

General Information

Project	Cyclewalk
Partner organisation(s) concerned	EGTC GO (European Grouping for Territorial Cooperation of Gorizia, Nova Gorica, Sempeter Vrtojba) is legally based in Italy. The actions take place in the transnational territory of EGTC GO
Nuts 2	Italy - ITH4 Friuli-Venezia Giulia Slovenia - SI02 Western Slovenia (Zahodna Slovenija)
Authors of the Final report	Giulia Cortesi, Tomaž Konrad, Giulia Bonn, Bogdan Birnbaum, Lara Devetak



REPORT 1

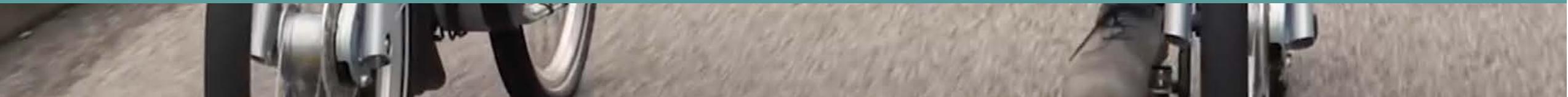
Author: Giulia Cortesi



AUDIT ON INTERMODALITY – SURVEY REPORT



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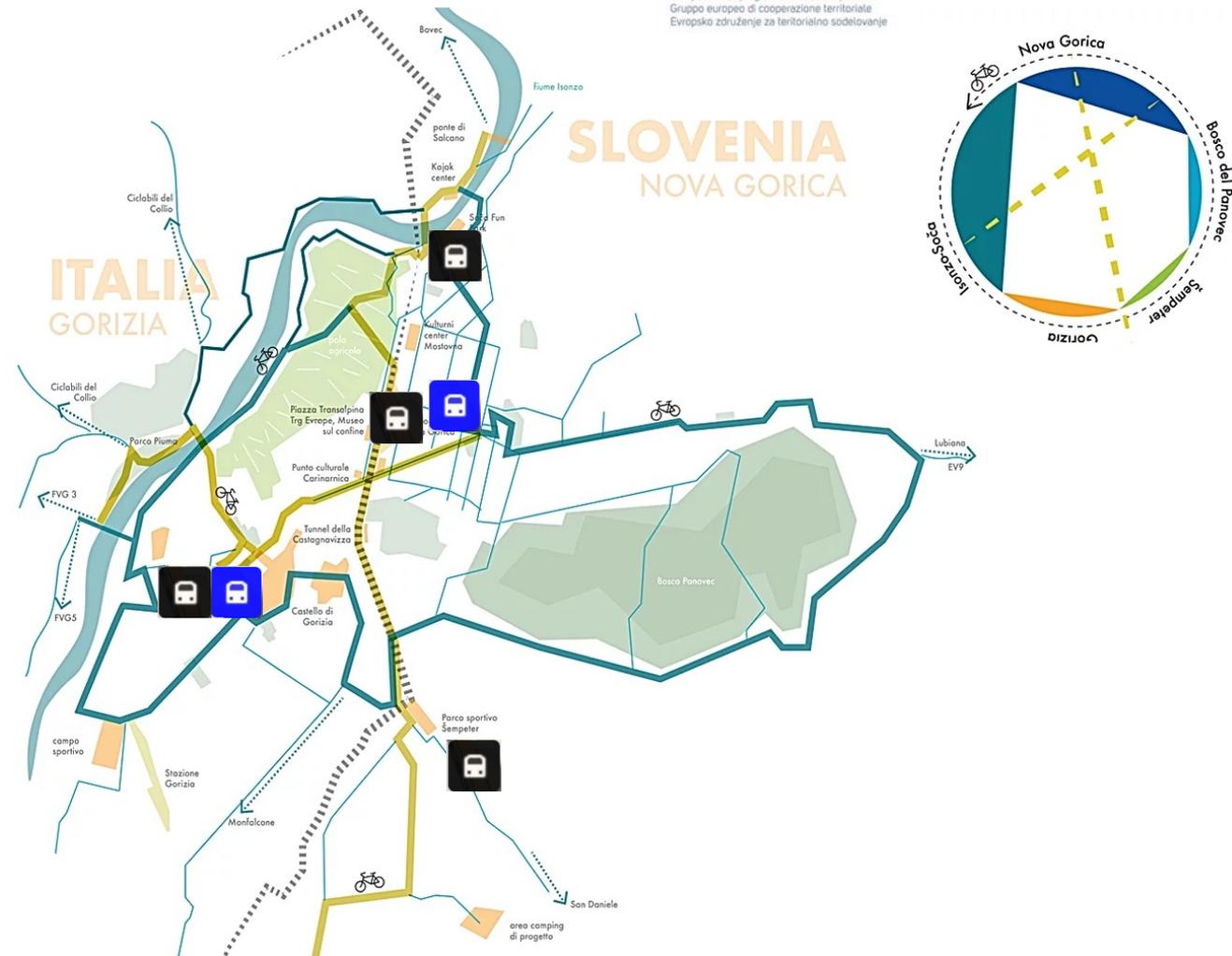
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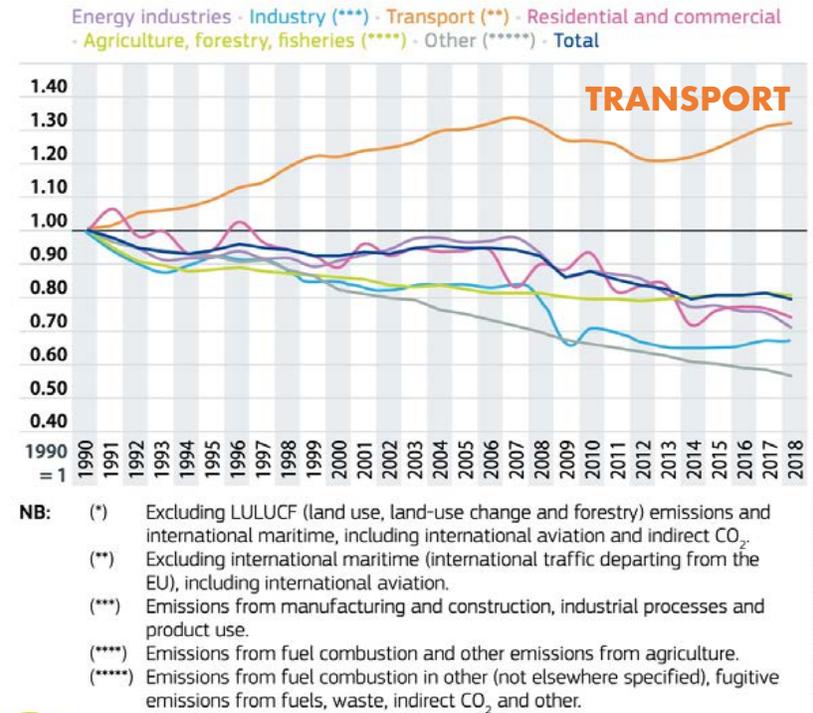


The ITI Project Isonzo-Soča cross-border cycle network and intermodality nodes

1. INTRODUCTION

“Mobility in Europe should be based on an efficient and interconnected **multimodal transport system** for passengers and freight”. “To put transport firmly on the right track we must shift the existing paradigm of incremental change to fundamental transformation”. These statements come from the *Sustainable and Smart Mobility Strategy* which is part of the European Green Deal (EGD), that is the new EU growth strategy that will cut emissions while creating jobs, and that put sustainability at the core of the economic policy. Between 1990 and 2018 EU growth was decoupled from resource consumption, as GDP grew by 61% while GHG decreased by 23%. The EGD set the target to decarbonize Europe by 2050 (net zero GHG emissions) while delivering on the UN SDGS 2030 agenda as well.

Producing 25% of total EU emissions, the transport sector, with its development characterized by technology-led incremental changes, represents a threat to reaching the EGD target because its trend is going in the opposite direction. Given the enormous effort required, the transport GHG reduction target is -90% by 2050 (vs 1990), with the remaining -10% to be compensated by natural carbon capture. Transport/mobility is one of the eight “deeply transformative policy areas” to be re-thought aiming to “accelerating the shift to sustainable and smart mobility”. And “achieving sustainable transport means putting the users first and providing them with more affordable, accessible, healthier and cleaner alternatives to their current mobility habits” (*EGD Communication*). One of the 3 pillars of the *Mobility Strategy* is to “make sustainable alternatives widely available to enable better modal choices in a **multimodal** transport system”. Effective actions in the urban nodes of the TEN-T network will be required such as “provisions for first/last mile solutions that include **multimodal** mobility hubs, park-and-ride facilities, and safe infrastructure for walking and cycling”, in order to reach a key ‘milestone’ set by the Strategy: 100 climate neutral cities by 2030.



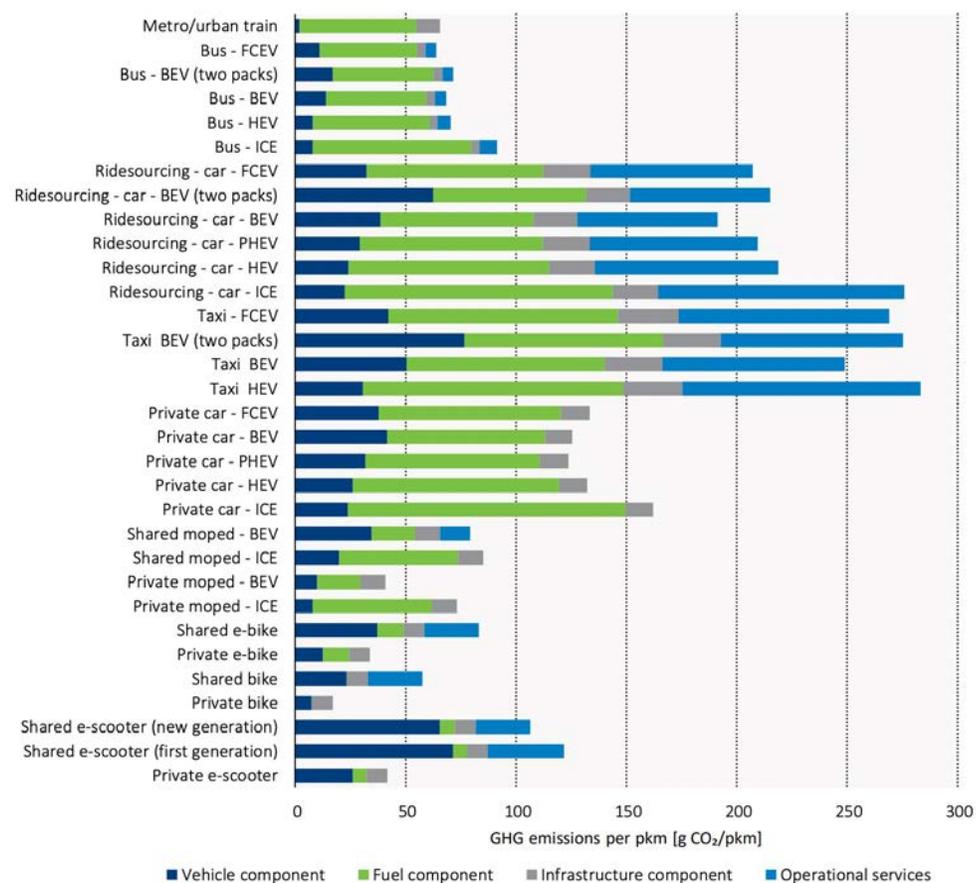
“I cannot envisage how a city can become climate neutral without putting cycling at the centre of its mobility plan” (Frans Timmermans, Eu Commission vicepresident, at Velo-city conference Lisbon, 6.9.2021).

A much greater role for active mobility (walking, cycling) in urban areas is envisioned by the new *EU Urban mobility framework* to simultaneously address many identified problems while “contributing to better public health (cancer prevention, improving mental health, addressing obesity) through greater physical activity”. The success of the entire EGD depends on our ability to make the transport system as a whole sustainable.

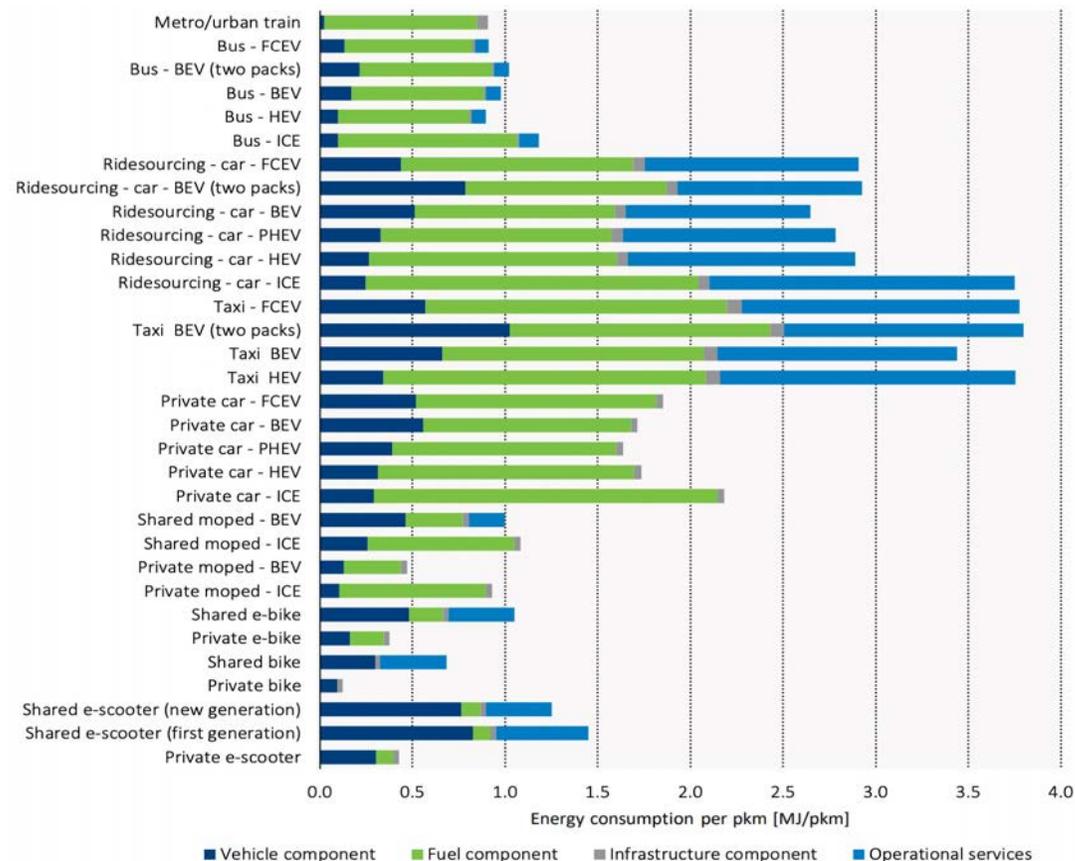
These EU policies frame the context in which the EGTCGO has delivered its action plan to start collecting data on the status of intermodality/multimodality bike+public transport and on the current use of cycling to support evidence-based decision

making about policy measures to win the shift to active mobility (cycling and walking) for the sustainable development of the cross-border FUA (functional urban area) via the construction of the cross-border cycle network of the Isonzo-Soča park.

Choosing to build this park to deliver a pillar of its strategic plan for territorial and community development, the EGTCGO acknowledged the transformative role of mobility as enabler of the economic and social life (commuting to work or study, visiting family and friends, tourism), of European cohesion and identity, borderless.

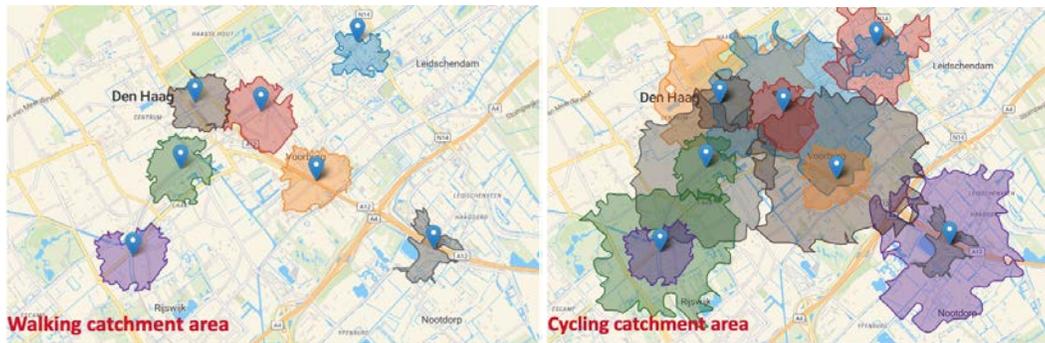


There should be few doubts about cycling, especially with private bikes, and public transport (trains and buses), and their combination for longer distances, as being the priority solution for utilitarian and leisure/tourism mobility over battery e-cars, for reasons of both green-house gas emissions (GHG) and energy efficiency as shown by the ITF-OECD Report *Good to go?* (2020), that applied a life-cycle assessment analysis to compare different mobility alternatives.



Notes: BEV = battery electric vehicle; HEV = hybrid electric vehicle; ICE = internal combustion engine; FCEV = fuel cell electric vehicle; PHEV = plug-in hybrid electric vehicle. These estimates have been developed using key inputs (such as average number of passengers, the electricity mix and the ratio of operational km per active km) defined by global averages (see Annex A for further details and source used) observed prior to the Covid-19 pandemic. Specific circumstances occurring in different world regions, changes in operational practices and the Covid-19 pandemic should therefore be modelled as individual specific cases, modifying input data accordingly. Sensitivity results are presented in the following sections of this report.

To promote and to add value to the cycling infrastructures of the EGTCGO area, existing and under construction, with the goal of winning a modal shift from car use to sustainable and efficient mobility (walking, cycling, public transport) for tourism and leisure on one side, and for utilitarian mobility on the other side, it is best practice to smoothly integrate cycling with collective public transport. The transport catchment area, that is the number of potential users, is much wider when the transport nodes can be easily accessed by bicycle, as much longer is the distance covered by cycling than by walking within the same time.



Therefore, measures to improve sustainable multimodality/intermodality complement the ITI policy tool, more specifically the second part of the ITI governance document *Strategic plan for the promotion of the Isonzo-Soča cross-border natural park*.

A first step to define a strategic set of measures is an audit of intermodality, to gain knowledge on the starting point. The following pages present the results of the audit and outline suggested actions to complement the ITI project.

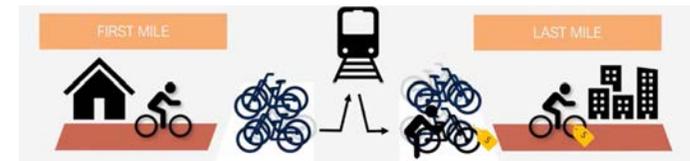
Combining cycling and public transport (PT) can be obtained in two ways, that are complementary and should be integrated in a wider approach to intermodality/multimodality.

a) Allowing the **carriage of 'complete' bicycles** of travellers on transport vehicles.



All European new and refurbished trains will be soon required to allow carrying at least 4 bikes (non-dismounted or non-foldable)*. The carriage of bicycles on trains can rarely be offered to a significant share of travellers (over 100) under special circumstances, especially where the railway is parallel to popular cyclist routes in areas where cycle tourists - who prefer cycling on their own bikes – are a target of the rail operators. The capacity of trains or buses to carry bicycles depends on the context and on the operators' business strategy.

b) Providing the possibility to comfortably reach PT stations and stops by bike and to depart from stations or stops by bike. This is often called the Dutch approach.



Any station can be complemented with a **parking** for bikes and with **public bikes**. Where cycling is a common mobility mode (for instance in the Netherlands), this way is prioritized and the carriage of bikes on trains is not encouraged or even not available at peak times.

The combination of both ways can be a perfect match for EGTCGO area, to meet the leisure and mobility needs of tourists, excursionists and locals, accompanying the development of the cross-border cycle network of the ITI project Isonzo-Soča. An audit to know the current status of the two ways was therefore conducted.

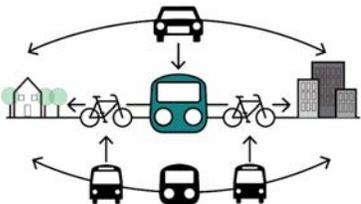
*Proposal for a Regulation of the European Parliament and of the Council on rail passengers' rights and obligations (recast), Outcome of Proceedings, 21.10.2020. This proposal followed three years of negotiations among the Eu Commission, the Eu Parliament, the Eu Council.

1.1. AUDIT METHODOLOGY

The methodology adopted in this audit is a combination of the so called Dutch approach offered by the guidelines released in 2017 by the European project BiTiBi (Bike Train Bike, a best practice promoted by the Cyclewalk project) with the bike and train intermodality guidelines by the European Cyclists' Federation (ECF 2016, 2021), both considered within the wider integrated mobility framework of 'Fusion Mobility' (*). The Quality criterion 1.3 ("Connect your walking and cycling network to public transport nodes") defined by the CYCLEWALK project itself will be applied as a start point analysis.

The audit involved the following players beyond EGTCGO staff:

- the railway operators (managing the service and the stations): Gruppo Ferrovie dello Stato; Slovenske železnice
- the bus service operators in Italy and Slovenia whose lines are serving Gorizia or Nova Gorica: APT Grado; Nomago
- the public authorities in charge of public transport planning and funding: Regione Friuli Venezia Giulia; Slovenian Ministry of infrastructures; the Municipality of Gorizia; the Municipality of Nova Gorica (MONG)
- The regional tourism agency Promoturismo FVG (its local branch in Gorizia)
- local stakeholders, as the representatives of local associations who are members of three committees of EGTCGO (Transport, Urban planning, Culture).



The BiTiBi methodology is conceived to provide a seamless door-to-door bike-train-bike transport connection, or also combinations where the bicycle is used only at one end of the trip, aiming to replace single car trips.

The BiTiBi approach is structured along six building blocks:

1. Existence of safe, sheltered and convenient bike parking at train stations
2. Availability of convenient public bikes
3. Unity of bike-train organizations
4. Integrated payment system/fare integration
5. Positive communication and marketing about bike-train combination
6. Existence of safe and secure routes to reach the stations.

The ECF methodology identified a list of required conditions in seven areas:

1. Information (online, inside the stations, on the rolling stocks)
2. Price of the bicycle tickets
3. Ticket reservation schemes and sales channels
4. Accessibility of the stations
5. Bicycle carriage
6. Bicycle parking at railway stations
7. Bike-sharing systems operated by railways companies

The present audit combines all BiTiBi building blocks and all conditions identified by ECF, merging the analysis about the same topics. The structure of the audit is divided into four chapters, including sets of suggested actions:

1. Carriage of bicycles on public transport and accessing PT vehicles;
2. Bicycle parking at railway stations and bus stations;
3. Public bikes at public transport nodes and beyond
4. Possible targets and suggested strategy for intermodality
5. Intermodality in EGTCGO as a step into the wider perspective of integrated mobility

Indicators of the CycleWalk project Quality Criterion 1.3 “Connect your walking and cycling network to public transport nodes”

Cyclewalk Quality indicator	Gorizia rail station and bus station	Nova Gorica rail station	Nova Gorica bus station	Sempeter pri Gorici rail station	Solkan rail station
a) All public transport nodes and stations are well-served with ample, safe, and easy to use walking and cycling facilities (such as bike parking racks) and amenities (such as furniture)					
b) Basic facilities for cycling and walking are often met and there is a plan for improvements and expansion.	Limited number of basic racks for bikes (not possible to fasten the frame, not protected from rain). Currently the racks are usually full and many other bikes are parked everywhere. There is also a bike sharing GoriziaInBici station, well positioned.	Good quality parking for bikes: staple shape racks to fasten the frame, mostly roofed, well video controlled; amenities such as self-repair tools are available, including a pump to inflate the tyres. No bike sharing stations.	Just one very basic rack (not possible to fasten the frame, not protected from rain). There is also a bike sharing station GO2GO at a distance of 270 m.	No bike racks . (There is a bike sharing GO2GO station at a main bus stop in the centre, <u>away from the rail station</u>).	No bike racks . There is a bike sharing GO2GO station, at the road side.
c) Basic facilities are often not available					

The EGTCGO area seems now to be positioned at b) level and heading towards an integrated development of the cross-border region thanks to the existing and new plans for improvement and expansion in order to reach level a) in the coming years, ideally by 2025.

2. CARRIAGE OF BICYCLES ON PUBLIC TRANSPORT

Though not planned in the Action Plan, also an audit of the operators of public transport and on their service about the carriage of 'complete' bicycles (non-dismounted, non-folding) on trains and buses in the EGTCGO territory was conducted to check status and conditions. The carriage of dismounted bikes in a bag or folded bikes is not considered here as a bicycle carriage service (allowed as any other luggage) because the lack of carriage of entire bikes reduces significantly the number of users.

The survey about the carriage of bike was focused on its transport as accompanied luggage of the travellers. It is also possible for travellers to send a bike packed in a rigid bag as a parcel (for instance Trenitalia offers this opportunity for the station of Trieste Centrale via its partner company Zippy), but again – as for dismounted bikes accompanying the traveller – this offer is of interest of a very small share of cycle tourists. A summary table presents the points analyzed and suggested actions (some of which to ask for at regional or even national level as they affect EGTCGO).

2.1 THE STATUS OF THE SERVICE

All **Italian trains** serving the station of Gorizia Centrale are operated by **Trenitalia** and allow carrying a bike, with different capacity depending on the rolling stock, varying from a minimum of 3 places or 7 places available on the oldest coaches to 30 places on the most recent ones and to 128 on the special TrenoBici AlpeAdria Line with two entire coaches refurbished for bike carriage only. They are all dedicated spaces (no flex areas), though no minimum capacity is guaranteed, as the train manager decides it based on the train occupancy. All trains have a double door to access the bike storage room. The additional fee of €3,50 for the bicycle is a one-day pass valid on any Italian regional train operated by Trenitalia (in the region those operated by FUC are excluded). Tandems and cargo bikes are not allowed.

Travel tickets are discounted 20% in weekends, lowering the weight of the bike fee. The replacement and refurbishment of older rolling stocks in the next years will improve the permanent minimum offer. All trains allow the carriage of e-bikes, with the more recent/refurbished ones providing also plugs for recharging the batteries in half of the places, and belt to fix the bikes more firmly. In order to lock the bikes hanging on the racks, it is required to have long chains. If many users at the same time before a stop will need to unlock their bikes, it might be a little challenge. To promote intermodal commuting bike+train, a one-month pass at the cost of €20 has been introduced for holders of seasonal (2 weeks, monthly or annual) train tickets for the same service.

The staff at the ticket office and on the trains generally speak English. The purchase of train tickets is possible at the ticket office, on the website, in the mobile app, at the ticket counters, but the purchase of the bicycle additional ticket is NOT possible via the mobile app. The website, the app and the automatic counters are available in English, German, French, Spanish, Chinese. Reservation for the bicycle is not possible and places are not numbered. Locking a bike is possible but complicated as it requires long chain-lockers.

The **TrenoBici AlpeAdria** line (Trieste to Tarvisio) was introduced in 2020 weekends in the summer months from mid June to mid September to improve the accessibility to reach/leave the main cycle route available in Friuli Venezia Giulia (the international CAAR, Ciclovia Alpe Adria Radweg Salzburg to Grado), which is increasingly popular, so much that the new service is leading the bicycle carriage at regional level, reaching in 2021 its highest numbers. All trains follow the CAAR between Tarvisio and Udine, while the train link Udine-Trieste is split between some trains via Cervignano (along CAAR), and some via Gorizia, therefore serving 4 out of the 5 CIMR (first level regional intermodal centres), connecting them.

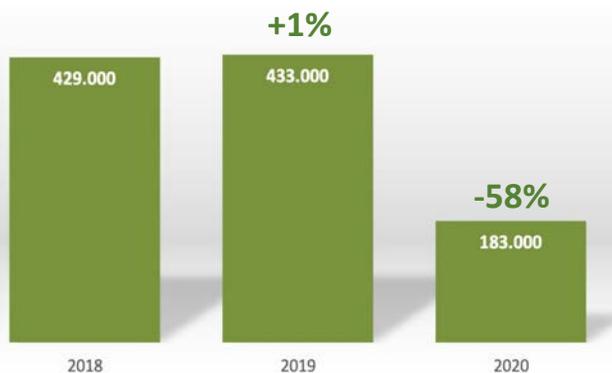
It is very positive that some of these trains follow the route Trieste-Gorizia-Udine (instead of Trieste-Cervignano-Udine) as they offer a quality access to Gorizia Centrale for cycle tourists, providing an advantage to the EGTCGO territory. Since its introduction, in summertime weekends the bike capacity of all trains connecting Trieste with Tarvisio is a gorgeous 30 or 128 bikes. TrenoBici AlpeAdria service (improved in 2021 over 2020 from 12 to 16 trains overall, each with 128 places in two refurbished coaches) also enabled or made more sustainable new events for group cycling along the CAAR, for instance the 'Bike Night Alpe Adria', transporting all participants by train instead of by diesel coaches with trailers.

The analysis of the available data about bicycle carriage on trains in FVG and about those with Gorizia Centrale as a start/arrival destination for both travel tickets and one-day bike passes, shows that a very tiny share of single travel ticket buyers also bought a one-day bike pass (ca. 1%) and that Gorizia's share of one-day bike passes has grown less than in the region, a share halved in 2020 from 21% to 10%. But it also shows a growing trend and the resiliency of cycling+train: Gorizia's bike passes share over single travel tickets has grown double digit in 2018/2019 and by 48% up to 1,37% in pandemic & TrenoBici year 2020.

2020 halved Gorizia's position in the region but increased its local bike+train travel share. Considering that in 2020 Italians on holidays were 45% less and that holiday travels by train decreased by 60% overall, by 66% for short breaks (holiday travels by car increased from 56% to 74%. Source: Istat), we observe that in the pandemic year the overall number of travels to/from the railway station of Gorizia Centrale - measured by the tickets sold - decreased by 58% in 2020 vs 2019, while the travels with an accompanied bicycle decreased less (-38%), and that before the pandemic in 2019 the increase of travels was only by +1% while travels with an accompanied bicycle increased double digit by +14%, though less than in FVG (+22%).

We also know, from an interview to the staff managing the PromoTurismo info point at Gorizia, that around a third of overall enquiries (more by foreigners), concern cycling routes in the area, particularly routes to reach Grado and Trieste. Some of them were likely among those railway travellers we see in the chart with an accompanied bike, heading from Gorizia to Cervignano, where they can follow the developed Ciclovía Alpe Adria Radweg to reach Grado.

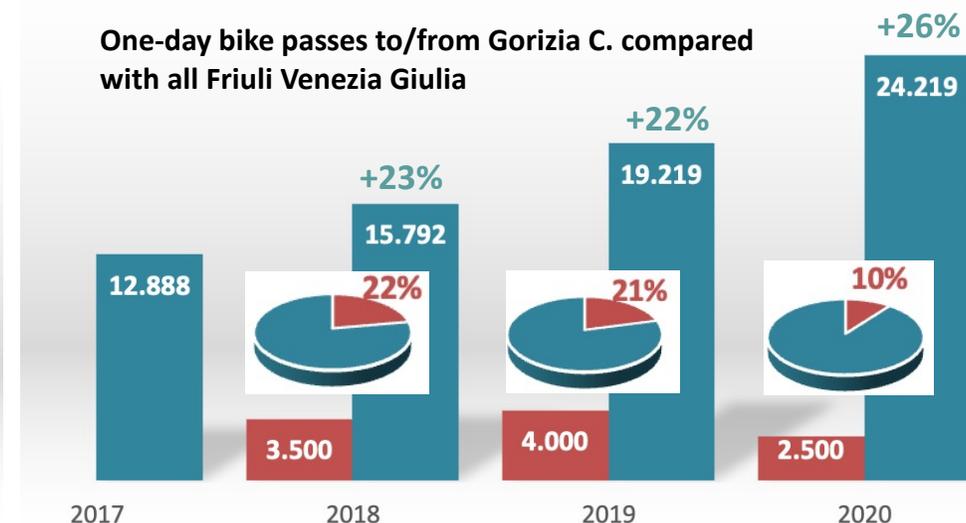
Single travel tickets to/from Gorizia C.



One-day bike passes to/from Gorizia C.



One-day bike passes to/from Gorizia C. compared with all Friuli Venezia Giulia



The ticket selling system makes currently impossible to know if the tickets bought with a certain start/end station were effectively used in that station, as the bike pass allows access to all regional trains country-wide in the day of validity. We assume that one-day bike passes are chosen by buyers of single travel tickets (not season ticket travel/bike pass holders; season bike pass number not available). Source: Premoci, Trenitalia FVG.



The variety of Italian trains serving the railway station of Gorizia Centrale (with 3, 7, 30, or 128 places), including the TrenoBici seasonal service with special coaches (yellow floor).





All trains serving the stations of Nova Gorica, as well as Sempeter and Solkan, allow bicycle carriage. Current users are both tourists and locals. October 2021.



All **Slovenian trains** serving the stations of Nova Gorica, Sempeter and Solkan are operated by **Slovenske železnice** and allow carrying a bike, with 6 bicycles generally admitted per train, including on the oldest rolling stocks, though the capacity depends on the train type and the occupancy of the train and is decided by the train manager. There is a single door to access the room to store the bikes on the oldest stocks and its accessibility is not optimal from the platform.

The additional fare is €1.50 for normal bikes, €3.00 for e-bikes. The bicycle ticket is valid for the entire day for an unlimited number of journeys on the SŽ network, with a valid passenger ticket, and can only be bought on board, while the train tickets can be purchased at ticket offices, automatic ticket counters, on the website and via the mobile app. The website is available in Slovenian and in English, the app only in Slovenian and does NOT show which trains carry a bike. The staff at the ticket office of Nova Gorica and on trains do not speak English. No ticket offices nor vending machines at the stations of Sempeter and Solkan.

In general, the **Italian and Slovenian bus operators (APT Gorizia, Nomago)** serving the EGTCGO territory do not officially allow the carriage of bicycles on their buses. APT Gorizia runs the seasonal service **BiciBus** (bus+trailer) with a carriage capacity of 28 bikes available twice a day in weekends and holidays (May to September) between Gorizia and Grado/Cormons, at no additional cost. E-bikes allowed up to a weight of 25 kg, non-standard bikes are not allowed (fat bikes, tandem, recumbent, cargo, velomobile, and trikes). Tickets also via mobile app.



2.2 ACCESSING PUBLIC TRANSPORT VEHICLES (TRAINS AND BUSES)

INSIDE THE STATIONS: Gorizia Centrale railway station

Platform 1 is fully, easily, accessible. The station underpass to reach the other three platforms has no elevator, nor ramps. One of the two staircases to access all platforms has a rail to ease the access with a bicycle but the distance from the railing does not allow to leave the luggage on the bicycle, due to the handrail.



The bike rail in the underpass in Gorizia Centrale; the Station of Nova Gorica

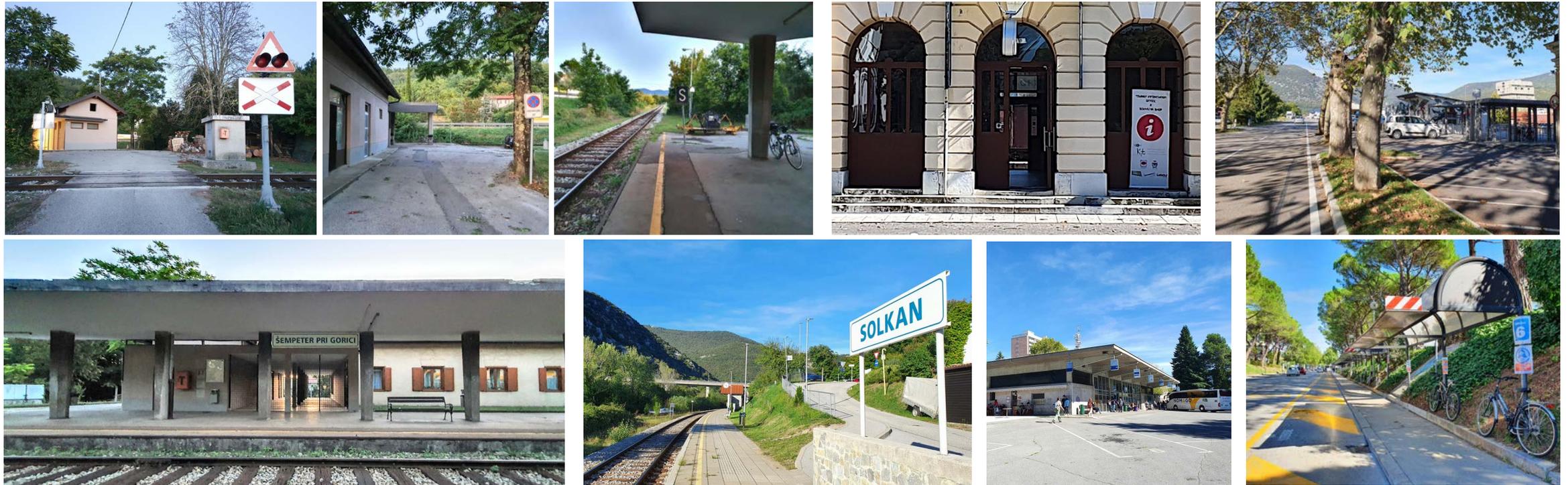


INSIDE THE STATIONS: Nova Gorica railway station (Transalpina)

With a bicycle, especially if loaded with the bags, the best entrance to the platforms is on the left side of the large station building, at street level, through the bicycle parking area, because the main building entrance has just few steps without any provision for bicycle access, and usually only a single door is open. The station has no underpass to reach the second platform, as the passenger rail traffic is limited. The first track can be easily crossed at ground level carrying a bicycle with the luggage.

INSIDE THE STATIONS: Sempeter pri Gorici railway station

The station has one track and platform, easily accessible by bike, at street level. The station building is completely closed. The large platform is roofed.



INSIDE THE STATIONS: Solkan railway stop

The station has a track a platform, easily accessible at street level. Small shelter.

INSIDE THE STATIONS: Nova Gorica bus station

The station is at street level and extremely easy to access by bike.

INSIDE THE STATIONS: Gorizia Centro Intermodale Passeggeri CIP (bus station in the same square as the railway station)

The station is made of two 'corridors' both at street level on the side of the square and along the street to enter the square (Corso Italia). Being at street level, it is extremely easy to access by bike.

The next tables list suggested actions, some of which to ask for at regional level.

ANALYSIS	Italian trains by Trenitalia reaching the EGTCGO territory + station of Gorizia Centrale	Slovenian trains by Slovenske železnice reaching the EGTCGO territory + Slovenian stations	Italian buses by APT GO / TPL FVG	Slovenian buses by Nomago
Information online	<ul style="list-style-type: none"> Website page dedicated to general information on bicycle carriage (in Italian and English): https://www.trenitalia.com/it/offerte_e_servizi/in_treno_con_la_bici.html NO general info in the mobile app Timetable search results in the website provide info about which trains allow bicycle carriage Timetable search results in the mobile app provides info about bicycle carriage NO query function on bicycle carriage in the timetable search engine NO online information about the position of the bike carriage coach 	<ul style="list-style-type: none"> Website page dedicated to general information on bicycle carriage: https://potniski.sz.si/en/transport-of-bicycles/ NO general info in the mobile app Timetable search results in the website provide info about which trains allow bicycle carriage Timetable search results in the mobile app does NOT provide info about bicycle carriage NO query function on bicycle carriage in the timetable search engine NO online information about the position of the bike carriage coach 	<ul style="list-style-type: none"> The website, including the page dedicated to the BiciBus service, is only in Italian, while the pdf flyer that can be downloaded is multilanguage Italian-English: https://www.apgorizia.it/servizio-bicibus/ ; https://tplfvg.it/it/il-viaggio/servizio-bicibus2021/ Timetable search results in the mobile app could not be tested (not found) because the BiciBus service was available only up to mid September 2021. NO query function on bicycle carriage in the timetable search engine 	<ul style="list-style-type: none"> No relevant information is provided because the the carriage of bikes is not allowed. website in Slovenian and English
Information in the stations	<ul style="list-style-type: none"> NO information about wich coaches on each service carry bicycles and about where customers should stand on the platform 	<ul style="list-style-type: none"> NO information about wich coaches on each service carry bicycles and about where customers should stand on the platform 	<ul style="list-style-type: none"> NO information available at the bus station (Centro Intermodale Passeggeri CIP) or not noticed off-season 	
Information on the rolling stock	<ul style="list-style-type: none"> NO bicycle sign marking on oldest rolling stocks Clear bike icon on the doors of the most recent rolling stocks (but not always on both sides) 	<ul style="list-style-type: none"> NO bicycle sign marking on oldest rolling stocks ? Icon on the most recent rolling stocks ? 	<ul style="list-style-type: none"> Possibly at regional level, adopt the same graphics and bike logo to communicate the bike services (trailers, pdf flyers, website, mobile app, etc.) 	
Prices of bicycle tickets	<ul style="list-style-type: none"> €3.50 one-day bike pass, valid on all FVG regional trains (except trains by FUC) €20 monthly bike pass for travellers holding a season ticket (same line) 	<ul style="list-style-type: none"> One-day bike pass at €1.50 for bikes, €3.00 for e-bikes, valid for the entire day on all Slovenian trains 	<ul style="list-style-type: none"> Where allowed, the bicycle carriage is free of charge 	

ANALYSIS	Italian trains by Trenitalia reaching the EGTCGO territory + station of Gorizia Centrale	Slovenian trains by Slovenske železnice reaching the EGTCGO territory + Slovenian stations	Italian buses by APT GO	Slovenian bus Nomago
Tickets reservation schemes and sales channels	<ul style="list-style-type: none"> Apart from groups of at least 10 travellers with their bikes, for whom reservation is free and compulsory 7 days before, it is NOT possible to reserve a place for the bike when purchasing a train ticket and there are NOT at least 20 places for bikes. 	<ul style="list-style-type: none"> Apart from groups of at least 10 travellers with their bikes, for whom reservation is free and compulsory at least 8 working days before departure, it is NOT possible to reserve a place for the bike when purchasing a train ticket and there are NOT at least 20 places for bikes. 	<ul style="list-style-type: none"> Where allowed, it is possible to reserve a place by contacting the ticket office via email or phone 	
Accessibility to and inside the station (about outside the station, see the next chapters)	<ul style="list-style-type: none"> Easy entrance to the station building of Gorizia At Gorizia (and in Monfalcone) there are not elevators to access the platforms from the underpass. One of the two staircases to access each platform is provided with a narrow metallic rail fixed over the stairs (bike gutter). There is not enough distance from the railing to keep the luggage (bike bags) on the bike. There is no signposting informing cyclists about this railing At Venice Mestre bikes are forbidden on elevators 	<ul style="list-style-type: none"> Easy entrance to platform 1 through the bike parking, side of the station of Nova Gorica, but no signposting leads to there. Few steps to enter the main entrance At Nova Gorica there is not any underpass. Easy passage over the rails of platform 1 possible at ground level to access platform 2, keeping the luggage on the bike Sempeter and Solkan: easy entrance at street level, no underpasses, possible to keep the luggage on the bike. At Solkan the shelter is too small to accommodate cyclists waiting for the train in case of rain 	<ul style="list-style-type: none"> The 'station' is a stop location open air at street level, buses are easily accessible There are two 'corridors' where buses stop, one in the square, one at the corner with Corso Italia. The last has a small roof. 	
Bicycle carriage	<ul style="list-style-type: none"> Bike carriage is allowed on all trains serving Gorizia Centrale along the two rail lines Trieste-Udine-Venice and Trieste-Udine-Tarvisio. Diverse rolling stocks have different capacity: the oldest ones only 3 official places in a separate room where more bikes can be in fact stored; a more recent ones have 7 places close to the seats; the newest ones have each two coaches with a zone dedicated to bicycle storage (30 bikes per train); since 2020 new TrenoBici trains have two refurbished bike-only-coaches (128 bikes/train). In all rolling stocks the places for bikes are dedicated ones (no flex areas), though the number of carried bikes is not fixed but up to the train manager, depending on the train occupancy. 	<ul style="list-style-type: none"> All trains serving the railway stations of Nova Gorica, Solkan and Sempeter along the line Jesenice-Nova Gorica-Sezana allow the carriage of bikes The number of places for the bikes depends on the decision of the train manager based on the train occupancy, but in general the oldest rolling stocks accommodate 6 bicycles. 	<ul style="list-style-type: none"> Bike carriage is not allowed in general Buses are not provided with bike racks Special seasonal BiciBus between Gorizia and Grado/Cormons with an attached trailer having the capacity of 28 bikes. The service runs twice a day only in weekends and holidays from mid May to mid September, extended to all days in July 	<ul style="list-style-type: none"> Not allowed

SUGGESTED ACTIONS	Italian trains by Trenitalia reaching the EGTCGO territory + station of Gorizia Centrale	Slovenian trains by Slovenske železnice reaching the EGTCGO territory + Slovenian stations	Italian buses by APT GO / TPL FVG	Slovenian bus by Nomago
Information online	<ul style="list-style-type: none"> Add general info on bicycle carriage in the mobile app Add query function on bicycle carriage in the timetable search engine Inform about the position of the bike carriage coach, if possible  <p>Info about the position of bike coaches by Czech railways and Deutsche Bahn.</p>	<ul style="list-style-type: none"> Add general info on bicycle carriage in the mobile app Add bicycle carriage logo/info in the timetable search results in the mobile app Add query function on bicycle carriage in the timetable search engine Add online information about the position of the bike carriage coach, if possible 	<ul style="list-style-type: none"> Add a bicycle carriage query function in the timetable search engine Add Slovenian and German language 	
Information in the stations	<ul style="list-style-type: none"> Add info about wich coaches on each service carry bicycles and about where cyclists should stand on the platform, per each train (info in the live timetable and/or audio message when the train is approaching) Add signposting guiding users to the 'bicycle stairway' 	<ul style="list-style-type: none"> Add info about wich coaches on each service carry bicycles and about where cyclists should stand on the platform Add directional signposting for cyclists to enter the station by the left side, through the bike parking 	<ul style="list-style-type: none"> Add information in the bus station: a signposting with the bik+bus logo where the BiciBus stops 	
Information on the rolling stock	<ul style="list-style-type: none"> Introduce a recognizable graphic for cycling (e.g. always the same bike logo, as large as possible) in all communications. Use icons as much as possible (multilanguage) 	<ul style="list-style-type: none"> Introduce a recognizable graphic for cycling (e.g. always the same bike logo, as large as possible) in all communications. Use icons as much as possible (multilanguage) 		
Prices of bicycle tickets	<ul style="list-style-type: none"> Introduce carnets (multipack) of 1 day bike pass Extend the one-day bike pass to FUC trains as well Introduce a more attractive seasonal bike pass, such as that of Lombardy: €60 per year, region wide, for all 	<ul style="list-style-type: none"> Introduce a bike season ticket for train season tickets holders (commuters) Introduce carnets (multipack) of 1 day bike ticket 		<ul style="list-style-type: none"> Introduce integrated tickets bus + bike sharing
Tickets reservation schemes and sales channels	<ul style="list-style-type: none"> Introduce the possibility to reserve a place for the bicycle for less than 10 travellers; alternatively extend to 20 bike places the minimum capacity of all trains 	<ul style="list-style-type: none"> Introduce the possibility to reserve a place for the bicycle or extend to 20 bike places the minimum capacity of all trains 		
Accessibility to and inside the station	<ul style="list-style-type: none"> If elevators will be introduced at Gorizia Centrale to access the platforms from the underpass, design them large enough to accommodate bicycles Alternatively, introduce ramps to access the platforms (also barrier free and never out of order). 	<ul style="list-style-type: none"> Improve the main entrance of the building: keep both doors; replace the steps with a ramp; alternatively, add directional signposting guiding cyclist to access the platforms via the bike parking Solkan: consider adding a roof alongside platform 		

SUGGESTED ACTIONS	Italian trains by Trenitalia reaching the EGTCGO territory + station of Gorizia Centrale	Slovenian trains by Slovenske železnice reaching the EGTCGO territory + Slovenian stations	Italian buses by APT GO / TPL FVG	Slovenian buses by Nomago
Bicycle carriage	<ul style="list-style-type: none"> Replace the oldest rolling stocks by 2025 to offer a higher minimum bike carriage capacity on existing regional trains 	<ul style="list-style-type: none"> Replace the oldest rolling stocks by 2025 to offer a higher minimum bike carriage capacity on existing regional services 	<ul style="list-style-type: none"> Upgrade buses with bike racks to allow a permanent service all year round even on small scale Introduce seasonal shuttles with a trailer where the demand is not high In lines with low passenger traffic as well as low cyclists traffic, consider to refurbish some buses to introduce two places inside the vehicle Plan seasonal services timetables largely in advance and include a promotional campaign or involve tourism promotion agencies months before the service start, in due time to allow the new service be advertised to the operators when they plan their products (e.g cycle tour operators or accomodation operators, or guides). Systematically collect data about bicycle carriage (number of bikes, time and date of their carriage, direction, start/end stops) even if the service is free of charge for the users (no bike tickets sold) 	<ul style="list-style-type: none"> Upgrade buses with bike racks to allow a permanent though limited service all year round In lines with low passenger traffic, consider to refurbish some buses to introduce two places inside the vehicle

Rare example of bike carriage inside a bus, by the Scottish operator Borders Buses, which operates in a border area.

Seasonal bike shuttle attached bike trailer operated by the same operator - Nomago - who is operating the bus service in Nova Gorica





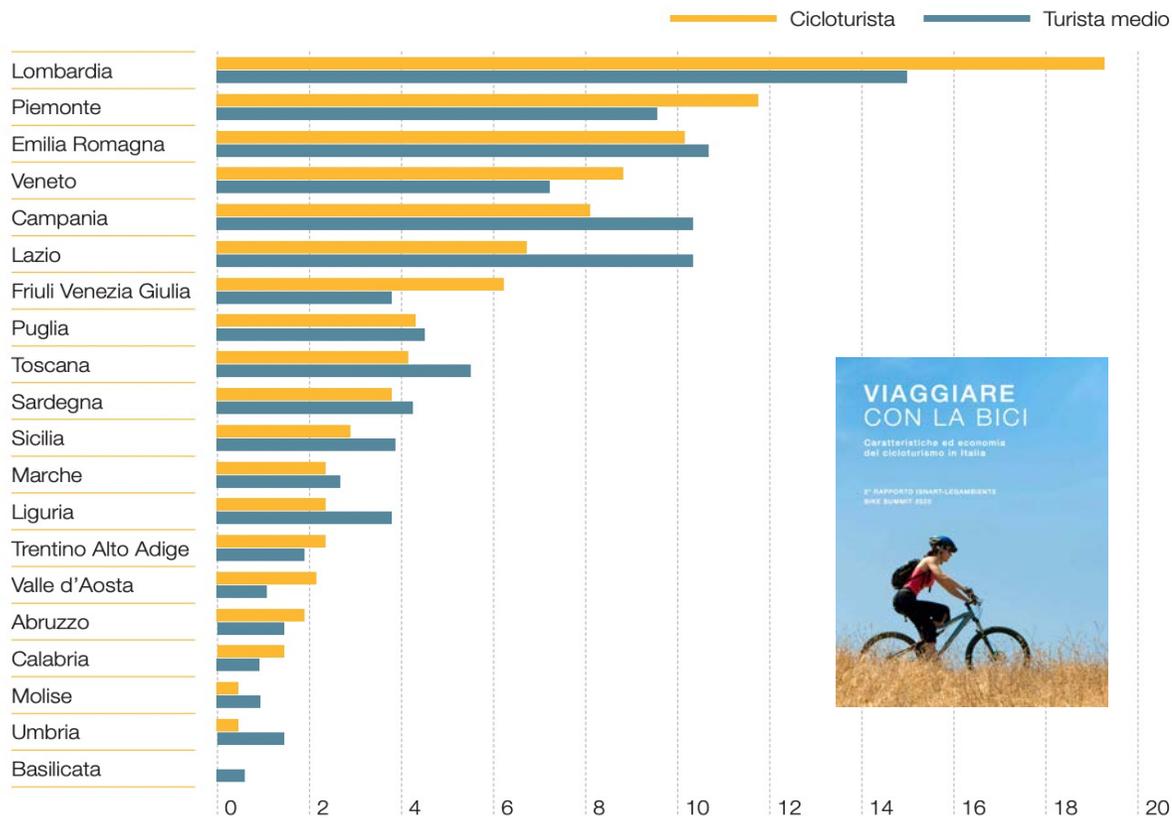
Examples of bicycle carriage on buses from the Swiss bus company PostBus (permanent racks on the back of all buses and seasonal extended service with an attached trailer; InterCity Bus run by the Austrian rail operator OBB



SUGGESTED ACTIONS**New long-distance train connections to Gorizia or Trieste with bicycle carriage? New cross-border trains reaching the EGTCGO area? Joint actions?****Bicycle carriage on new potential cross-border and long-distance connections**

- The **problem**: two areas known as first in the list of origin-regions of cycle tourists (Lombardy and Piedmont alone were origin of over 30% of all Italian cycle tourists in 2020, see image in next page) are not connected directly by any long-distance train reaching Gorizia nor Trieste. Zero high-speed trains (arriving in Trieste or Gorizia Centrale) carry bikes. Zero Intercity trains (who carry bikes since 2020) reach Trieste or Gorizia from those regions. Only two Intercity trains per day arrive in Trieste from Rome. If no long-distance trains with bike carriage will stop in Gorizia or Monfalcone, reaching the EGTCGO area from Milan for instance, would require a rare combination of regional trains, with 2 connections in Verona and Venice Mestre (where bikes are forbidden on the elevators) and would take a very long time, a limit that may induce cycle tourists to choose a different cycling destination, giving priority to Veneto/Trentino Alto Adige, after the first connection. It's positive that at least Bologna – capital of the third region of origin of cycle tourists – is directly connected to Monfalcone along the line Rome-Trieste.
- Therefore it is suggested to start now a plan and strategy **to obtain** by the beginning of GO2025 (joint European Capital of Culture, Go2025) the introduction of direct **long-distance trains connecting Gorizia (or the closest Monfalcone) with the rest of Northern Italy provided with rolling stocks with at least the minimum bicycle carriage capacity, possibly more. Options** can be:
 - 1)** to advocate at Ministry level in Italy for the new high-speed rolling stocks that will be introduced next years in the rail network thanks to Eu subsidies to be firstly introduced along the line Turin-Milan-Venice-Trieste at least for Go2025, as they will have to comply with the new EU ruling (minimum 6 bike places), being new trains.
 - 2)** another/additional option is to obtain the introduction of Intercity connections along the line Turin-Milan-Verona-Venice-Trieste (or maybe with Gorizia as final destination instead of Trieste), as all Intercity trains have been upgraded to carry 6 bicycles.
 - 3)** a single inter-regional train from Northern Italy to Trieste via Udine-Gorizia could also be an option. A “TrenoBici del mare” existed from Verona to Latisana in 2018-2019, and since 2020 moved to Verona-Venice-Mantua as TrenoBici Verona. May the current TrenoBici delle Lagune Venice-Trieste via Gorizia be extended on the Veneto side up to Verona?
 - 4)** a last option, targeting Italian and foreign cycle tourist at the same time, is to introduce a connection Trieste/Gorizia to Trento/Bolzano, either as Intercity or cross-border Inter-regional train. Bolzano is now being reached from Milan by direct high-speed Frecciarossa trains, without connection in Verona. Can a new symmetric long-distance train connect Bolzano to Trieste via Verona/Udine/Gorizia, maybe also extended to Ljubljana? Or even a double cross-border Innsbruck-Ljubljana via Gorizia/Trieste, to be supported under the framework of the emerging need to integrate the two Interregs programmes Italy-Slovenia and Italy-Austria? In this last case, OBB EuroCity or Railjet trains would already be fit for the purpose.
- If a new cross-border inter-regional rail service will be introduced, include adequate bicycle carriage capacity, possibly going beyond the Eu minimum requirement of 6 places and consider that 20 places is the minimum required when the reservation of bike places is not possible, as on inter-regional trains. By 2022-2023 the stations of Gorizia Centrale and Nova Gorica should be connected (by new so-called ‘lunettas’ and a new electrified track) allowing extending the current service.
- Take the opportunity to **candidate the historical Transalpina railway line Jesenice - Nova Gorica - Sezana - Trieste Campo Marzio, which is not electrified, for conversion to a green hydrogen railway, building upon** the synergy with the green hydrogen valley project involving the Trieste Port authority (**North Adriatic cross-border Hydrogen Valley**) endorsed under the Slovenian EU presidency in 2021. In 2022 the first call will be published to support the EU Clean Hydrogen Partnership. Consider also that many Italian remote areas in 11 regions already presented candidacy to convert similar non-electrified lines with the support of the Italian Recovery and resilience plan funding. Hydrogen trains are already a reality successfully tested for commercial service in Germany, Austria, Netherlands, France and Poland. In Italy (Brescia-Iseo-Edolo) they will be firstly introduced and operational in 2022-2023. Hybrid hydrogen/electric trains are under development.

Estate 2020. Regione di provenienza dei turisti (% sul totale)



Workshop on the creation of a "North Adriatic cross-border hydrogen valley"
Location: Perla Hotel conference hall, Nova Gorica, Slovenia

HYDROGEN ECOSYSTEM NORTH ADRIATIC

Conference

North Adriatic Cross-border Hydrogen Valley
24 November 2021

I progetti di conversione dal diesel all'idrogeno; linee ferroviarie non elettrificate



Piano Nazionale di Ripresa e Resilienza
#NEXTGENERATIONITALIA

- ① **Piemonte:** Cuneo-Ventimiglia; Novara-Biella
- ② **Lombardia:** Brescia-Iseo-Edolo (progetto già in fase di realizzazione)
- ③ **Toscana/Emilia:** linea Faentina (Firenze/Pontassieve-Borgo S. Lorenzo-Faenza); Lucca-Aulla
- ④ **Umbria/Lazio/Abruzzo:** linea Terni-Rieti-Sulmona;
- ⑤ **Sardegna:** Alghero centro-Alghero aeroporto;
- ⑥ **Puglia:** Lecce-Gallipoli-Leuca
- ⑦ **Calabria:** Reggio Calabria-Catanzaro
- ⑧ **Sicilia:** linee Siracusa-Modica; Modica-Gela; Gela-Canicattì; Lentini-Gela;

Fonte: elaborazioni Il Sole 24 Ore

Alstom's Coradia iLint – General Overview

- Based on successful Coradia Lint 54 DMU
- Lowfloor entrance (620 or 810 mm)
- Max. speed 140 km/h
- 1000 km range
- No technical components in the passenger area
- 150 seats / 1 toilet / Flex Area
- Zero emissions



Flexible zone for bicycle carriage



Successfully tested in Austria by OBB on tracks with a 4,4% gradient

Coradia Polyvalent FCEMU for SNCF

Main Characteristics

- Bi-mode train (Hydrogen + Pantograph)
- Max Speed: 160 km/h
- Range (only H₂): 600 km
- Capacity: 218 seats

First Contract

- 12 trains
- Train Validation 2023
- Start of operation 2025



3. ANALYSIS OF THE RAILWAY STATIONS AND OF THE BUS STATIONS

The public and collective transport hubs analyzed are:

IT: Gorizia centrale railway station

IT: Gorizia Centro Intermodale Passeggeri (bus station), in front of the rail station

SLO: Nova Gorica railway station (cross-border)

SLO: Avtobusna Postaja Nova Gorica (bus station)

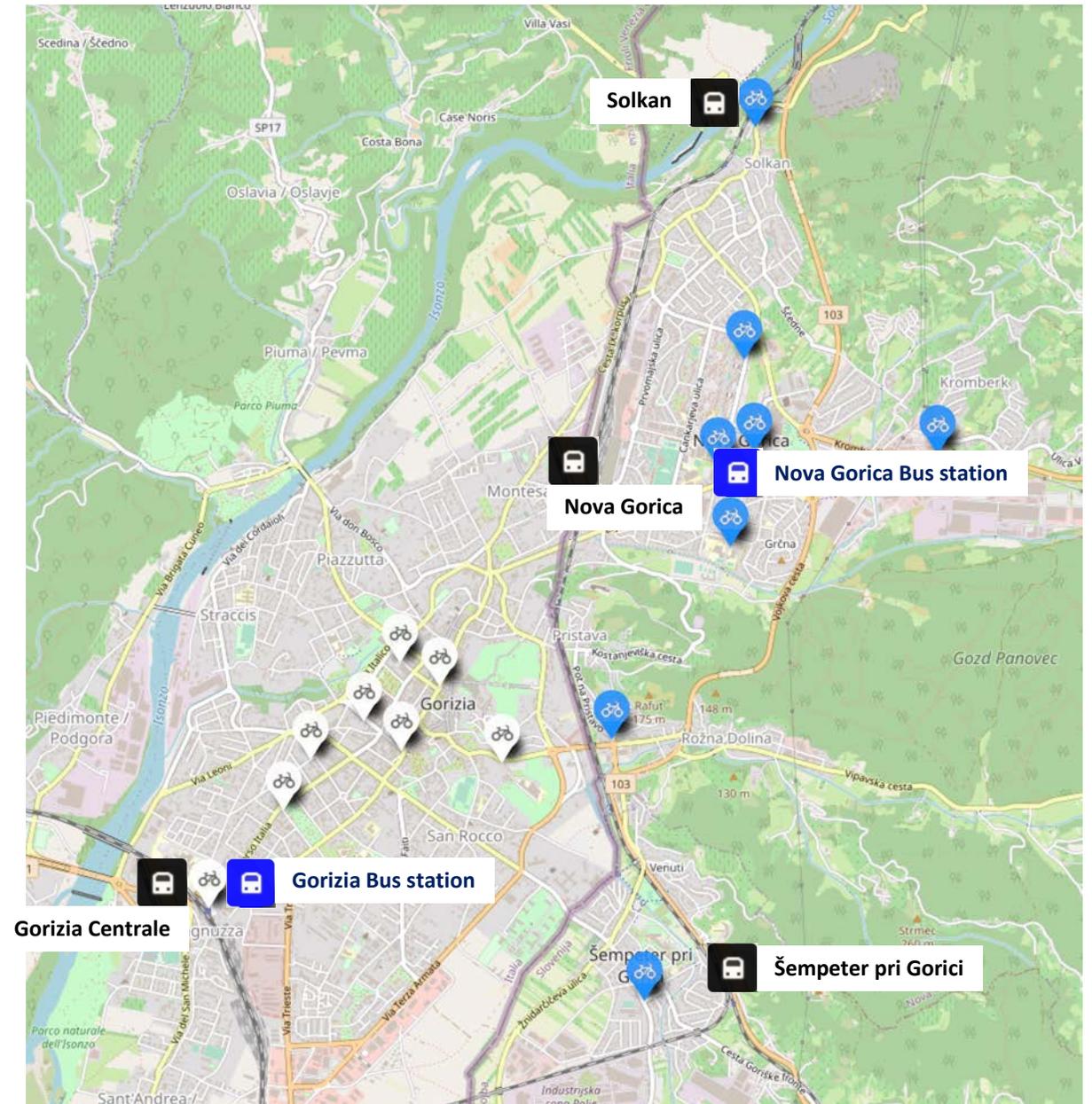
SLO: Solkan railway station

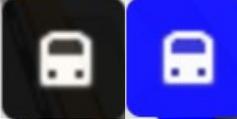
SLO: Sempeter pri Gorici railway station

Each hub was analyzed based on the BiTiBi methodology, that was applied also to the bus stations and bus operators. A field survey was conducted to collect data about the current offer of bicycle parking for private bicycle and of the current parking needs, checking all bikes parked in the hub area. The survey took place in the months of October and November 2021, when each station was checked at different times in the time-frame 10-14 and 17-20, in all weekdays and on Saturdays and Sundays. The zones surveyed in each hub (as deemed relevant up to 100 m from the hub) are described in the following maps and summary tables.

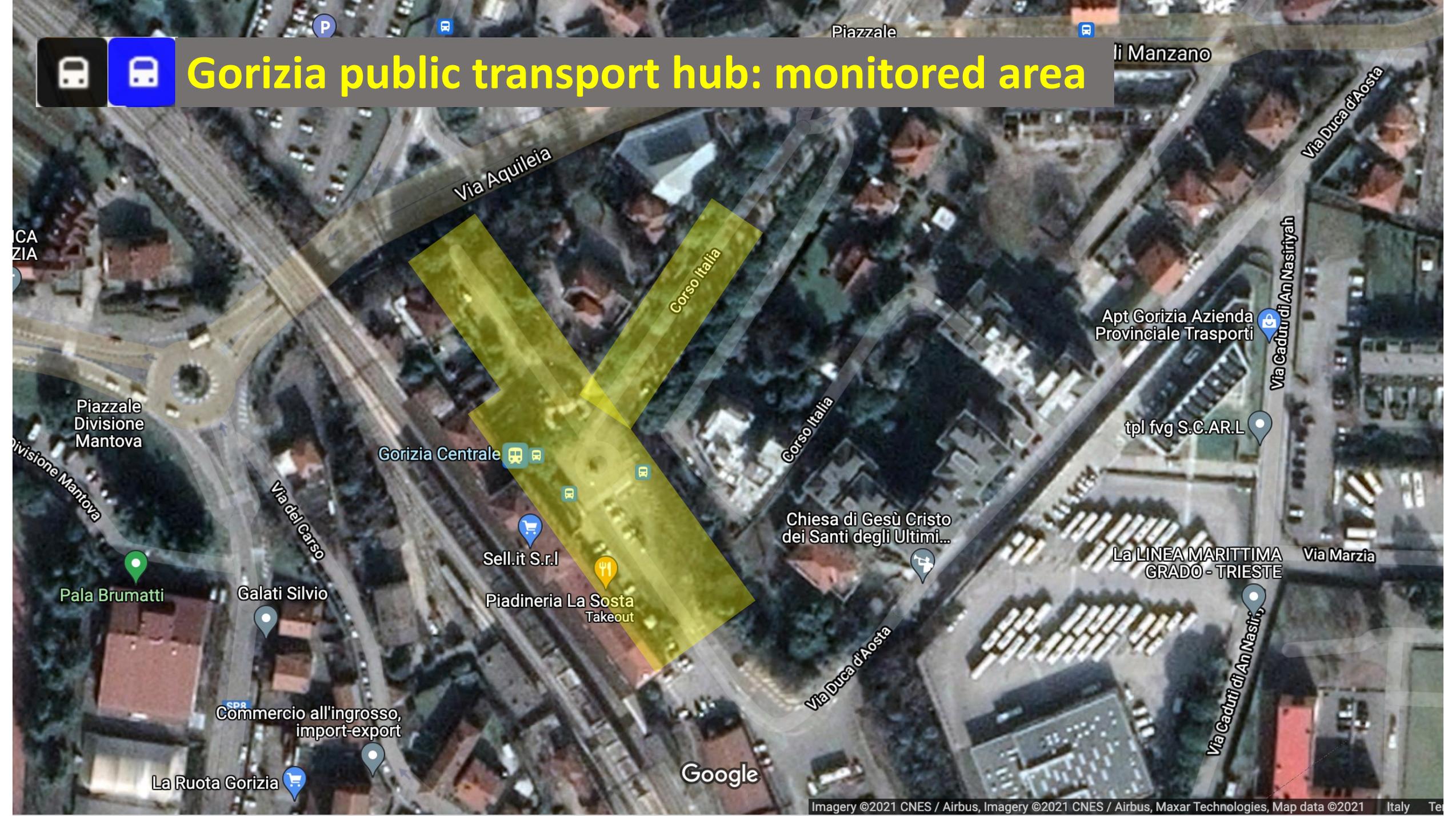
At two transport hubs, in Gorizia Centrale/Centro Intermodale Passeggeri (Bus station), and in Solkan, there are stations of bike sharing schemes: in both cases they are not operated by the railway companies or their groups (Trenitalia and Slovenske železnice), which are not active on such a service, unlike other European railways companies. See next chapter on bike sharing schemes.

In Italy the Gorizia hub is one of the four ‘first level CIMR’ (Centro di Interscambio Modale Regionale): it combines the railway station with the bus station. In terms of lines and passenger traffic this hub is the main one in entire EGTCGO area. The Bus station is in front of the railway station building, the bike sharing as well.





Gorizia public transport hub: monitored area



Monitored zones

GO2

GO3

GO4

GO1

GO5

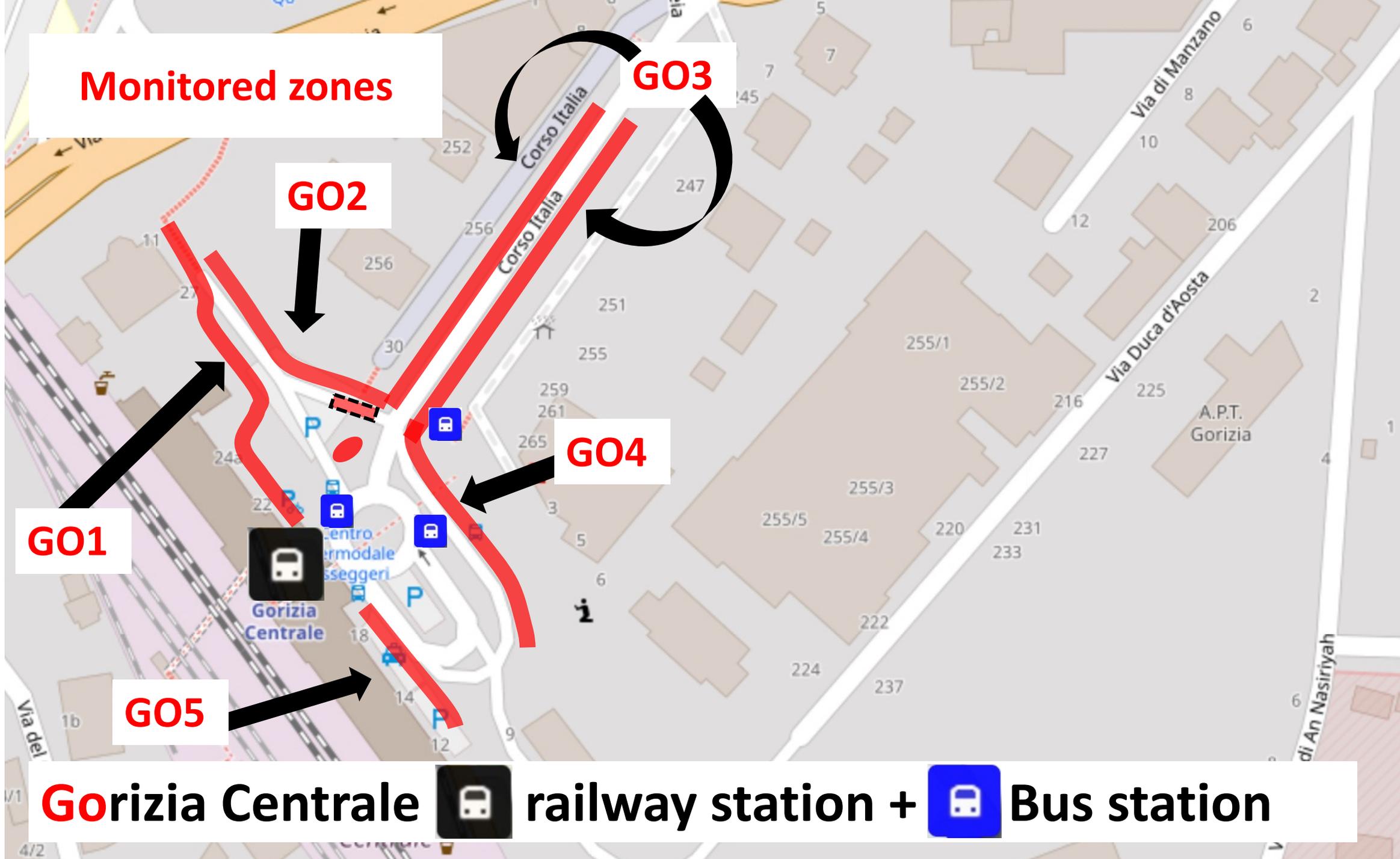
Gorizia Centrale



railway station +



Bus station





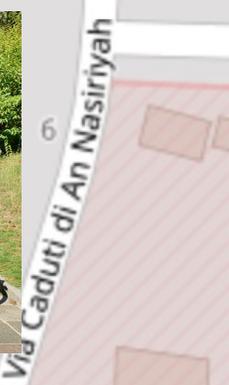
GO1

Gorizia



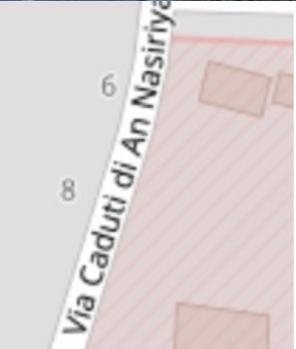


Gorizia



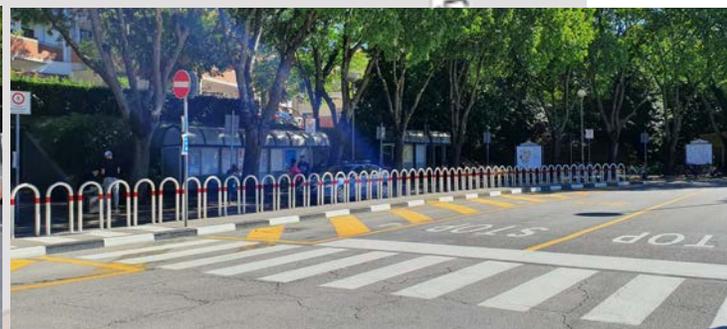
G03

G03



Gorizia



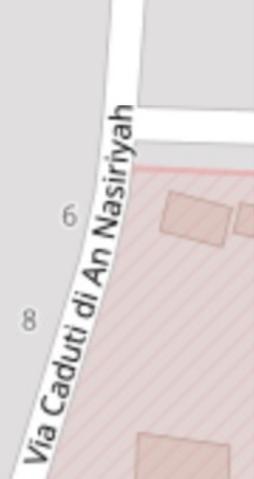
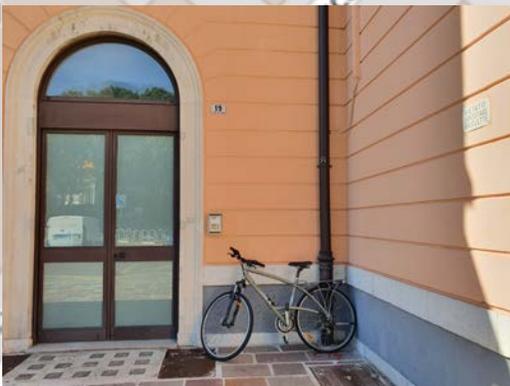


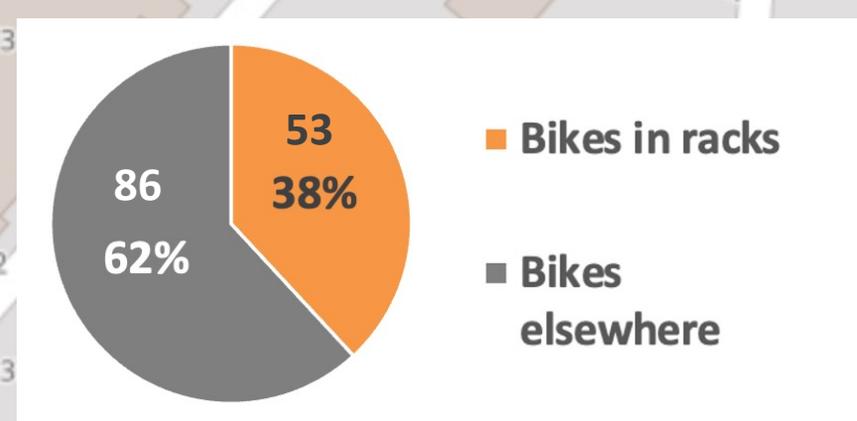
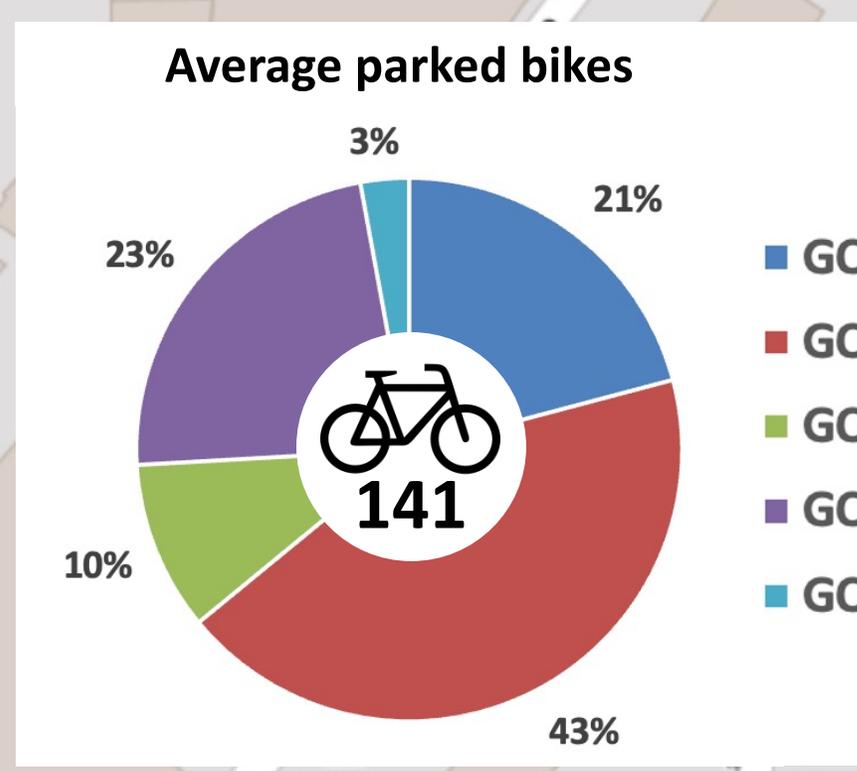
Gorizia



GO5

Gorizia





Gorizia Railway station + Bus station

3.1 OFFER AND DEMAND OF BIKE PARKING AT GORIZIA RAILWAY + BUS STATION

THE OFFER

Location and context: there is a single bike parking that is not sheltered nor provided with lockers or boxes. There are racks with places for 57 bikes 25 metres from the main entrance of the railway station and in front of one of the corridors of the bus station, for both train and bus passengers. Recently the pavement surrounding the station building was renewed and during the works the bike racks were moved. The parking is not signposted (no sign of bike parking was found). The BiTiBi guidelines suggests 10-20 metres as the maximum acceptable distance *of the first racks* from the entrance, while other racks can be furthest away. The position is 'in the flow' of the access routes to the station. There is a car parking closer to the station entrance.

Accessibility, ease of use: being on the street level, the parking is easily accessible.

Attractiveness: it is not much in the view point of local residents or railway passengers' flow (which would make the users feel safer and more secure both during the day and the night), though the parking area is lighted in the night. There isn't a video surveillance camera over the racks. No amenities.

Price and opening times: the parking is free of any charge and accessible h24.

Quality of the racks: the racks are those defined by BiTiBi guidelines «cheap wheel benders», which are also unfit to lock the frame. The parking is not roofed nor the racks covered. The limits of this kind of solution are low protection against theft (the frame not fastened), risk of damages (bending the wheels, no protection from the rain), low comfort for users. As a result, owners of good quality bikes feel discouraged from leaving their bikes parked there. The parking may not be used efficiently because some places are permanently occupied by bikes



that were abandoned after being damaged, broken, or stolen components ('orphan bikes' and wrecks). To avoid this from happening, the BiTiBi guidelines suggest to only provide high quality racks and to monitor and manage the parkings (see below and next tables).

Quantity of the racks: there is a lack of availability (not enough space for all users to park their bikes). The demand has grown beyond the capacity of the current offer to fulfill it.

Maintenance and monitoring: monitoring of 'orphan bikes' and of illegal or wrong parked bikes helps to keep the station square tidy and to attract users. Enforcing rules requires availability of places for every bike.

The bike parking before and after the renewal of the pavement near the station building and the relocation of the bike parking. After the renewal the area closer to the station entrance is more tiny and attractive.



THE DEMAND

Though the survey took place at the end of the cycling season October-November, including days with non optimal weather, it found an impressive number of parked bikes, particularly if compared with the current offer of bike parking.

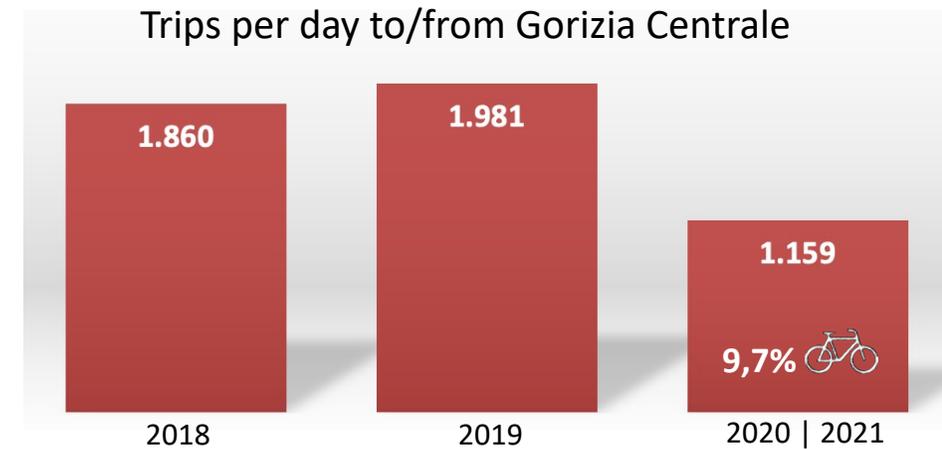
The demand of the current users of the Gorizia 'first level CIMR' (Centro di Interscambio Modale Regionale) for bike parking emerged by counting the number of bicycles parked in the entire square at a radius of 100 metres from the entrance of the railway station, and a few metres from Corso Italia (bus station corridor).

An average of **141 bikes** were found. It was noticeable that the share of bikes parked out of the provided racks – nearly full – was much higher than the share of bikes parked in the racks. Almost **two thirds (62%) of the total bikes parked were chaotically locked** everywhere users found a pole or anything else apt to hold a bike and to fasten the frame. The bikes parked out of the racks were distributed in all zones (GO1 to GO5), with few users even leaving a bike in zone GO5 leaned to the wall of the station building where bike parking is explicitly forbidden, likely after a desperate search for a place and rushing to the platform to catch the train. In peak times a higher amount of 152 bikes was found. It is easy to guess that during the cycling season at peak times the amount of parked bikes could be much higher and that the potential for growth is huge.

The current bike parking offer can be improved in quantity and quality.

We could try to very roughly estimate the level of intermodality bike + train in 2020/2021 combining the 2020 data from Trenitalia FVG with the 2021 survey data, though it is very difficult to draft a profile, and also unclear the share of parked bikes used in combination with buses.

It was noted that some of the parked bikes may be 'orphan bikes' or wrecks. Though the survey could not monitor those bikes, as an hypothesis it was estimated around 15% of places occupied by those bikes.



If we assume that:

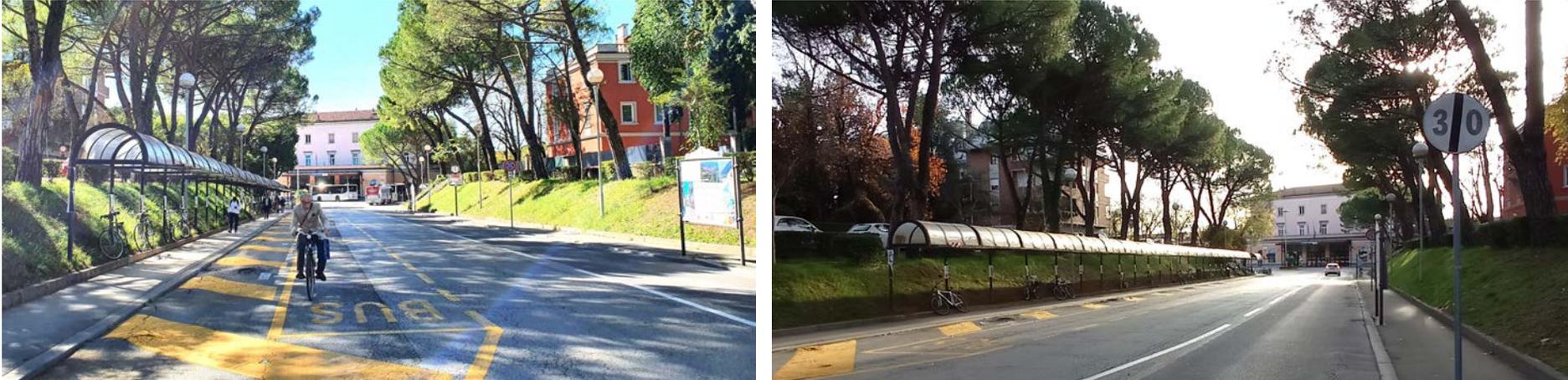
- holders of a monthly train ticket in 2021 with Gorizia as arrival/departure station are about the same as in 2020 (2020 data used in the chart) and would travel by train and use the Gorizia station 20 days per month;
- only 75% (106) of the parked bikes (data collected in 2021) are from railway passengers (excluding 'orphan bikes' and bus passengers' bikes)

then we may try to estimate a share of bike+train travellers of 9,7% over the total passengers per day in 2020/2021, with those holding a one-day bike pass being only 0,6% (based on 2020 data)*.

The total intermodal/multimodal share is likely even higher if we could add the users of the bike sharing service GoriziaInBici.

This figure seems consistent with the recent estimate of cycling modal share within the Gorizia (10%) (PREMOCI 2021) and with the 2020 growing trend of the share of cycling in North-Eastern Italy from 5,9% up to 8,4%, while the PT share lowered to 4,5% and walking reached 24,1% (Isfort 2021).

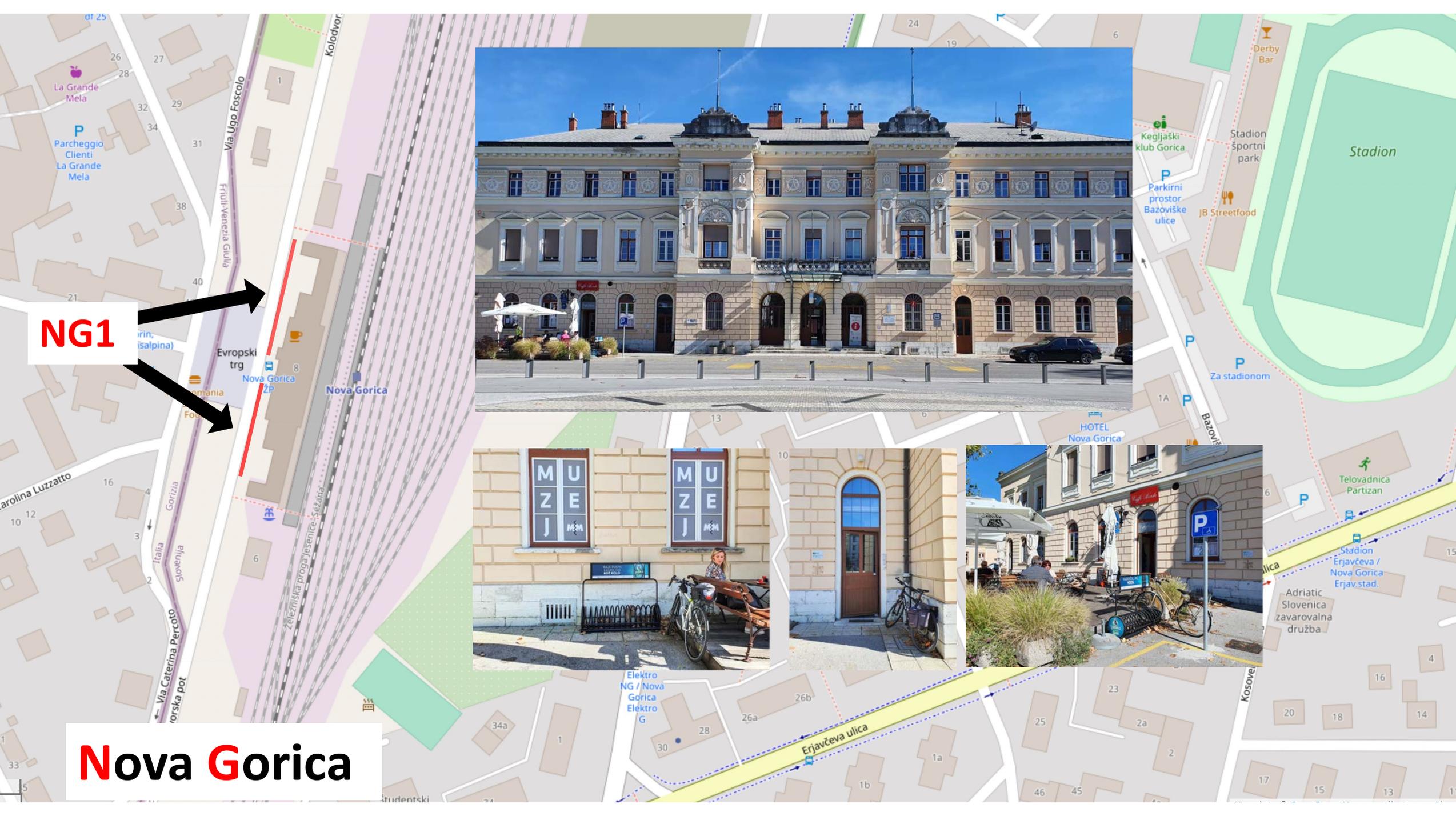
* this share is lower than that of bike carriage in previous charts because here we are counting also holders of seasonal train tickets, that were not considered in the previous charts.

ANALYSIS	Gorizia Centrale railway station + bus station at piazza Martiri della Libertà
Existence of safe, sheltered and convenient bike parking at train stations	NO: <ul style="list-style-type: none"> • No sheltered parking, nor bike boxes or lockers • Very basic bicycle parking facility, not roofed nor covered, with racks for 57 bike for the mobility hub. On average 141 bikes were found parked in the square: 62% of parked bikes were outside of the racks with the racks nearly full. Lack of capacity to meet the current demand. • The location of the first racks is farer than 10-20 metres from the railway station entrance but within adequate distance from the bus station • The racks are easy to access, being at street level, free of charge, no opening/closing time. • Low level of perceived safety and security • Low quality of the racks (wheel benders), not possible to fasten the frame
Availability of convenient public bikes	YES: <ul style="list-style-type: none"> • Bike sharing location of GoriziaInBici, well positioned in the square, less than 20 m. from the railway station entrance (see next chapter)
Unity of bike-train organizations	NO: the train service, the bus service, the bike sharing GoriziaInBici are independent
Integrated payment system/fare integration	NO
Positive communication and marketing about bike-train combination	YES/NO: <ul style="list-style-type: none"> • Positive communication about bicycle carriage on trains by Trenitalia, highlighting TrenoBici AlpeAdria • No communication about bicycle parking at the station, lack of the sign indicating the bike parking
Existence of safe and secure routes to reach the stations.	NO 

NG1



Nova Gorica



NG2-6

NG2

NG3

82
places




NG6

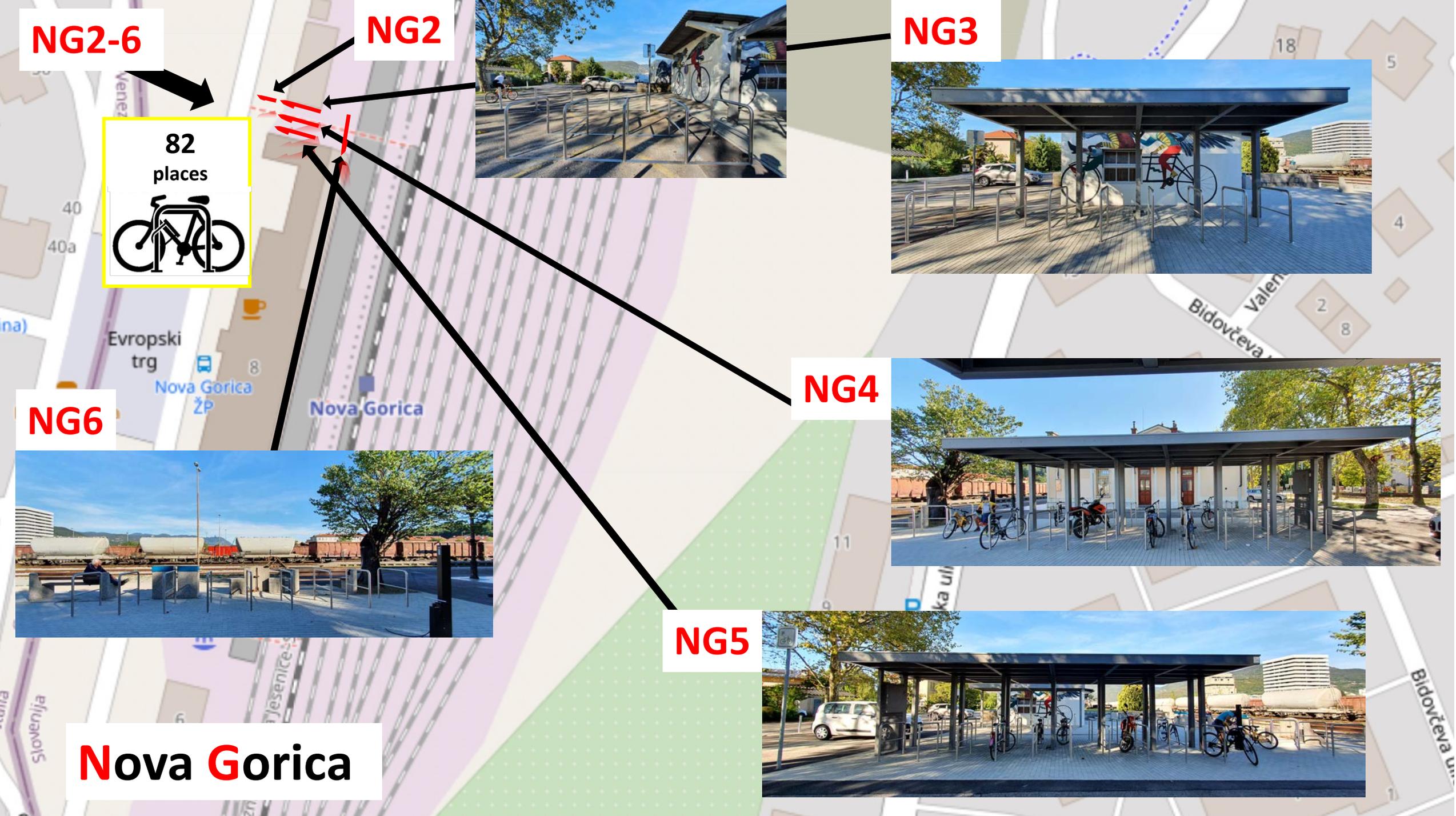
NG4



NG5



Nova Gorica



3.2 OFFER AND DEMAND OF BIKE PARKING AT NOVA GORICA RAILWAY STATION

THE OFFER

Location and context: at the left side of the large Transalpina building, attached to it, in between the road and platform 1, there is large square area dedicated to a bike parking, providing direct access to the platform. The distance from it is less than 5 m. The parking provides open air racks divided into 3 groups with an overall number of 41 racks, each of which can host two bikes, for a total of 82 places: a main group at the centre, under two roofs, and two smaller groups unroofed, one closer to the platform, parallel to it, the other on the opposite side, closer to the road. Additionally, the Café inside the station building also offer private bike racks to its customers, for about 10 places close to its entrance.

Accessibility, ease of use: being on the street level, the parking is easily accessible. Though, its presence is not communicated in front of the main entrance of the station building and from the square and it may be go unnoticed. Its visibility from outside can be improved.

Attractiveness: it is not in the view point of local residents but there is some railway passengers' flow. The parking is video-controlled by surveillance cameras attached to the its roof and well lighted in the night. The perceived safety and security is good. Amenities increases its appealing: self-service repair station with a pump, decoration on the walls of the side building, fountain and a bench (side of platform).

Price and opening times: the parking is free of any charge and accessible h24.

Quality of the racks: the racks are staple-shape, made of inox, defined good quality by BiTiBi guidelines as they allow to fasten both wheels and the frame and can hold bikes without any risk of damage. The Café racks are low quality 'wheel benders'.

Quantity of the racks: there is abundancy of places (82 places) compared with the demand observed in October-November. It is possible that during the higher cycling season this parking is serving not only the railway customers but also the people reaching the square for other reasons, such as events of leisure time. The additional racks by the Café which is inside the station building suggests there can be a high demand for bike parking.

Maintenance and monitoring: the parking is tidy. There were no 'orphan bikes' nor wrecks. No messages were seen about forbidding bike parking in some zones or about the removal of wrong parked bikes to a warehouse.

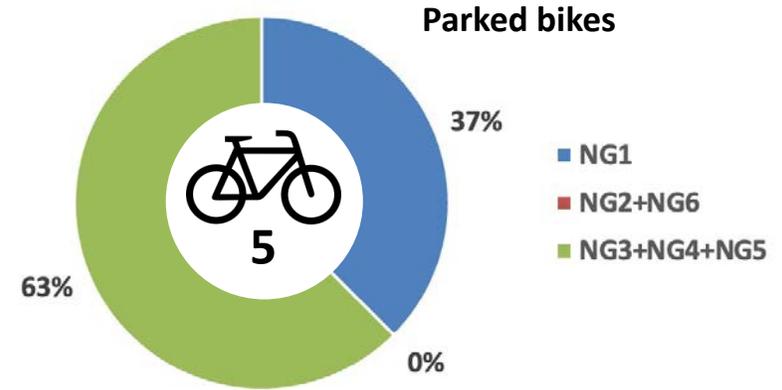


THE DEMAND

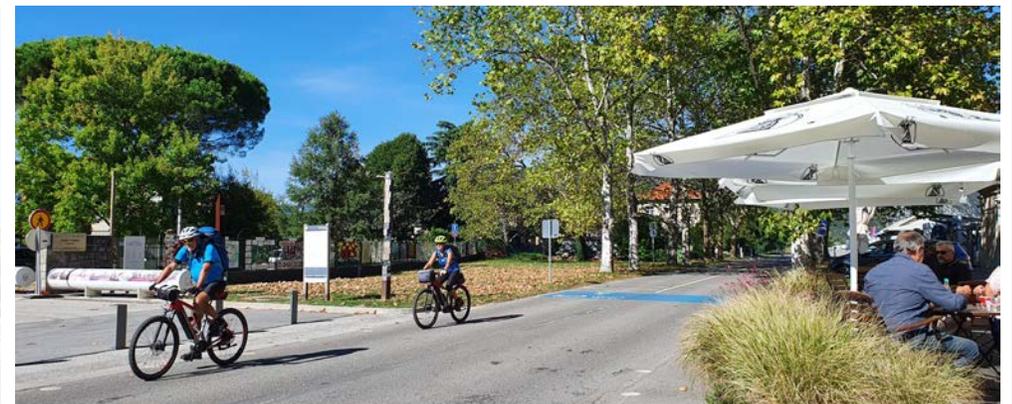
The railway service is relatively limited if compared with that of the station of Gorizia Centrale, as the trains serving Nova Gorica run only along one railway line (Jesenice-Nova Gorica-Sezana), the line is not electrified, some rolling stocks are quite old and not very attractive. As a consequence, the railway traffic is overall not elevated, especially for the size of the station.

During the survey at the end of the cycling season October-November, including rainy days, few parked bicycles were found: on average, 4 to 5 parked bikes, all fastened to the racks in the roofed zones. All bikes observed were in use, no suspicious 'orphan bikes' were noticed.

The bike parking is well dimensioned to allow further traffic growth when the two stations of Nova Gorica and Gorizia Centrale will be linked and new railway lines will be therefore accessible from this station.

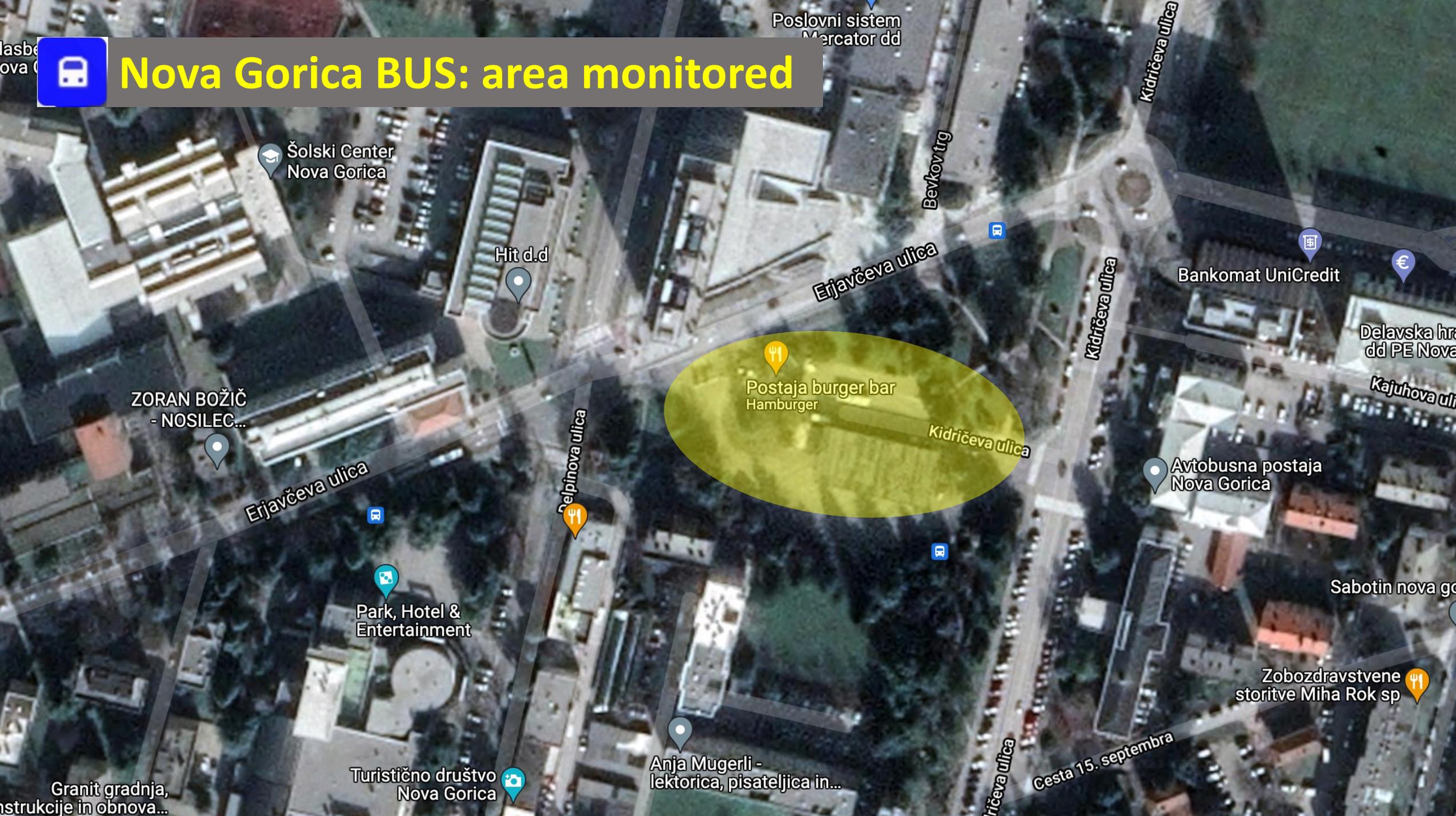


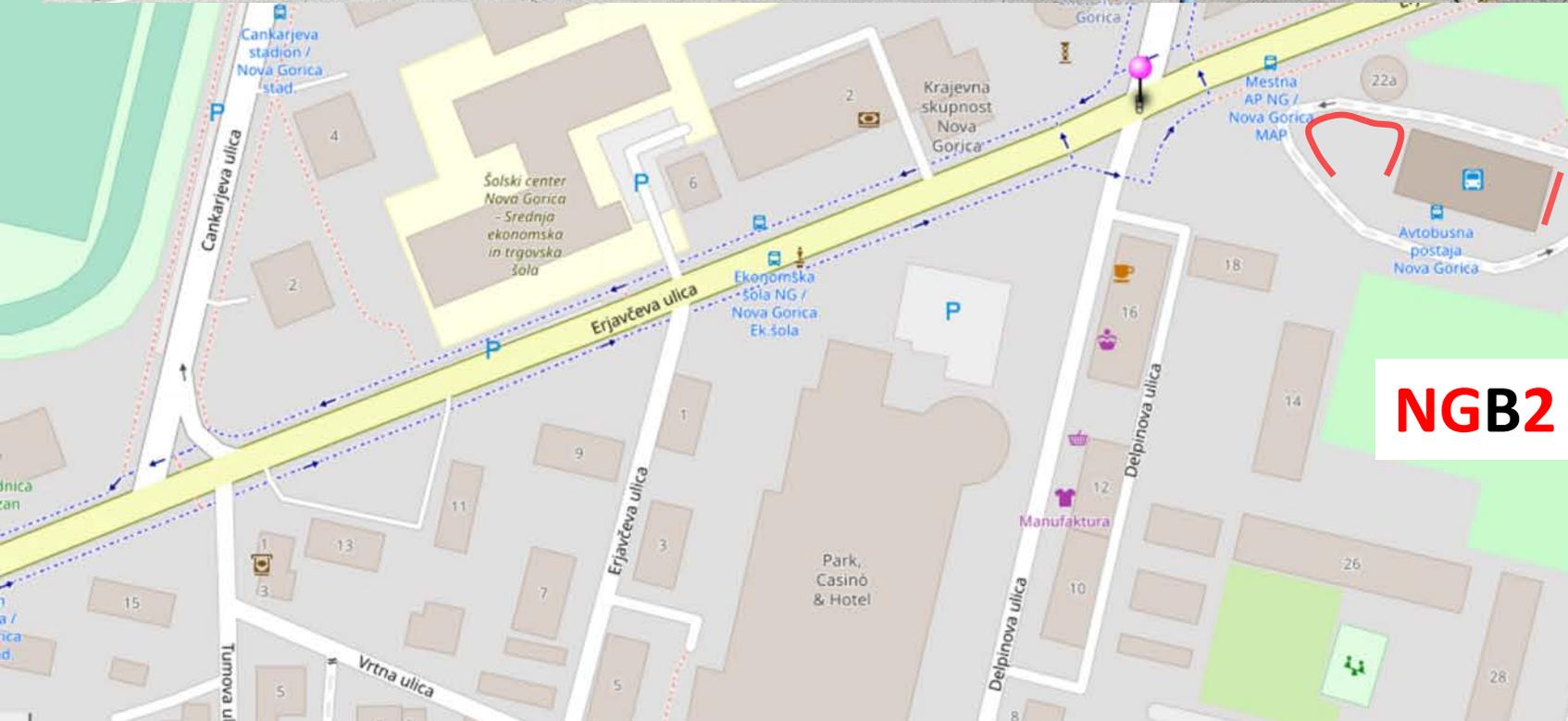
ANALYSIS	Nova Gorica railway station
Existence of safe, sheltered and convenient bike parking at train stations	NO/YES <ul style="list-style-type: none"> No sheltered parking, nor bike boxes or lockers Convenient open air bicycle parking, conveniently located, mostly roofed, well lighted in the night, with good quality racks (staple-shaped, inox) for 82 bikes, at disposal of the railway customers and for the square as a destination. The parking is ready for the traffic growth of the railway station All bikes were parked in the racks The racks are easy to access, at street level, free of charge, no opening/closing time. Good level of perceived safety and security, attractiveness incremented by amenities (e.g. self repair tools, thematic decoration of the walls)
Availability of convenient public bikes	NO
Unity of bike-train organizations	YES: Being the bike parking on the premises of the railway station, it is managed together with the station
Integrated payment system/fare integration	NO
Positive communication and marketing about bike-train combination	NO/YES <ul style="list-style-type: none"> by Slovenske železnice only concerning bicycle carriage along other Slovenian train lines (for instance Maribor-Austria, or along Parenzana)
Existence of safe and secure routes to reach the stations.	NO/YES <ul style="list-style-type: none"> Only the central area in front of the station building is traffic calmed, as 30 km/ zone. Safe and secure routes to reach the station from the Sloveninan and Italian side are planned and some works ongoing (ITI project Isonzo-Soča cross-border cycle network, Biciplan)





Nova Gorica BUS: area monitored





ANALYSIS	Nova Gorica bus station
Existence of safe, sheltered and convenient bike parking at bus stations	NO/YES <ul style="list-style-type: none"> • No sheltered parking, nor bike boxes or lockers • Open air bicycle rack, conveniently located, not roofed, not lighted in the night. The quality is low ('wheel benders'). • Places for 10 bikes, at disposal of the bus customers and of the nearby station Café. • OFFER AND DEMAND: The quantity seems proportioned to the current demand, as none or only one bike was found during the survey, though, given the high traffic of passengers, many of which are students, the demand would be likely higher if quality racks or a better parking were provided, such as that in Nova Gorica railway station. • The racks is in the view point of bus passengers' flow or Café customers. • Only one bike was found parked in the entire station square, parked in the rack. • The racks is easy to access, at street level, free of charge, no opening/closing time. • The level of perceived safety and security is that of the bus station. • the parking is tidy. There were no 'orphan bikes'
Availability of convenient public bikes	NO/YES <ul style="list-style-type: none"> • A bike sharing location of Go2Go is available at a distance of about 270 m.
Unity of bike-train organizations	<ul style="list-style-type: none"> • Go2Go bike sharing is managed by the same group providing the bus service, Nomago, via its branch NomagoBikes (see next chapter) • Being the bike parking on the premises of the bus station, it can be managed together with the station
Integrated payment system/fare integration	NO
Positive communication and marketing about bus-train combination	Unknown
Existence of safe and secure routes to reach the stations.	YES <ul style="list-style-type: none"> • A cycle path on both sides of the main road xxxx offers safe and secure accessibility to the bus station.



Sempeter pri Gorici: area monitored





SE1



ŠEmpeter pri Gorici

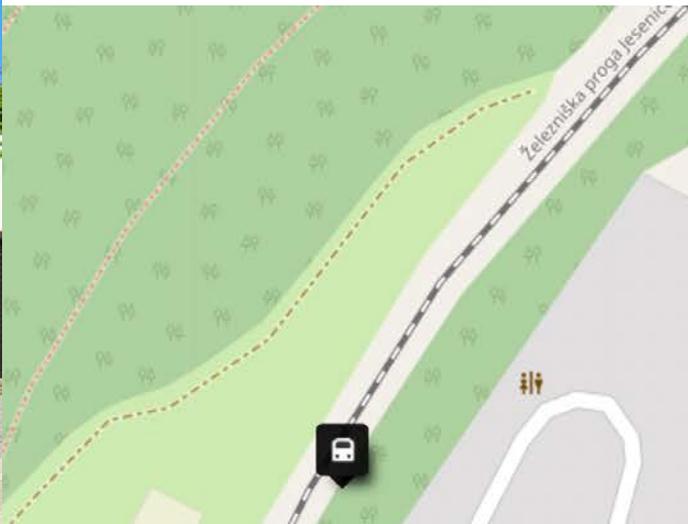
SE1

ANALYSIS	Šempeter pri Gorici railway station	
Existence of safe, sheltered and convenient bike parking at train stations	<p>NO</p> <ul style="list-style-type: none"> • There are no cycling facilities available • Inside and around the station building there is not any rack for parking bikes, neither there seems to be a demand for places, at least at the end of the cycling season, as the field check never found parked bicycles. • It can be useful to investigate whether there can be a potential demand by for instance workplaces in the surrounding area, or for leisure activities • The current rail traffic at this station is low. • In case of an increase of the rail traffic and of the demand for cycling intermodality, the station building has the potential to host a sheltered bike parking in a area currently unused. There can be a real growth potential, not only for the building size to host a sheltered parking, but also because the locals are already very responsive towards cycling, as the bike sharing station opened in 2021 summer at the centre of Šempeter near the post office is the second most used by the Go2Go registered users (see next chapter). 	
Availability of convenient public bikes	NO	
Unity of bike-train organizations	NO	
Integrated payment system/fare integration	NO	
Positive communication and marketing about bike-train combination	<p>NO/YES</p> <ul style="list-style-type: none"> • by Slovenske železnice only concerning bicycle carriage along other Slovenian train lines (for instance Maribor-Austria, or along Parenzana) 	
Existence of safe and secure routes to reach the stations.	<p>YES</p> <ul style="list-style-type: none"> • The main street to access the railway station is quiet 	



Solkan: area monitored



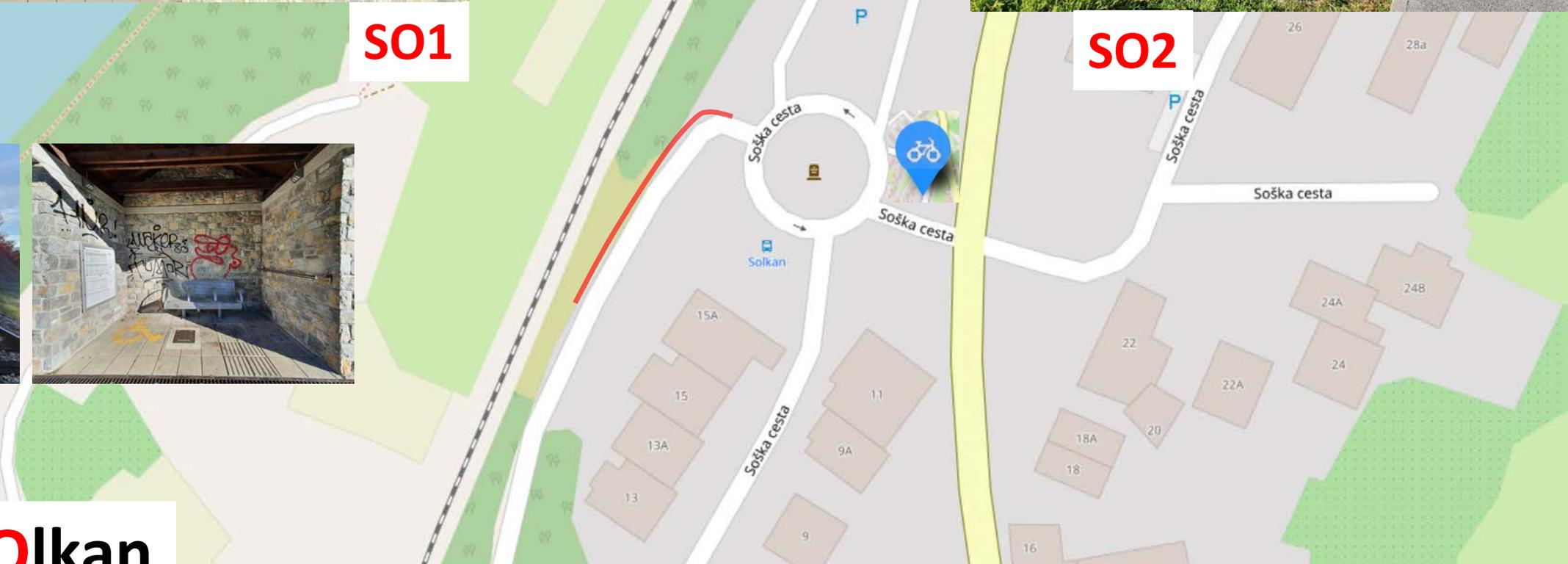


SO1

SO2



SOlkan



ANALYSIS	Solkan railway station	
<p>Existence of safe, sheltered and convenient bike parking at train stations</p>	<p>NO</p> <ul style="list-style-type: none"> • There are no cycling facilities available • Inside and around the railway stop there is not any rack for parking bikes, neither there seems to be a demand for places, at least at the end of the cycling season, as the field check never found parked bicycles. • It can be useful to investigate whether there can be a potential demand by for instance workplaces in the surrounding area, or for leisure activities • The current rail traffic at this station is low. • registered users (see next chapter). 	
<p>Availability of convenient public bikes</p>	<p>YES</p> <ul style="list-style-type: none"> • There is a Go2Go bike sharing location at a short distance (about 200 m.) from the railway stop, side of the street 	
<p>Unity of bike-train organizations</p>	<p>NO</p>	
<p>Integrated payment system/fare integration</p>	<p>NO</p>	
<p>Positive communication and marketing about bike-train combination</p>	<p>NO/YES</p> <ul style="list-style-type: none"> • Near the Go2Go bike sharing location a directional sign communicates the way to the railway stations • by Slovenske železnice only concerning bicycle carriage along other Slovenian train lines (for instance Maribor-Austria, or along Parenzana) 	
<p>Existence of safe and secure routes to reach the stations.</p>	<ul style="list-style-type: none"> • In the main road to access the railway station the traffic is not adequate for safe cycling. Planned improvements in the area by ITI project of the Isonzo-Soča cycle network. 	

SUGGESTED ACTIONS (BiTiBi guidelines)	Gorizia mobility hub	Nova Gorica railway station; Nova Gorica bus station	Solkan station	Sempeter pri Gorici railway station
Safe, sheltered and convenient bike parking at train stations	<ul style="list-style-type: none"> Upgrade and enlarge the bike parking up to 300 places (consider availability of a room inside the station or add bike boxes targeting ebike owners) Bike Hub: services (rental... for tourists&students) 	<ul style="list-style-type: none"> Railway station: Add wayfinding  Bus station: introduce a good quality bike parking for the customers of the buses 	Survey current users and residents about intermodality, add few racks.	Survey current users and residents about intermodality, add few racks.
Convenient public bikes	<ul style="list-style-type: none"> Integrate and merge the two independent bike sharing systems of Gorizia and Nova Gorica, to let users take and return a bike in all stations. Add one or two locations of the bike sharing service at Europe/Transalpina square, in the area of the railway station Add other bike sharing locations in between the existing ones on both the Italian and Slovenian side and Europe/Transalpina square Consider integrating the station based systems back-to-many with back-to-one system (Dutch the OV-Fiets model) at main hubs in Gorizia and Nova Gorica Add bike rental services at Gorizia Centrale and at Nova Gorica railway stations, targeting tourists (offering a variety of bikes and accessories, guided tours) 			
User monitoring	<ul style="list-style-type: none"> Permanent observatory of cyclists/intermodal cyclists (bike parking, cycle network, services): data collection and annual reports to assist decision making 			
Safe and secure routes to reach the stations.	<ul style="list-style-type: none"> Analyse the context of each mobility hub/station by assessing all routes to the stations from the neighbourhoods up to 4 km away: apply cycling infrastructure assessment tools based on sets of criteria grouped under the acknowledged principles of Safety, Directness, Comfort, Attractiveness. Give priority to main roads/routes leading to the stations: where they are found cycle-friendly, add wayfinding to the station; where interventions are required, provide input for city administrations to improve cycle accessibility, prioritizing Safety and Directness over Comfort and Attractiveness. 			
	<ul style="list-style-type: none"> Give priority to building the missing link between Piazza Martiri della Libertà and a main axis (Corso Italia) of the Isonzo-Soca cycling network, including a safe cycling roundabout at P. Saba 	<ul style="list-style-type: none"> As the cycle path along the former border is on the way, give priority to providing a convenient route linking Europe/Transalpina square to Corso Italia in Gorizia and to the existing path of Erjavčeva ulica in Nova Gorica 	<ul style="list-style-type: none"> Safe cycling connection from the station&Go2Go to the new bridge and to Solkan centre 	<ul style="list-style-type: none"> Connect the railway station to the Isonzo-Soča cycle network. (wayfinding)
Unity of bike-train organizations	<ul style="list-style-type: none"> EGTCGO may extend its existing coordination on transport to promote convergence of rail, bus and cycling service providers, existing and new ones (Ita and Slo rail companies - bike sharing and rental companies – Ita and Slo bus companies) to favour unity of actions in introducing new services or be the managing organization of the new services 			
Integrated payment system/fare integration	<ul style="list-style-type: none"> Introduce cross-border integrated bus/train fare integrated with bike sharing or bike rental for season ticket holders (EGTCGO cross-border season ticket) Introduce one-day pass or multiday offers integrating public transport with cycling (bus/train fare + bike sharing or bike rental) and with other offers for tourists (an EGTCGO card) 			
Positive communication and marketing about bike-train combination	<ul style="list-style-type: none"> Marketing campaign to accompany the new works (especially the bridge) and the new services such as integrated bike sharing, bike rentals, bike parkings Joint initiative with stakeholders to promote the TrenoBici and the BiciBus services via the EGTCGO networks (new service network) Promotional campaign at workplaces located along the Isonzo-Soca cycle network and up to 4km from the railway stations (especially from Nova Gorica) Integrate the Isonzo-Soča cycle network info (tracks, POIs) into digital platforms existing/planned/under construction at regional/national/cross-border level 			

4. PUBLIC BIKES AT PUBLIC TRANSPORT NODES

The two existing schemes in Gorizia on one side, and in Nova Gorica and Sempeter on the other side, are operated by the Gorizia Municipality or by the main Slovenian bus operator Nomago.

Unlike other railways companies, the Italian Trenitalia or the Slovenian Slovenske železnice do not operate any public bikes scheme.

4.1 GORIZIA: GoriziaInBici

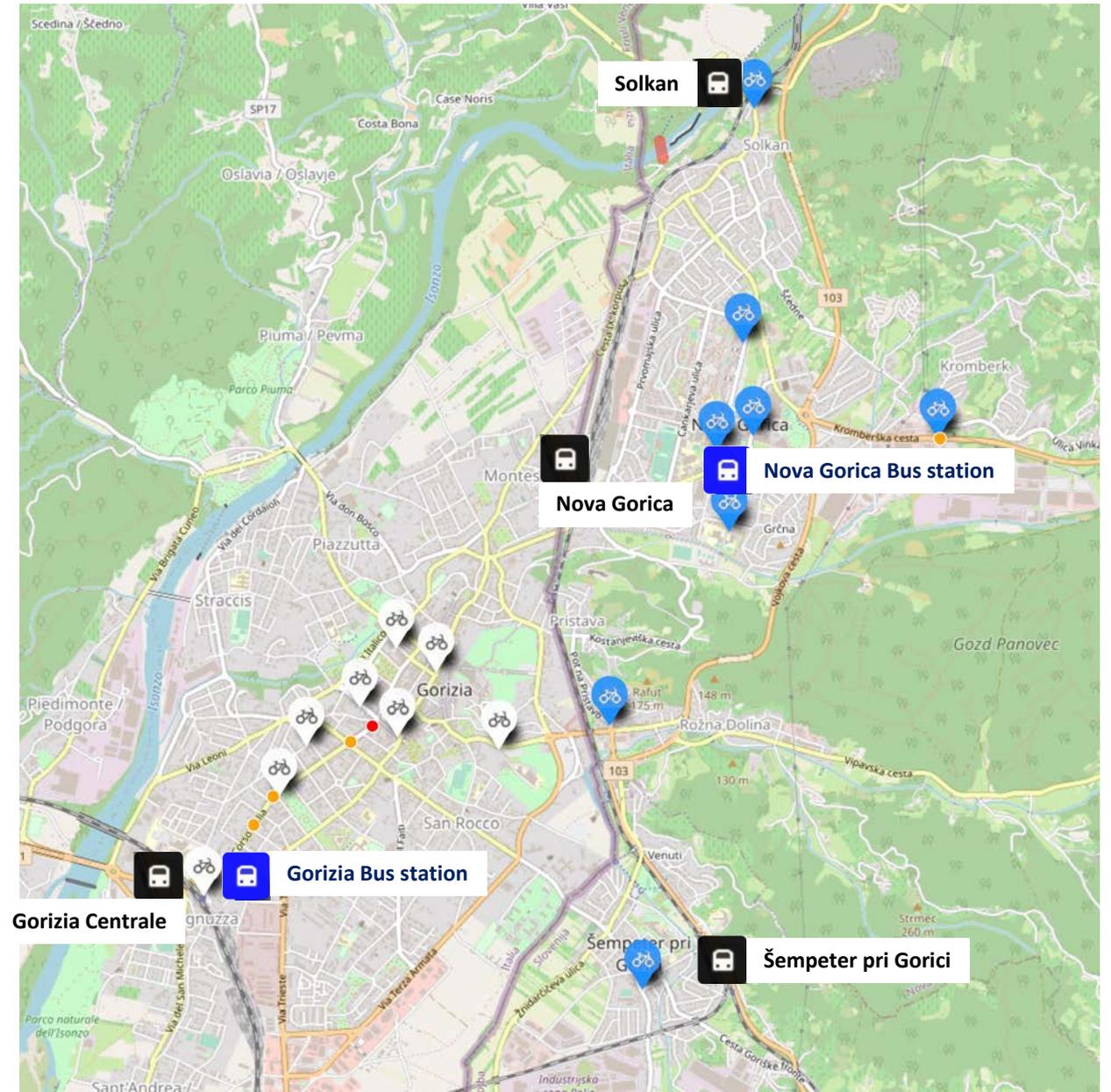
The system is station-based (bikes can be taken and return at specific locations where there is a hub to fasten the bikes). The system is one-to-many: any bike can be returned in any other location of the network.

There are 8 locations at the main city destinations:

1. Stazione FS – piazzale Martiri della Libertà d'Italia
2. parco della Rimembranza – corso Italia (e-bike charging point)
3. parcheggio pubblico – via Manzoni (e-bike charging point)
4. Comune – piazza del Municipio
5. Università degli studi di Udine – via Armando Diaz
6. mercato – via Boccaccio (e-bike charging point)
7. Università degli studi di Trieste – via Alviano (e-bike charging point)
8. Prefettura – piazza della Vittoria

The location at Gorizia Centrale is conveniently close to the railway station entrance to facilitate intermodal integration of cycling with trains or buses.

To access the system it is necessary to request subscription in person at a city office. At the moment, it is not possible to register online or on site via a mobile app.





Gorizia Centrale

Location of Bike sharing GoriziaInBici



The bike share service is conceived to meet the different needs of both commuters and tourists.

The annual subscription is accessible to residents and non-residents and allows also the extended use of a bike up to a maximum of 3 hours per each rent. Tourists can access the service on a daily basis at a specific fare and can keep the bicycle for the entire day, as a common rental.

4. PUBLIC BIKES AT PUBLIC TRANSPORT NODES

4.2 NOVA GORICA: GO2GO

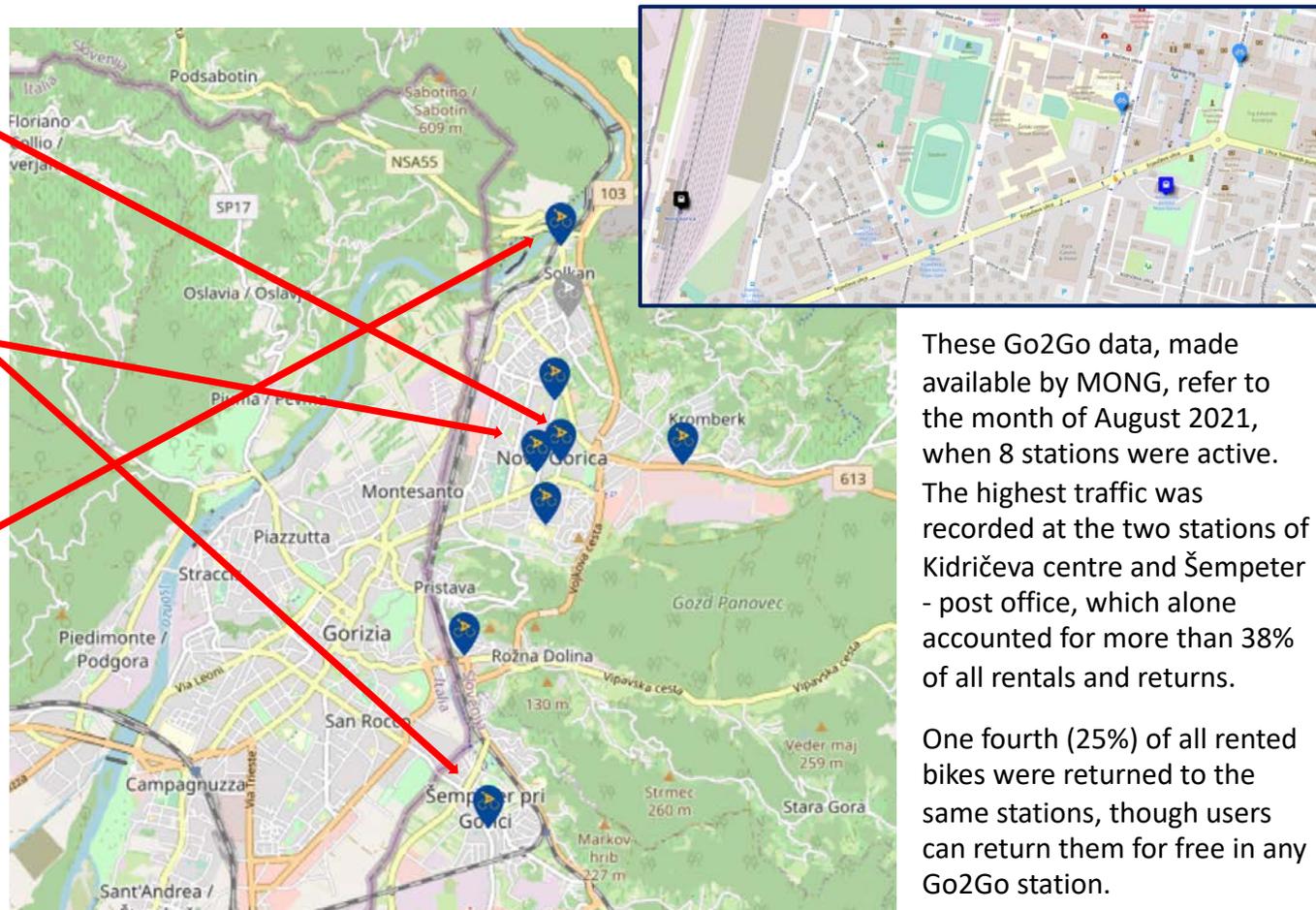
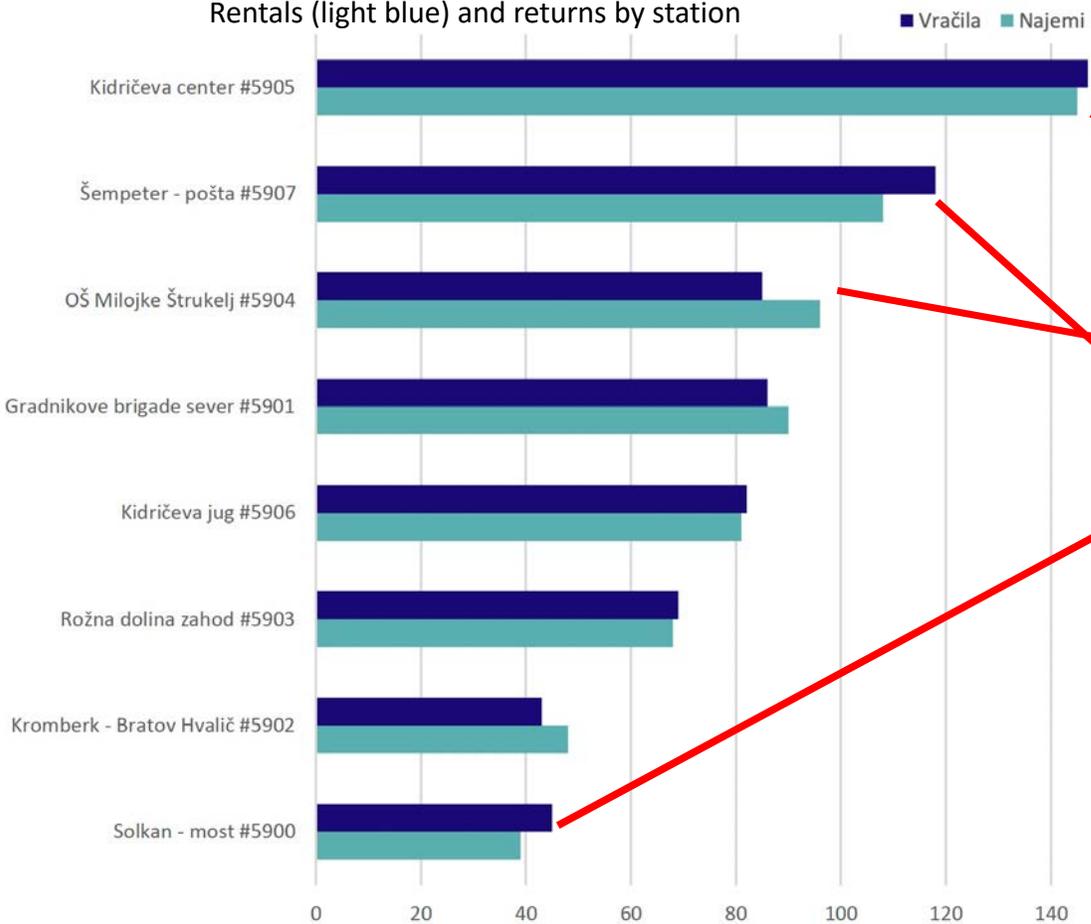
GO2GO Bike sharing by NOMAGO, on the way to integrated mobility

The bike sharing service GO2GO introduced in Nova Gorica in 2021 is run under the brand of the Slovenian NOMAGO, a wide range mobility operator based in Ljubljana, that manages a fleet of about 600 buses in a network of intercity and international bus lines in the Adriatic region (Slovenia, Italy, Croatia), that manages a related network of bus stations, and a more recent bike sharing service (Nomago bikes) in a number of Slovenian cities and towns. It is also a travel agency that resells flight tickets in combination with own bus tickets to reach the airports and also accommodation, gaining a position as an integrated travel and mobility solutions provider, from the long-distance to the last mile. The Nomago bike sharing service is powered by NextBike, a German company based in Leipzig, highly specialized in one of the first large scale bike sharing scheme, station-based, disseminated in Central and Eastern Europe, in the Balkans and also in a number of Mediterranean islands, with a growing extra European expansion. Coping with the competition by the more recent generation of free-floating bike sharing schemes, Nextbike also introduced a hybrid scheme, combining station-based and free-floating bikes using geofencing to define virtual stations. These evolutions are made possible by the ITS developments, with apps and digital platforms as enabler of new solutions framed as “Mobility as a service (MaaS)”, such as all the ‘sharing mobilities’ services, ranging from cars to bikes and cargobikes, to kick scooters. Enhanced by digitalisation, Intermodality can offer a competitive solution to replace traditional car use, making possible a smooth, effective and efficient integration of different travel modes and related services, an example of which is the Nomago integration of the bus and the bike sharing service.



The source of the information about the first months of GO2GO is the Municipality of Nova Gorica/Nomago bikes

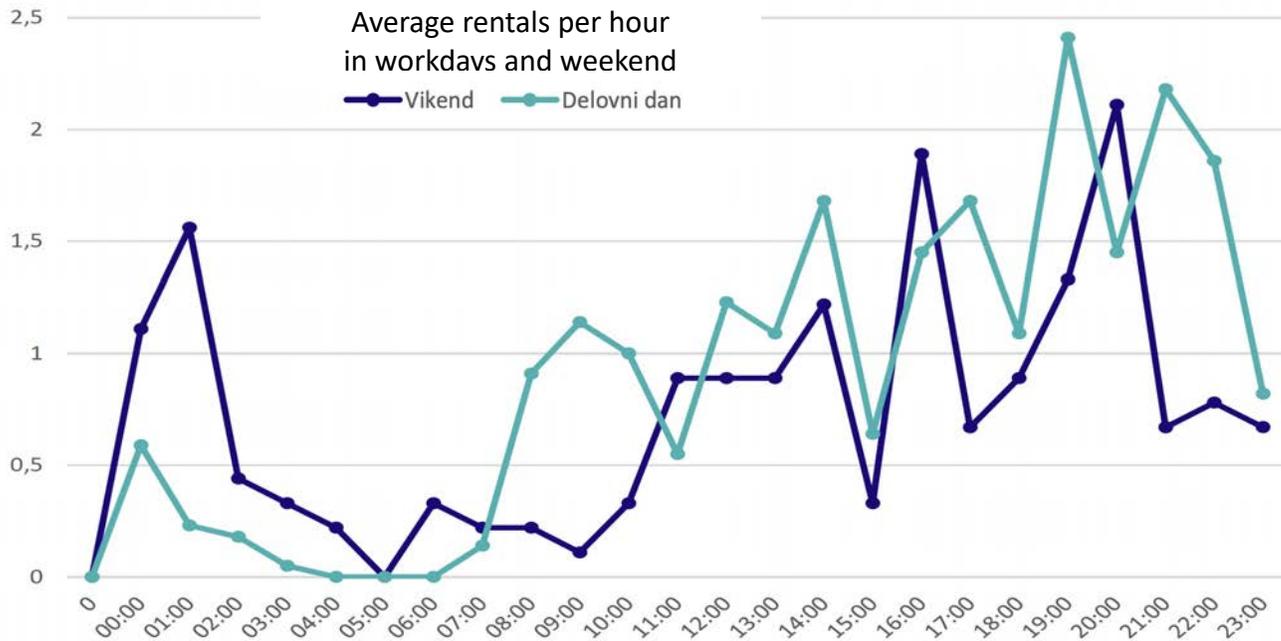
Rentals (light blue) and returns by station



These Go2Go data, made available by MONG, refer to the month of August 2021, when 8 stations were active. The highest traffic was recorded at the two stations of Kidričeva centre and Šempeter - post office, which alone accounted for more than 38% of all rentals and returns.

One fourth (25%) of all rented bikes were returned to the same stations, though users can return them for free in any Go2Go station.

The majority of the stations have a fair balance of rentals and returns – which is important for the economic sustainability of the system – while two stations stood out from the others: the popular Šempeter - Post Office, with more returns than rentals, suggesting Go2Go may be chosen to go back to Šempeter after a first trip by different means; the Milojka Štrukelj Primary School, with significantly more rentals than returns, as if users leave from here to go back to their homes, after reaching the centre with a different mode. Together with Kidričeva centre, this Go2Go station is the closest to the main bus station. This seems to confirm GO2GO is being used in combination with other mobility solutions on the way to a more integrated mobility system, though this may increase the cost to reallocate the bikes. Combining bike sharing with public transport stations, especially large stations as Avtobusna postaja Nova Gorica, is a known challenge: on one side many users desire to find bicycles at the station when they arrive there by bus, which would require a very large amount of bikes made available in the morning peak time slots, when more users arrive by bus than those coming from the city and departing, and many parking places available to return the rented bikes at the station in the evening peak time when more users need to return the bikes and depart by bus. The operator faces higher/unsustainable managing costs to provide the desired amount of bikes or places to return the bikes, as the bikes should be moved among stations very often. This type of bike sharing system is generally considered unfit for those needs, unless there is the capacity to cover the costs. To keep a balance between users' demand and sustainable costs, it's often chosen – as in the Nova Gorica case – to locate more bike sharing stations a bit far from large public transport nodes to reduce the amount of users looking for a bike in one single place. Of course this is a compromise: a less accessible offer is planned to reduce the pressure over the bike sharing system.

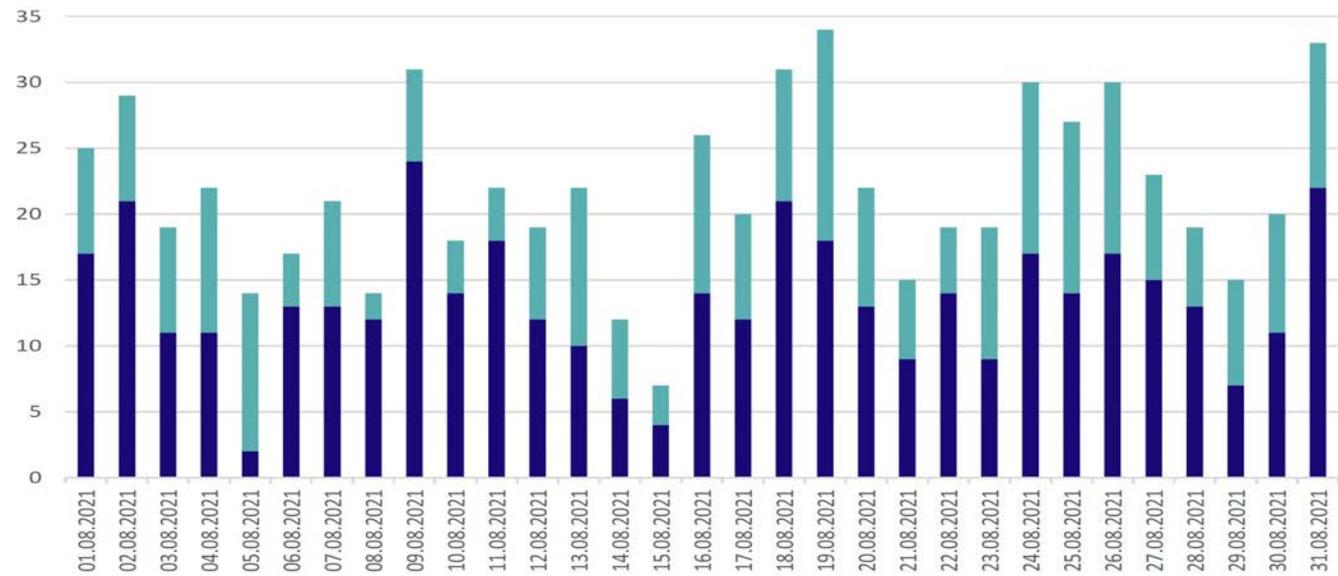
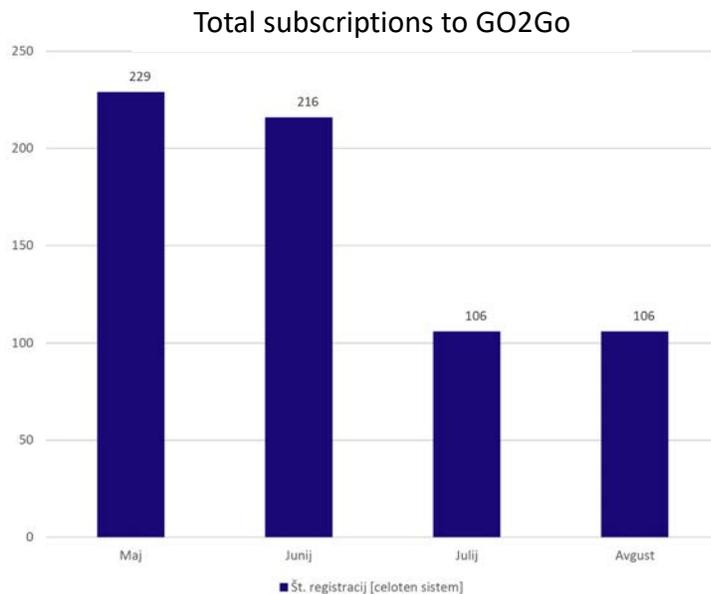


The hourly profile shows that the new bike sharing scheme is succeeding in providing a service for the diverse needs of work days users and iweekend ones, though the overall rentals are higher in weekdays.

It has likely been used on weekdays for commuting, as suggested by the first peak between 8 and 10 am, followed by a second peak at lunchtime, but with the highest daily peak in the evening rush hours at 6-7 pm, followed by second highest peak after dinner time. It would be interesting to investigate whether this last peak may mean that Go2Go is also complementing the public transport offer when transit services have a longer journey time due to lower frequency or are not available, thus whether GO2GO is enabling multimodality.

That can be the case in weekends too as a significant peak occurs in the night hours around 1 am, with the highest daily peaks in the evening at 8 pm, followed by a third peak in the afternoon at 4 pm. It should also not to exclude that GO2GO may serve the needs of weekend workers as well, alongside the needs of travels originated by leisure or shopping purposes.

Most of the users registered in the first two months. In the summertime months of July and August less than half of the subscriptions to the service were registered, suggesting that tourists may have not discovered the service yet.



In August 2021 the e-bikes (dark blue) were rented as much as or more than normal bikes.

4.3 SUGGESTED ACTIONS

To fulfil the development of the EGTCGO as a functional urban area (FUA) it is advised to extend to cycling services, more specifically the bike sharing service, the integration process concerning mobility that was already started by EGTCGGO with the plan to develop a cross-border public transport system.

In the framework of the Cyclewalk project it was suggested to integrate GoriziaInBici with Go2Go, the last one launched in 2021.

During the implementation of the the intermodality action of the Cyclewalk action plan, the EGTCGO decided to embed in the ITI policy tool (Isonzo-Soca park) the plan to deliver a single bike sharing system for the whole territory.

The EGTCGO submitted to the European programme B-Solutions a proposal and received assistance for the definition of the legal framework and the administrative procedures to reach firstly the integration of the two existing systems, and later a full merge of them. The plan foresees to reach a merged system by 2025, when the ETGCGO territory will host the events of Go2025 (Nova Gorica, jointly with Gorizia, European Capital of Culture).

A legal framework and an administrative procedure were defined to deliver firstly the integration of the two systems, and at a later stage a full merge of them.

The implementation plan was discussed with the Transport, Urban planning and Culture Committee.

The contracts are going to be signed and the new service will be running in 2022. merged system by 2025, when the ETGCGO territory will host the events of Go2025 (Nova Gorica, jointly with Gorizia, European Capital of Culture).



About the typology of the new integrated/merged systems, it is advised to build upon the two positive experiences of the two existing systems, that are both based on the bike-to-many concept (each bike can be returned in any location of the network) but also to consider the advantages of the back-to-one system such as the Dutch OV-Fiets, that has much lower operational costs.



The bike-to-many systems are indeed quite challenging in terms of management. Indeed when some locations of the network are positioned in places where many users arrive at the same time (or short time-range) to collect a bicycle or, symmetrically, where many users arrive at the same time to return a bicycle. This typically happens at collective transport nodes, when a trains or buses arrive or depart, attracting many users at the same time.

As a consequence, to assure a good quality service, that is to assure that all or most of the users can find a bicycle to hire or a free place to return a bicycle in a location, it is necessary to have dedicated teams, with a large vehicles such as a van, moving around bicycles all day long. This has a high cost in terms of personnel, and it also has an impact in terms of GHG emissions, especially if the van has a diesel engine, as often happens, thus reducing the positive impact of cycling as climate friendly mobility choice. From this point of view, indeed, the best solution is the combination of private bikes with collective transport by providing parkings for bikes at mobility hubs.

5. POSSIBLE TARGETS AND SUGGESTED STRATEGY FOR INTERMODALITY

Considering these figures in the context of the European Green Deal, of the Italian Law 11.01.2018 n.2 and of the FVG regional Law 23.02.2018 n.8 and of the related PREMOCI Piano Regionale Mobilità Ciclistica (May 2021), that are all calling to extend the share of cycling and of the combined use of public transport + cycling, the current high demand for bike parking seen in Gorizia shows the high potential to reach considerable results and motivates to tackle criticalities.

The bike parking offer can be improved in terms of both quantity and quality, as well as the accessibility to the square by safe cycling infrastructure, to encourage potential users to choose either trains and cycling as means of transport or either Gorizia as a destination (tourists and commuters such as students*).

The BiTiBi experience of adapting the Dutch approach to other European contexts can inspire the drafting of a new strategy by EGTCGO to combine private cycling, public transport, and public bikes (bike sharing) at cross-border level. When in 2014 the BiTiBi method started to be applied in Italy and other Eu countries, the estimated share of existing combination of cycling with rail transport was 4%. The BiTiBi scenario set for European railway passengers is 20% of them who would cycle for their first or last mile. 20% is less than half the share reached in the Netherlands in 2016 (45% of passengers cycling to/from railway stations) but is the double of the assumed Gorizia starting point (9,7% share that we roughly estimated in 2020-2021) is encouraging. A sharp increase can be target considering all users of EGTCGO main mobility hubs, be users of railways or buses, with the perspective to replicate also an increase in overall train passengers at those stations where new/enlarged bike facilities were provided along BiTiBi guidelines (+20% obtained in the Netherlands).

A perspective that will be facilitated by the opening of the rail connection Gorizia Centrale-Nova Gorica if not of the historical Transalpina railway line.

Bike trips are covered either by private bikes or by public bikes: private bikes, for which bike parkings are needed, are used mostly for the first mile, from home to the departure station, while the last mile from the arrival station to the final destination of the journey is covered with a second private bike - left in the bike parking - only by regular users of that station such as commuters, while irregular travellers prefer hiring a public bike (bike sharing) at the arrival station.

In the EGTCGO context, a mix of commuters and irregular travellers such as tourists can be expected as uptaking cycling to/from the railways stations and public transport hubs.

The strategy to increase cycling intermodality can be based on three pillars:

1. Merge the existing bike sharing systems into a single integrated one extended to the entire EGTCGO territory, and include a location of the public bikes scheme, at the main mobility hubs in Gorizia and Nova Gorica.
2. Provide the same high quality of bike parking and adequate capacity at the main mobility hubs in Gorizia and Nova Gorica, setting an EGTCGO standard, combining parkings with services (such as rentals) at new 'bike hubs'.
3. Accompany the existing offer of extensive bike carriage capacity by Italian regional trains targeting leisure cyclists (seasonal weekend trains: 128 places for bikes) by giving priority to the works of the planned safe cycling infrastructures to connect the railway stations with the Isonzo-Soca cross-border cycle network, particularly Gorizia Centrale, as this is the main entrance gate to access the network from outside the EGTCGO. These infrastructures will be useful also for the existing bus intermodality (APTGo BiciBus are based in the same hub).

*As the mobility offers affects students attendance to classes, and lower attendance is correlated with lower study results, universities and their hosting cities are supported by the Ministries of Mobility (MIMS) and of University (MUR) in their investments to connect railway stations to university sites and to provide adequate bike parkings at stations (velostazioni): <https://www.mit.gov.it/comunicazione/news/pnrr-assegnate-regioni-ed-enti-territoriali-risorse-per-oltre-32mld-per>.

The perspective of reopening the Transalpina railway line would have, among its many impacts on the accessibility of the cross-border region, also the likely positive impact of improving the so much required change towards sustainable mobility, that is towards intermodality train+bike as replacement of single car trips. Improved train services were indeed found as the second most important trigger of bike-train uptake capable of replacing car driving (and not just scaling up cycling), in a long list of triggers, after reducing traffic congestion (S. Nello-Deakin, M te Broemelstroet 2021).

The combination of actions of reopening of the historical railway line with the implementation of the ITI project/ Isonzo-Soča park cycle network and with the measures suggested to improve the infrastructural integration at the mobility hubs analyzed in the present audit (improving the bike parking facilities and the merge of the two public bike sharing schemes into a single borderless one) would make cycling irresistible and boost its modal share increase while developing cohesion and symbolic bridges at the country level, adding co-benefits, as the new Solkan cycle-pedestrian bridge over the Isonzo-Soca river achieved before its completion.



Table 3 Triggers of bike–train uptake for modal shift trips (n = 168)

Category	Trigger	Counts
Unsatisfied with existing travel mode (61)	Too much traffic congestion	25
	Too slow	19
	Too expensive	18
	Too unpleasant	14
	Too unreliable	7
	Parking became too difficult/expensive	2
Change in available transport options (44)	Stopped having car available	17
	Acquired a bicycle	14
	Change in train/PT services (e.g. timetables, routes)	12
	Acquired train season ticket	8
Changes in personal life (35)	Bikesharing/bike rental service became available	3
	Change in trip chaining	13
	Reduction in income level	12
	Change in household composition	10
Improvements to train services or cycling facilities (34)	Improved train services	20
	Improved bike parking facilities at station	13
	Increased availability of bikesharing/OV-fiets at station	9
	Improved cycling infrastructure in journey to/from station	7
Changes in professional/educational life (20)	Change in working hours	16
	Change in workplace travel policy	7
None of the above (10)		

