along the route regarding the provision of services. Of particular note, there is a lack of bike repair services on section 44. Moreover, food or rest areas are not always available every 15 km (additional criterion).

5.5.3 Marketing / Promotion

There is no website promoting EuroVelo 6 in Hungary.

The French EuroVelo 6 website has a page on the **stretch between Budapest and Belgrade**. Moreover, there is a website dedicated to the **stretch between Vienna and Budapest**, including cycle tour offers. Visit-hungary.com offers some **general information** about cycling in Hungary.

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The printed material includes the "**Cycling around Hungary**" atlas/map, with a short guide, in German, English and Hungarian. It includes EuroVelo 6.

Existing promotional tools

Category	Promotional tool		Criteria met?	Comments
Web	National/ regional website, including information on:	Information on the route, including a detailed map	**No**	
		Info on signing	**No**	
		Info on accommodation	**No**	
		Info on PT connections	**No**	Some info on how to get to Budapest and Belgrade.
		Interactive maps	No	
		POIs	No	
		Accommodation online databases	No	
		PT timetables	No	
		GPS track downloads	No	
	Overview info about the route on eurovelo.com		Yes	
Print	Guidebook		Yes	Esterbauer and Huber cover Hungary as well
	Detailed printed map		Yes	
Other	Information boards / centres on every daily section		Yes	

■ = Doesn't meet essential criteria ■ = Doesn't meet important criteria

The following tourist information centres and panels exist, based on the route survey:

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Tourist information centres / panels per section*

Daily section	info center	info panel
33	0	7
34	0	3
38	0	3
40	1	3
41	0	4
42	1	2
43	0	4
44	0	2
45	0	5
46.1	1	4
51.1	0	1

*Based on the route survey.

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

5.5.4 Critical deficiencies

- Out of the route's 505 km in Hungary, 58 km (11%) lead over roads with very high or high traffic:
  - Nearly one half (26 km) of these exist in section 38: Ács-Esztergom; another 5 km in the same section have been classified as featuring moderate traffic.
  - The highest volumes of traffic were counted in sections 40: Esztergom-Vác and 41: Vác-Budapest (before Szentendre: 11,000-19,000 vehicles/day with no cycling infrastructure).
  - Another 13 km featuring public roads with high traffic were identified in section 42: Budapest-Ráckeve.
  - In other daily sections, there were between 0 and 3 km of public roads with high traffic.
- 24 km (5%) have been classified as badly rideable and another 8 km (2%) as not rideable at all:

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  - Most of the badly rideable paths (16 km) in section 43: Ráckeve-Harta;
  - Not rideable stretches have been identified in sections 34: Dunaszeg-Ács, 38: Ács-Esztergom, 41: Vác-Budapest and 42: Budapest-Ráckeve.
- On section 42, between km 17-19 in Szigetszentmiklós, the route leads over several one-way streets with no contraflow cycling. As different sources give different itineraries in this location and some direction change signs appeared to be missing during the field survey, it is difficult to determine the route's legal continuity. Signage should be reviewed and missing signs (direction changes, and, if necessary, also exceptions for contraflow cycling) added.
- No significant cultural or natural attractions were identified in daily section 44: Harta-Fajsz.
- 65 junctions with missing or confusing signs have been identified along the route.
- On section 44: Harta - Fajsz, there is no bike repair workshop, self-service station or spare-parts shop available.
- There is no national website dedicated to promoting EuroVelo 6 in Hungary.

Badly rideable surface in section 34.

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Route on public road with heavy traffic in section 41.

5.5.5 Proposed actions

To bring the route in line with the Essential and Important European Certification Standard criteria, the following issues need to be addressed:

1. Approximately 90 km of cycle path need to be constructed. This is only a preliminary estimate, as in some locations…:
   a) A cycle path does not necessarily have to be constructed directly along the main road but could be located closer to the river. This would create a route that is more attractive, provides more opportunities to enjoy nature and less exposure to noise from motorised traffic. This means that the total length of cycle path to be built can differ. It could be longer or shorter, depending on the section.

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b) On up to 16 km of the route, the traffic category can be improved by lowering the speed limit (roads with 4,000-10,000 vehicles per day and speed limit of 40-50 km/h). However, it should be carefully considered whether the new limit would be respected by the drivers and feasible to enforce.
c) The length of required new cycle paths could be significantly reduced (from 90 to 56 km) in case of co-ordinated developments with Slovakian partners. If the Slovakian partners developed the route between Cunovo and Esztergom on the northern bank, the Hungarian partners could focus on short- and medium-term actions on the sections downstream, from Esztergom onwards.
d) As an alternative route to avoid heavy traffic on about six kilometres before the bridge to Szob on daily section 40, cyclists could also stay on the Slovakian side from Sturovo (Esztergom) and take a low-traffic public road up to Szob. However, this stretch was not surveyed as part of the contract.
e) Similarly, the heavy traffic on daily section 41: Vác-Budapest (before Szentendre) could be avoided by taking the route on the eastern bank of the river between Vac and the bridge behind Dunakeszi or by staying on the eastern bank of the small Danube branch at Tahitótfalu and then take a ferry to the other side behind Szentendre. Both stretches have potentially a high quality, but they were not surveyed as part of the contract.

2. Missing signs should be added, especially on daily sections 31-32, 38, 41-43.
3. On section 42, between km 17-19 close to Szigetszentmiklós, where a part of the official route leads along a one-way street in the wrong direction, contraflow cycling signs should be installed.
4. A repair shop, self-service bike repair station, helpline or similar facilities should be installed on the daily section 44: Harta-Fajsz.
5. A website dedicated to promoting EuroVelo 6 in Hungary should be developed. See the **ECS**, page 13, for details of what it should include.

Further improvements of the route, especially bringing it in line with the Additional European Certification Standard criteria, might depend on the level of aspirations of the route operator. If this part of the route is to be communicated as suitable without restrictions to all user groups, the following issues would need to be addressed:

- three dangerous crossings;
- 25 km of the route on roads with moderate traffic;
- 22 km of moderately rideable surface (in addition to the sections mentioned above);

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- 105 km of the route with insufficient width for comfortable bidirectional traffic of bicycles with trailers etc. (partially overlapping with moderately rideable surface);
- 10 chicanes or similar obstacles difficult to navigate by tandems, trailgators etc.
- Certification system for cycle-friendly accommodation;
- More rest areas with roofs, toilets and drinking water to provide a comfortable stopping possibility every 15 km on four sections;
- E-bike charging stations.

A perfect location for a cycle path – section 43 north of Dunavecse.

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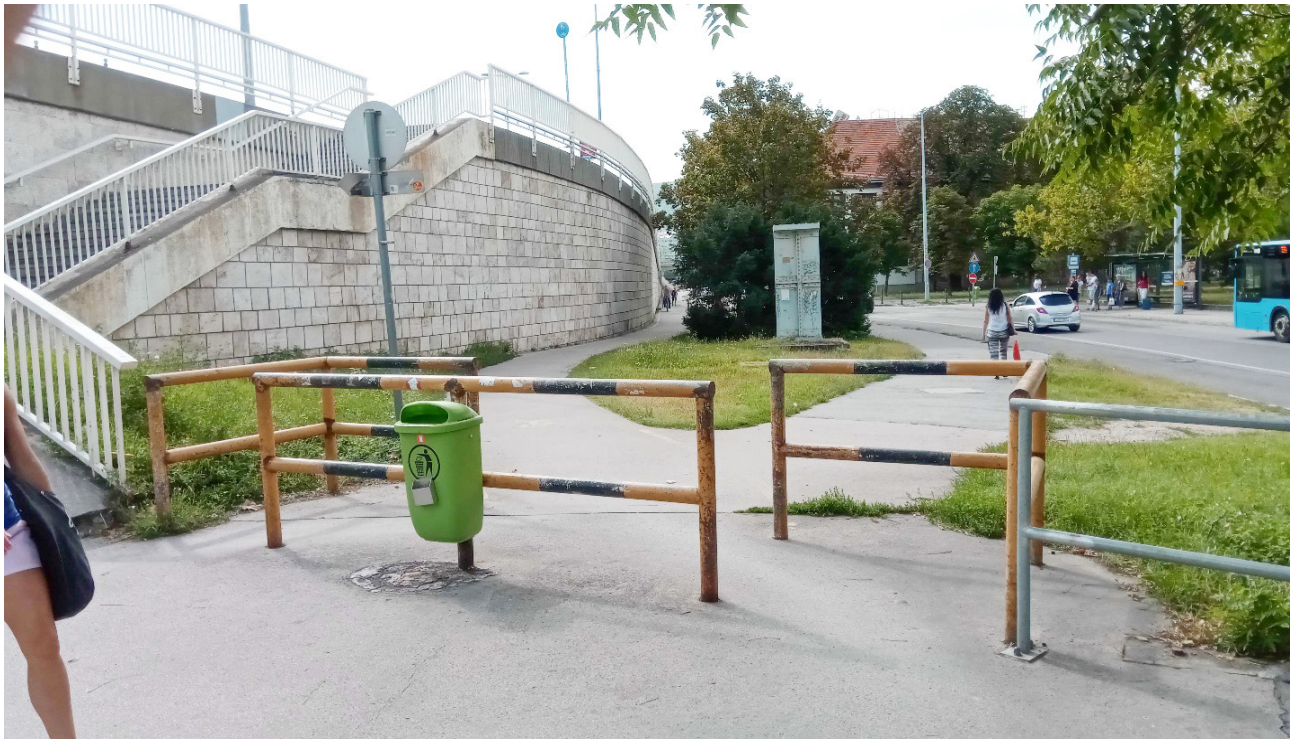

Example of a chicane that is difficult to pass with a tandem or trailer.

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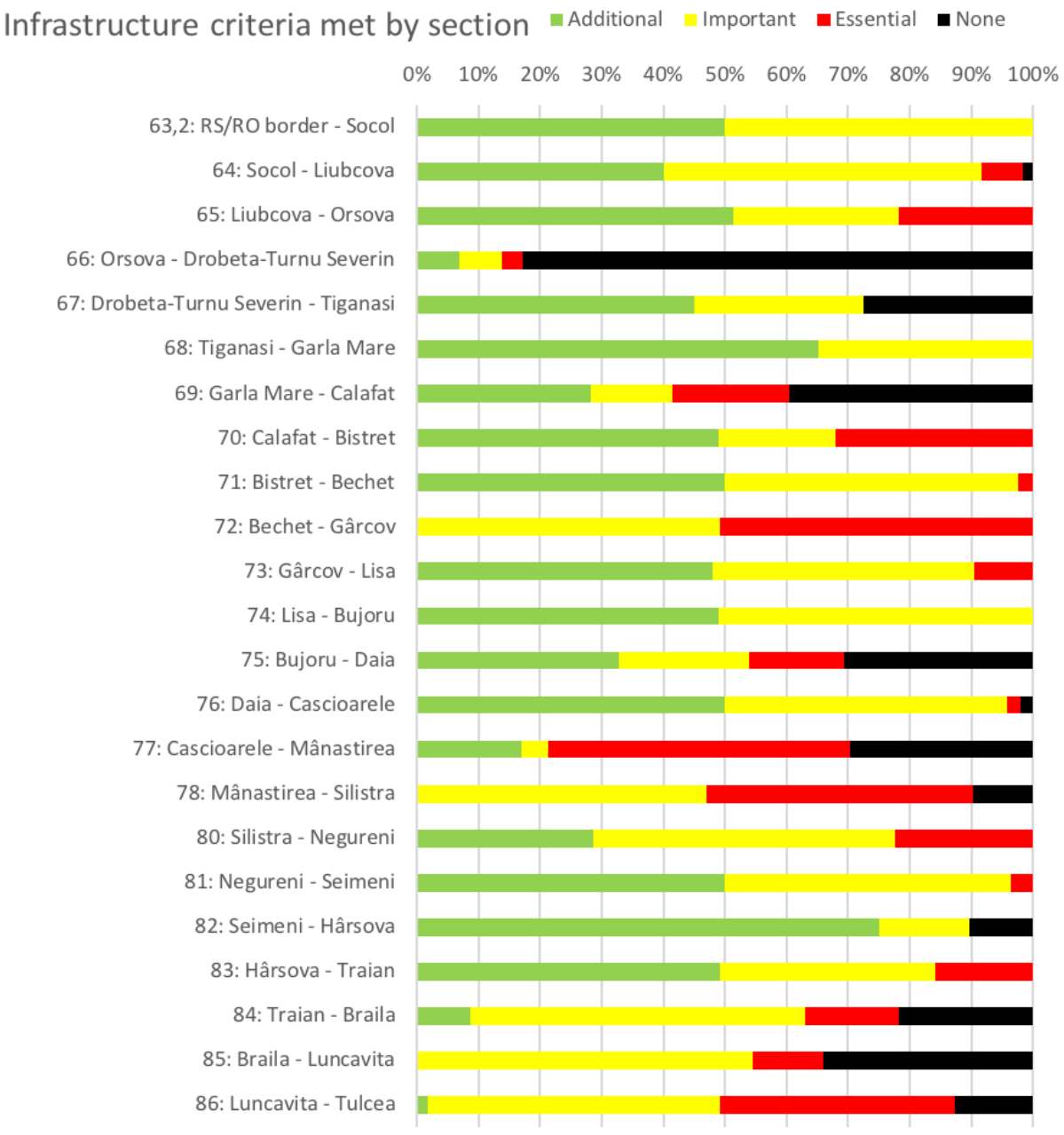
5.6 Romania

There has been little cycling infrastructure so far in Romania. The country has high potential to raise cycle tourism along EuroVelo 6.

5.6.1 Infrastructure



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This table shows the shares of the 23 sections in Romania that meet or do not meet the essential, important and additional criteria of the European Certification Standard with respect to route infrastructure (continuity, route components, surface). For instance, on daily section 86, 87% of the section's distance meet the essential criteria, while 49% meet the essential and the important criteria and only 2% meet all the criteria, i.e. the essential, important and additional criteria combined. Black-coloured parts of a section show which share does not meet any of the criteria, illustrating which sections do not fulfil the minimum requirements (100% of the essential criteria must be met). In this case, the section does not meet the essential criteria on 13% of its length.

The following table shows which shares of the route fall in which traffic category, depending on the different levels of traffic volume and speed. The traffic categories range from traffic-free/very low (green) to very high (black):

	30 km/h or lower	31 to 50 km/h	51 to 79 km/h	80 km/h or over
traffic free	2.30%			
1-500 units/day	0.0%	0.7%	3.2%	0.0%
501-2 000 units/day	0.0%	9.6%	34.7%	0.0%
2 001-4 000 units/day	0.0%	8.1%	16.0%	0.3%
4 001-10 000 units/day	0.1%	6.5%	8.3%	1.9%
>10 000 units/day	0.0%	2.9%	4.1%	1.1%

= traffic-free / very low traffic = low traffic = moderate traffic = high traffic = very high

The following table combines the different traffic categories and surface qualities:

	perfectly rideable	well rideable	moderately rideable	badly or not rideable
cycle paths	0.4%	1.0%	0.6%	0.3%
very low traffic	2.6%	0.8%	0.5%	
low traffic	37.9%	5.4%	1.1%	
moderate traffic	22.0%	2.1%	0.2%	
high traffic	13.3%	1.7%		0.1%
very high traffic	9.4%	0.7%		

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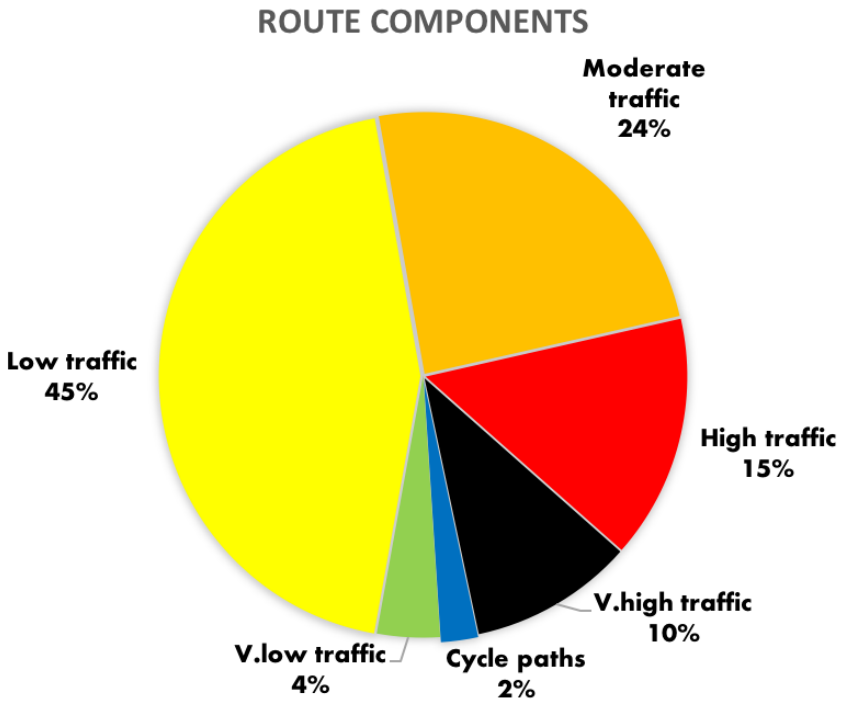
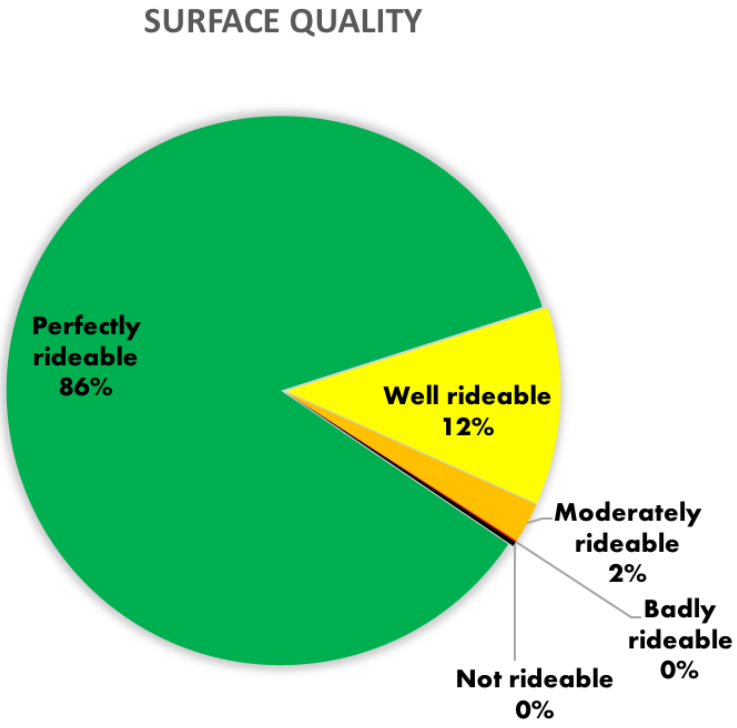


The table above shows that only 2% of the route run on segregated cycle paths, with no other traffic-free route segments. 25% of the route feature high or very high traffic, which is important for action planning.



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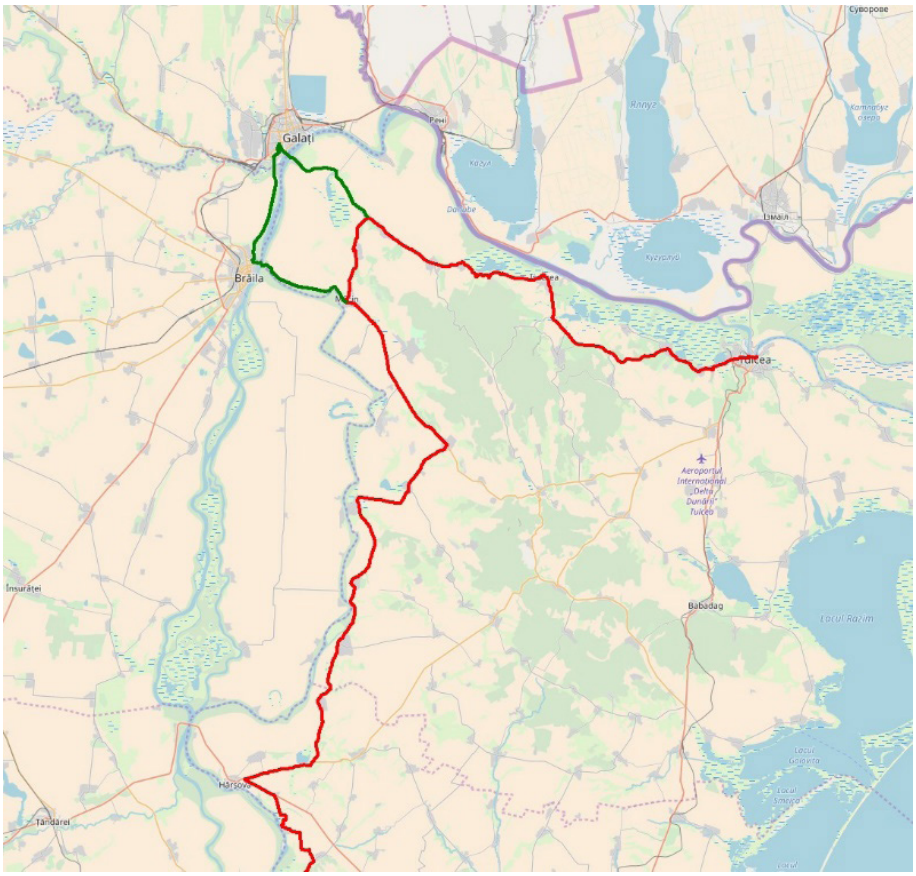
The large majority of the route in Romania (86%) consists of perfectly rideable stretches, while another 12% are well rideable. The table shows that surface quality is not an issue, but most of these roads are made for motorised vehicles without cycling infrastructure.

Itinerary

The ECF suggests to adapt the route itinerary between daily sections 84: Traian-Brăila, km 31 (Măcin), and section 85: Brăila-Luncavita, km 33 (Garvăn), to include the town of Brăila. The town is a major highlight on the 300-400 km before reaching Tulcea and the delta. It comprises beautiful architecture and also offers two nice ferry rides (to enter Brăila and to exit Galati). Moreover, cyclists will benefit from the services offered in the cities. The length of the route rises by about 30 km to include the town.



Red line: Previous EuroVelo 6 route; green line: suggested route to include Brăila

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Public Transport

In **Romania**, bikes are allowed on Regio and InterRegio trains. Cyclists have to buy a bike ticket. The trains service every town and city. The Romanian rail network is the fourth-largest in Europe and very dense.

Highly attractive part of the route through the Iron Gates gorge (daily section 65).

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Orsova – one of the few locations with a dedicated cycle path.

Cycle path in Călăraşi (the one on daily section 72, not the Călărași on section 78) was completely unusable and therefore not taken into account during the evaluation.

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Daily section 78: ferry Călărași-Silistra.

Daily section 81: long sections of the route comprise pleasant roads with low traffic.

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5.6.2 Services

Based on the survey data, the following services exist along the route:

Daily section	Accommodation					Food/ rest areas			Bike services		
	luxury	standard	budget	camping	cyclist-friendly	food on daily section	food/rest every 15 km	repair shops	self-service	spare parts	e-bike charging
63.2	0	0	0	0	0	1	No	0	0	0	0
64	0	3	12	1	0	18	Yes	0	0	0	0
65	0	8	22	3	0	21	No	0	0	0	0
66	1	3	3	0	0	11	Yes	0	0	0	0
67	0	0	4	0	0	10	Yes	0	0	0	0
68	0	0	0	0	0	6	No	0	0	0	0
69	0	2	3	0	0	19	Yes	0	0	0	0
70	0	0	0	0	0	17	No	0	0	0	0
71	0	1	0	0	0	16	Yes	0	0	0	0
72	0	1	2	0	0	22	Yes	0	0	0	0
73	0	1	3	0	0	13	No	0	0	0	0
74	0	2	1	1	0	17	Yes	0	0	0	1
75	0	3	2	0	1	23	Yes	1	0	1	0
76	1	0	1	0	0	11	Yes	0	0	0	0
77	0	1	1	0	0	18	No	0	0	0	0
78	0	3	3	1	0	24	Yes	0	0	2	0
80	0	2	2	0	0	6	No	0	0	0	0
81	0	3	3	0	0	11	Yes	0	0	0	0
82	0	0	2	0	0	6	No	0	0	0	0
83	0	0	0	0	0	5	No	0	0	0	0
84	2	3	3	0	0	8	Yes	2	0	1	0
85	1	3	3	0	0	13	No	3	0	1	0
86	2	3	8	0	0	16	No	0	0	0	0

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

The table above shows a shortage of services along the route. Accommodation or bike repair services could not be identified on several sections.

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5.6.3 Marketing / Promotion

There is no official national website promoting EuroVelo 6 in Romania.

Existing promotional tools

Category	Promotional tool		Criteria met?	Comments
Web	National/ regional website, including information on:	Information on the route, including a detailed map	**No**	
		Info on signing	**No**	
		Info on accommodation	**No**	
		Info on PT connections	**No**	
		Interactive maps	No	
		POIs	No	
		Accommodation online databases	No	
		PT timetables	No	
		GPS track downloads	No	
	Overview info about the route on eurovelo.com		Yes	
Print	Guidebook		Yes	Esterbauer and Huber cover Romania as well
	Detailed printed map		**No**	
Other	Information boards / centres on every daily section		No	

■ = Doesn't meet essential criteria ■ = Doesn't meet important criteria

The following tourist information centres and panels exist, based on the route survey:

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Tourist information centres / panels per section*

Daily section	info center	info panel
63.2	0	0
64	2	0
65	2	0
66	0	1
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	1
73	0	0
74	0	0
75	1	0
76	0	0
77	0	0
78	0	0
80	0	0
81	1	1
82	0	0
83	0	0
84	1	0
85	0	0
86	0	2

*Based on the route survey.

= Doesn't meet essential criteria = Doesn't meet important criteria = Doesn't meet additional criteria

5.6.4 Critical deficiencies

- Out of the route's 1,134 km in Romania, 286 km (25%) lead over roads with very high or high traffic. The longest stretches have been identified in these sections:
  - 25 km in section 66: Orsova - Drobeta-Turnu Severin;
  - 31 km in section 69: Garla Mare - Calafat;

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  - 24 km in section 75: Bujoru - Daia;
  - 37 km in section 77: Cascioarele - Mânastirea;
  - 26 km in section 78: Mânastirea - Silistra;
  - 28 km in section 86: Luncavita - Tulcea.
- Furthermore, in four daily sections, the length of the route on roads with moderate traffic exceeds 50%. This means that another 132 km (12%) need to be addressed in the following sections:
  - 55 km – whole section 72: Bechet-Gârcov;[2]
  - 35 km in section 80: Silistra-Negureni;
  - 39 km in section 84: Traian-Braila;
  - 41 km in section 85: Braila-Luncavita.
- In four locations, short stretches (between 200 m and 1 km each) of the surface quality were assessed as non-rideable or badly rideable.
- In daily section 73, a section of the route has "entry forbidden" signs with exception for local inhabitants, but not cyclists.
- The route is not signed, neither according to national nor EuroVelo standards. Furthermore, there seems to be no legal framework for signposting cycling routes on public roads.
- In three daily sections, basic or standard accommodation could not be identified (not counting the border section). Moreover, in two additional sections, standard accommodation could not be identified.
- In 17 daily sections (excluding the border section), bike repair workshops, shops with spare parts or self-service stations could not be identified.
- In 14 of the 23 daily sections, tourist information centres or panels could not be identified.
- There is no official national website promoting EuroVelo 6 in Romania.

[2] The numbers per daily section in this list include also stretches with high or very high traffic in the same section, so the sum exceeds 132 km.

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Heavy traffic on the TEN-T road between Orsova - Drobeta-Turnu Severin (daily section 66).

Daily section 67, between Drobeta-Turnu Severin and Simian.

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Daily section 69: Garla Mare-Calafat.

Daily section 73 – entry forbidden, exception for residents, but not for cyclists.

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Daily section 75. Traffic on road number 5 leaving Giurgiu estimated to reach 25-30,000 vehicles/day.

5.6.5 Proposed actions

Insufficient quality of existing cycling solutions reveals the need of developing technical guidelines (standards) with basic requirements for cycling infrastructure (e.g. width, clearance, horizontal curves, alignment, solutions for crossings). This should be undertaken before commissioning any design or construction work.

To bring the route in line with the Essential and Important European Certification Standard criteria, the following issues need to be addressed:

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1. 422 km of the route infrastructure needs to be improved. As an initial appraisal, this can be estimated as the construction of 422 km of cycle paths. However:
    - In many locations, a cycle path should be constructed not directly along the main road, but closer to the river. This would create a route that is more attractive, gives more opportunities to enjoy nature and provides less exposure to noise from motorised traffic. This means that the total length of the cycle path to be built can be different (either longer or shorter, depending on the section).
    - In several locations, it is worth investigating alternative itineraries on other roads. For example, between Calafat and Poiana Mare (first part of section 70), as an alternative to cycling 12 km in high traffic on the road number 55A, changing the route to roads 553A and 553 can be considered. These roads are closer to the Danube and not so busy, but also twice as long (24 km instead of 12 km), which will increase the costs of signing, maintenance and demand on services, which are also quite sparse along the route.
    - On up to 110 km of the Romanian route, the traffic category can be improved by lowering the speed limits (roads with 2000-4000 vehicles per day and speed limit above 80 km/h, roads with more than 4000 vehicles per day and a speed limit of 40-50 km/h). However, it should be carefully considered whether the new limits would be respected by the drivers and can be enforced.
2. In daily section 66 between Orsova and Drobeta-Turnu Severin, the route follows a very busy public road (part of the trans-European (TEN-T) road network) leading through quite limited space between the mountain side and the river bank. Because of the surrounding landscape, this could potentially be a very attractive section, but it would need significantly more expensive investments (e.g. construction of a cycle path that partially “hangs” over the river):
    - Ideally, this should be (have been?) integrated in the TEN-T road reconstruction project;
    - On this section there is also a railway line between the road and the river bank (on a lower level than the road). There might be enough space for a cycling path next to the railroad.
3. The whole route should be consistently signposted in line with national and EuroVelo standards. As no national standard exists, it first needs to be developed and approved by the relevant authorities.

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4. Basic and standard accommodation should be available in the three daily sections where these services are missing (68, 70 and 83), and standard accommodation should be available on two additional sections (67, 82). Moreover, the installation of self-service stations, spare-part stations or even repair shops / helplines on the 17 sections whether these services are missing would be helpful for cyclists.
5. The promotion of the route should be improved by creating a website promoting EuroVelo 6 in Romania and by installing tourist information boards along the 14 sections where this information is missing.
6. Safety and the general perception of the route could be improved by an educational campaign for the local drivers, explaining the basic principles of how to share the road safely with cyclists, with a focus on these issues:
    - Maintaining a safe distance and reducing speed when overtaking cyclists;
    - Waiting for vehicles from the opposite direction to pass before overtaking cyclists.

    A part of this campaign could include posting road signs, for instance, indicating the minimum passing distance along the route. It needs to be verified whether the matter is sufficiently regulated in the national road code.

In some parts of the route, adjustments of the itinerary not related to the current critical deficiencies could be considered. For example:

7. Between Vanatori and Viisoara (daily sections 73-74) there is already a paved shortcut that could save 7 km of loop through Lisa and Piatra.
8. A cycling and pedestrian bridge over the river Nera (and new local border crossing with Serbia) between Banatska Palanka and Socol would save 40 km of cycling on public roads and could be an attractive landmark on the northern bank (similar to the Bicycle Freedom Bridge on the border between Austria and Slovakia).

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Daily section 66: Orsova - Drobeta-Turnu Severin. To verify whether there is a possibility to construct a cycle path at a lower level, next to the railroad track. Otherwise, an extension that overhangs partially could be constructed at the carriageway level.

Cycle path attached to railroad embankment – one of the possible solutions for daily section 66. Photo from Murradweg between Tamsweg and Madling (Austria).

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In many locations, the construction of a cycle path would improve also safety of local inhabitants. Basarabi near Calafat, daily section 69.

Example (from France) of a sign for drivers indicating the minimum distance to cyclists that needs to be observed when overtaking.

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Given the large scale of investments necessary to bring the route quality in line with the European Certification Standard, it might be worth reconsidering whether the route, at its current stage of development, should be promoted as following both banks of the Danube between Stara Palanka and Silistra. It could be beneficial to:

- Discuss between Serbian, Romanian and Bulgarian partners which parts of the route are more feasible to improve on which side of the river;
- Identify one route switching sides whenever necessary (including bridges, ferries) and focus short- and medium-term actions on improving that itinerary, co-ordinating the efforts between Serbian, Romanian and Bulgarian partners;
- Make a distinction in promotional materials, e.g. showing the side more advanced as “under development” and less advanced as “in the planning stage”.

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6 Comparison of river banks

The following table presents a comparison of critical deficiencies along the route on parts where EuroVelo 6 officially covers both sides of the river. As it is not always possible or easy to cross the Danube, for each pair of rows, several subsequent daily sections have been grouped together. For example, between Passau and Linz, the route on the northern side already meets all the Essential and Important criteria of the European Certification Standard, while on the southern side, 4 km of high or very high traffic would need to be addressed.

	Daily Sections		City			Missing infrastructure					Missing services	
Side	From	To	From	To	Km	Very high traffic	High traffic	Moderate traffic >50%	Badly/not rideable surface	Total km to fix	Accommodation	Bike Services
N	14.1	15	Passau	Linz	**92**	0	0	0	0	0	0	0
S	22.1	23	Passau	Linz	**104**	**1**	3	0	0	4	0	0
N	16	17	Linz	Emmersdorf (Melk)	**108**	**5**	5	0	0	10	0	0
S	24	25	Linz	Melk	**110**	0	0	0	**2**	2	0	0
N	18	19	Emmersdorf (Melk)	Vienna	**122**	0	2	0	0	2	0	0
S	26	27	Melk	Vienna	**121**	0	1	0	0	1	0	0
N	20	20	Vienna	Hainburg an der Donau	**52**	**1**	5	0	0	6	0	0
S	28	28	Vienna	Hainburg an der Donau	**49**	0	0	0	**2**	2	0	0
N	30	32	Cunovo	Esztergom	**148**	**3**	10	0	**12**	25	0	1
S	33	38	Cunovo	Esztergom	**166**	0	29	0	0	29	0	0
S	46.1	48	Mohács	Backa Palanka	**188**	**8**	27	4	0	39	2	2
N	51.1	55	Mohács	Backa Palanka	**212**	0	8	0	**7**	15	3	5

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N	63.1	69	Stara Palanka / Bela Crvka	Calafat	**347**	**60**	32	0	0	92	4	8
S	87	92	Stara Palanka/Ram	Vidin	**306**	0	3	10	**7**	20	0	2
N	70	71	Calafat	Bechet	**95**	0	18	0	0	18	1	2
S	93	95	Vidin	Oryahovo	**133**	**11**	20	0	0	31	1	3
N	72	78	Bechet	Silistra	**350**	**20**	85	17	**1**	123	0	6
S	96	103	Oryahovo	Silistra	**394**	**26**	29	0	**2**	57	3	5

= Doesn't meet essential criteria = Doesn't meet important criteria

The comparison could serve as a starting point for a strategic discussion between project partners on the possibility of focusing the short- and medium-term efforts in development and promotion of the route on one side of the river. Please note that the total length of missing infrastructure does not have to be always proportional to the cost of necessary investments, as it does not take into account land availability, the kind of terrain, necessary bridges/tunnels and other factors that can significantly affect the unit price.

The data could also be used to communicate the difference between the left and right bank of the river to tourists.

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7 Conclusions

- The survey covered 4,636 km, significantly exceeding the length of the Danube (2,850 km), as there is often a route on both banks of the river.
- In terms of continuity, route components (road safety), surface and attractiveness, 93.3% of the surveyed route already meet the Essential requirements of the European Certification Standard.
- The recurring critical issues are high or very high traffic on busy roads. In addition, more than 50 dangerous or very dangerous crossings were identified by route inspectors.
- Only 95 km of the surveyed route do not meet the minimum quality requirements for surface.
- The route only includes four sets of stairs.
- The route comprises 384 km where the width is not sufficient.
- There were more than 450 missing or wrong signs along the route, including missing EuroVelo signs or indications of the route itinerary.
- 26 daily sections already meet all Essential and Important criteria. 71 sections need improvements in this respect.
- The critical sections with the lowest level of conformance with the European Certification Standard are daily sections number 66: Orsova - Drobeta-Turnu Severin (17% of conformance) and 69: Garla Mare – Calafat (60% of conformance), both in Romania.
- Significant investments in route infrastructure are already planned in Germany, Austria and Slovakia, partially resolving the critical problems.
- There is a good level of services all along the route, although it can be more difficult to find standard accommodation or bike services in Romania and Bulgaria.
- All the daily sections can easily be reached by train.
- There is a good amount of sometimes excellent websites, printed maps, etc. available, but EuroVelo 6 marketing can still be strengthened in Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria.

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Further information on the project and activities are available here:
http://www.interreg-danube.eu/approved-projects/transdanube-pearls