# Optimazing Bikes and Luggage Transportation System

Online Workshop
4 October 2024



OPTIMIZING BIKES AND LUGGAGE TRANSPORTATION IN RAILWAY SYSTEMS **UIC** Online 4 October 2024 10:00-12:30 CET

### Welcome



# UIC Customer Experience Platform (CEMP)



Jörg Ostwald

Head Product and Services

SBB Passenger

Department

UIC CEMP Chair



Vanessa Pérez Miranda

Passenger Senior Advisor
CEMP Project Manager
UIC

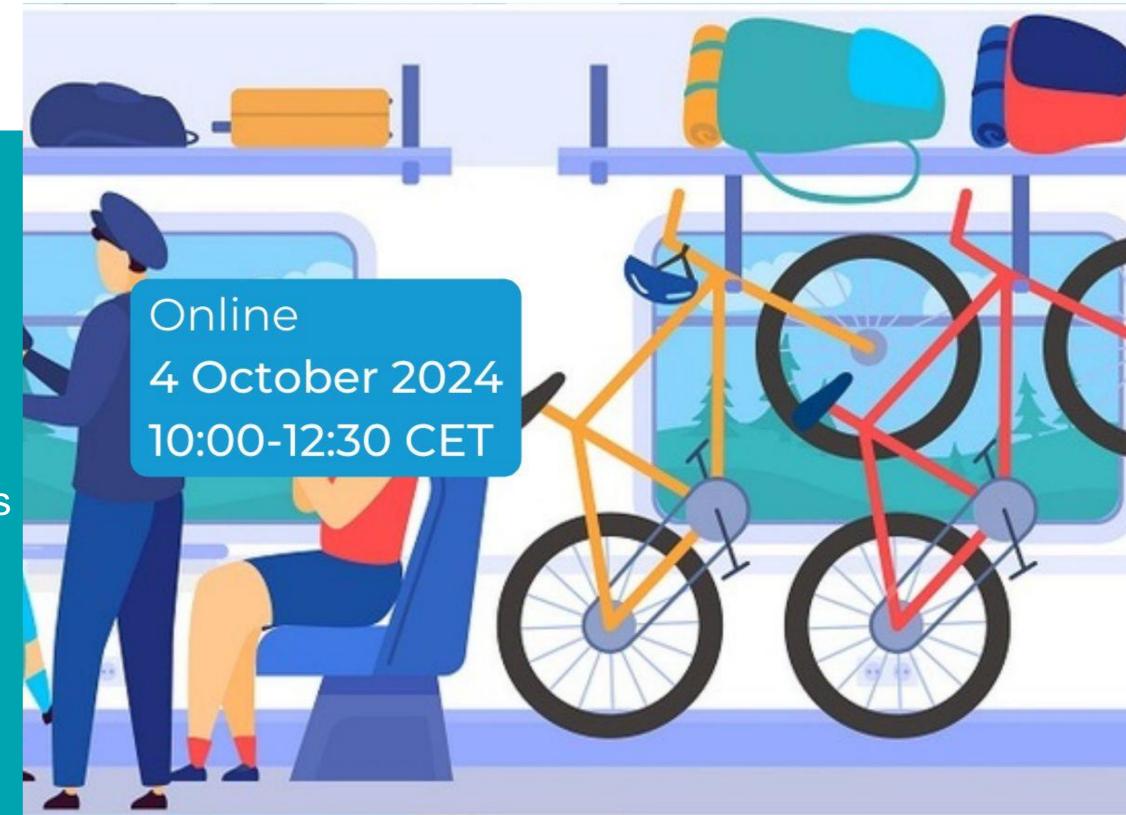


Joaquin Botella

Chief Technical
Engineer Railways
Sener

OPTIMIZING BIKES AND LUGGAGE
TRANSPORTATION IN RAILWAY SYSTEMS







# Optimazing Bikes and Luggage Transportation System Programme

Welcome

Keynote Speeches

The International Landscape of Bikes and Luggage Management on Railways

Panel Discussion: Balancing Accessibility, Capacity, and Sustainability in Railway Services

**Closing Remarks** 

### Welcome

# uic)

# UIC Customer Experience Platform (CEMP) Chair



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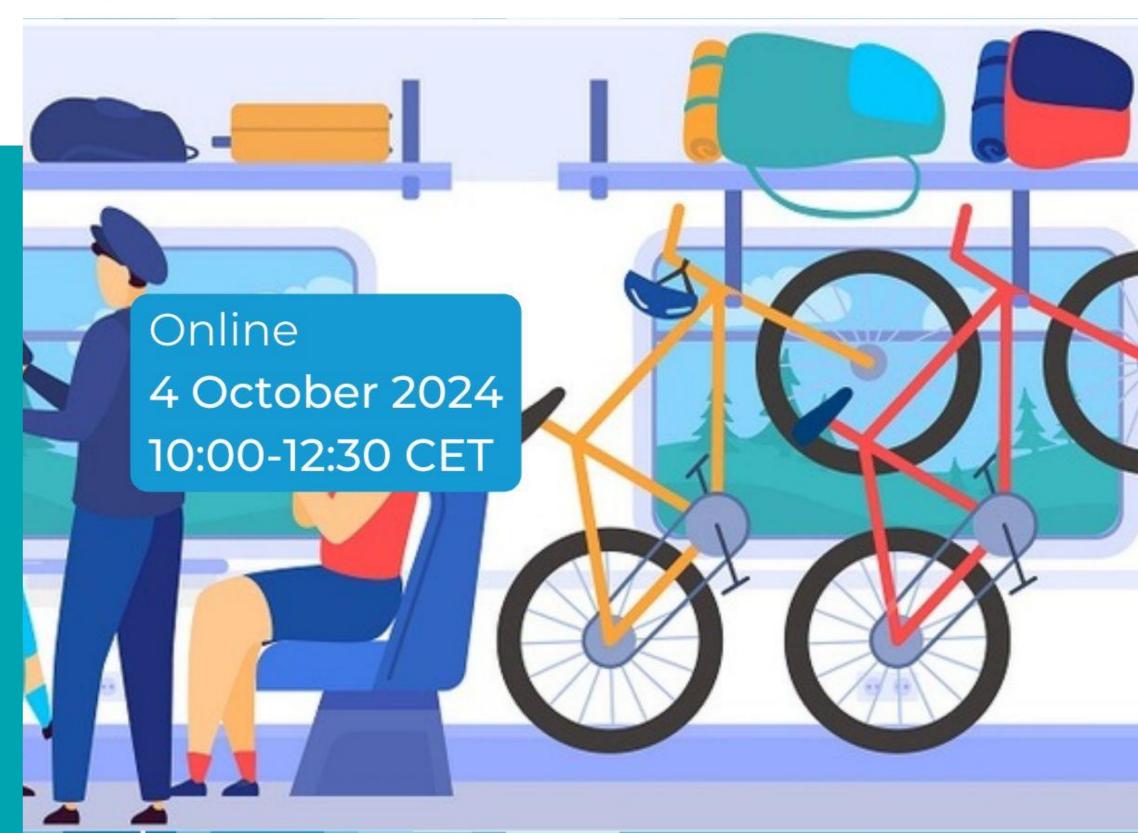
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TRANSPORTATION IN RAILWAY SYSTEMS







# **Customer Experience Platform (CEMP)**

Global Passenger Forum, Commuter and Regional Trains sector.

CEMP signifies:

Improving the railway travel experience through innovation, best practice exchange, and the integration of new technologies.

CEMP is developed by:















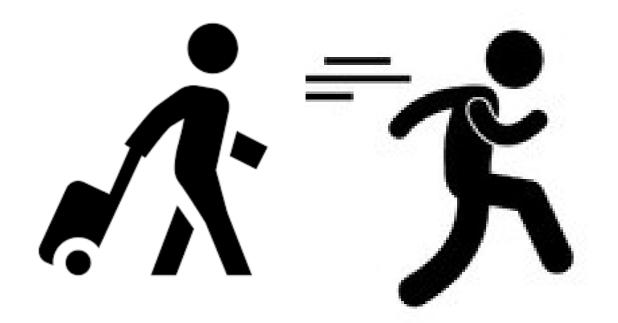






# Scope

# From Passenger



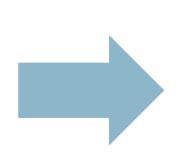


# To Customer



# Mass Transit

# Personalization

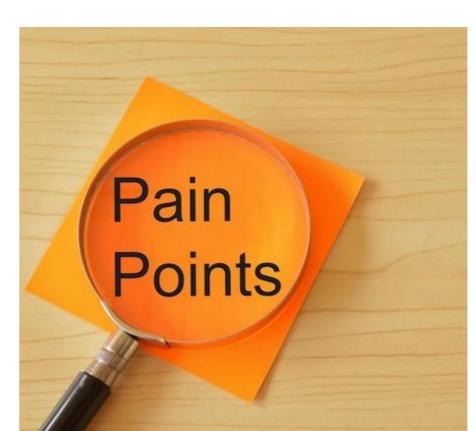


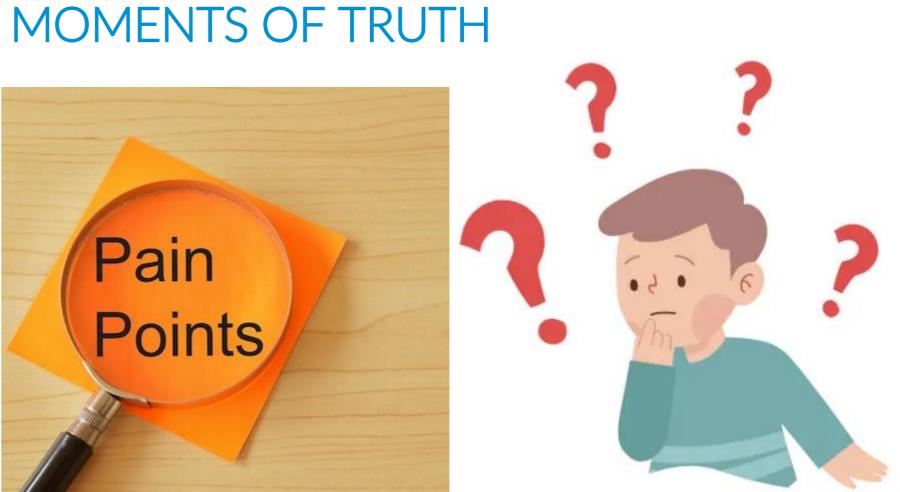
CX is more relevant in the context of railways, and the railway community ought to collaborate in laying the foundation for tools and measures for CX management



# THE CUSTOMER JOURNEY













### Benchmarking examples

- More sustainable and more competitive railways
- ☐ Adaptability of interior design and services: how do we keep an interior up to date when a train lasts 30 years
- ☐ Sense of cleanliness at the stations and on board
- ☐ Exchange of information with the clients, especially in case of disruption

# Lessons learned from CEMP I and CEMP II



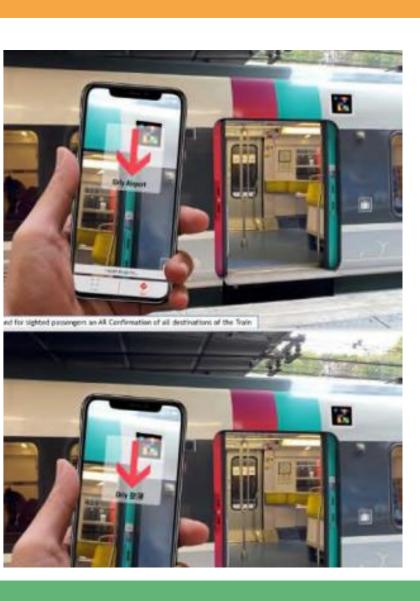


# How to communicate using different channels.... especially in case of disruption









# Lessons learned from **CEMP I and CEMP II**

不不成為方法









NoCarbonRun: participerez-vous?

31/05 L'été n'est plus si loin – pe...



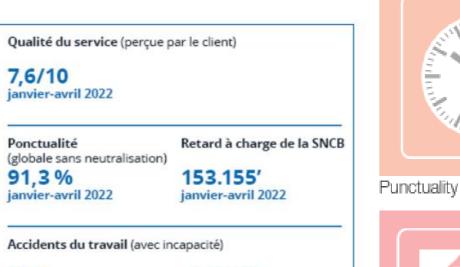
30/05 La gare de Charleroi devient ... 29/05 Grève nationale des secteurs ... 25/05 Ecoutez le podcast Let's Talk... 25/05 4 ans pour le GDPR 25/05 Trainbow Belgium colore les c... 25/05 Grève du 31 mai: les restaura...

Toutes les news...



392

Indicateurs de performance



+0,26 %

vs janvier-avril 2021

Nos postes vacants



Free Cashflow





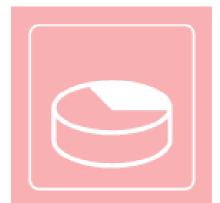


employee satisfaction





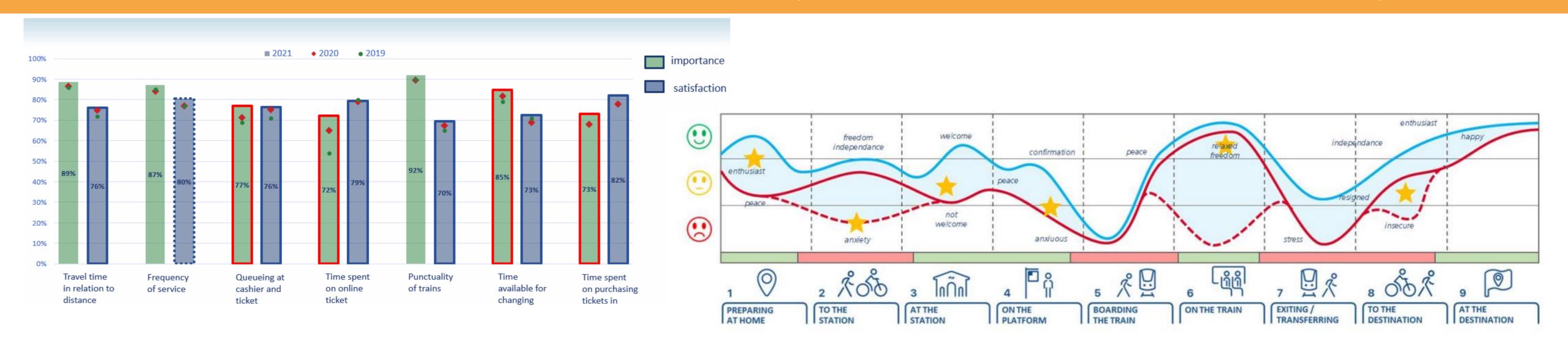
Period result



Market share



### How to measure customer experience and how to share it internally



# Lessons learned from CEMP I and CEMP II





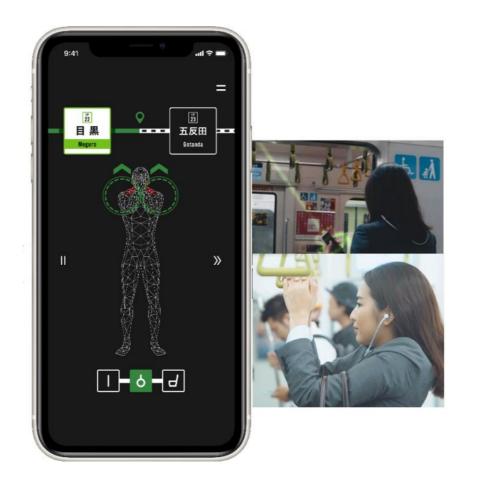


### How to motivate our clients, our staff and our engineers











Experience
Advice
Sightseeing
Authenticity



Sustainability
Safety
Quality
Accurate information
Assistance



Punctuality
Frequency
Efficiency
Digital
Travel time

# Lessons learned from CEMP I and CEMP II



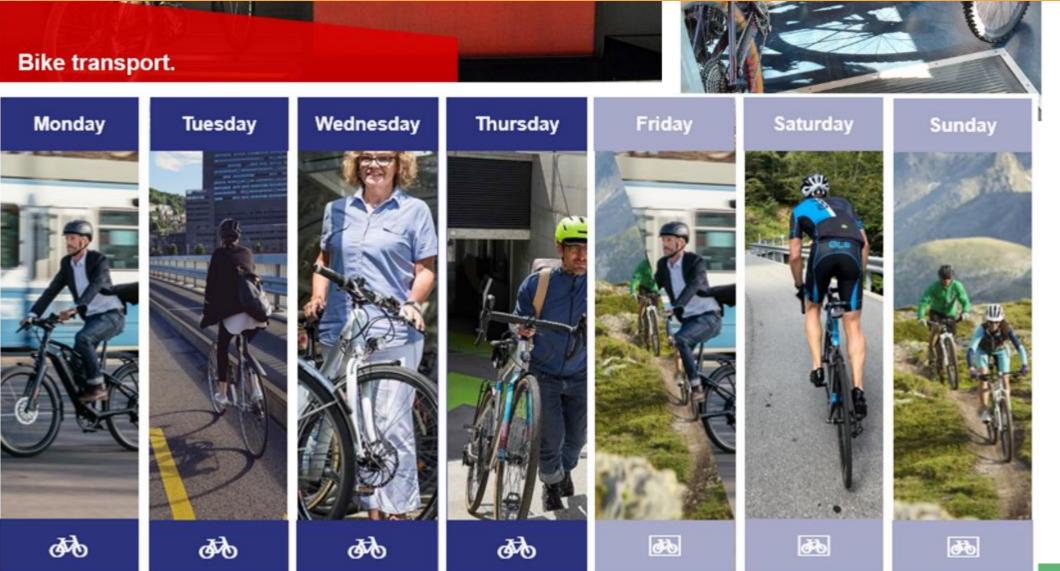








# How to manage bikes and luggage at the station and on board



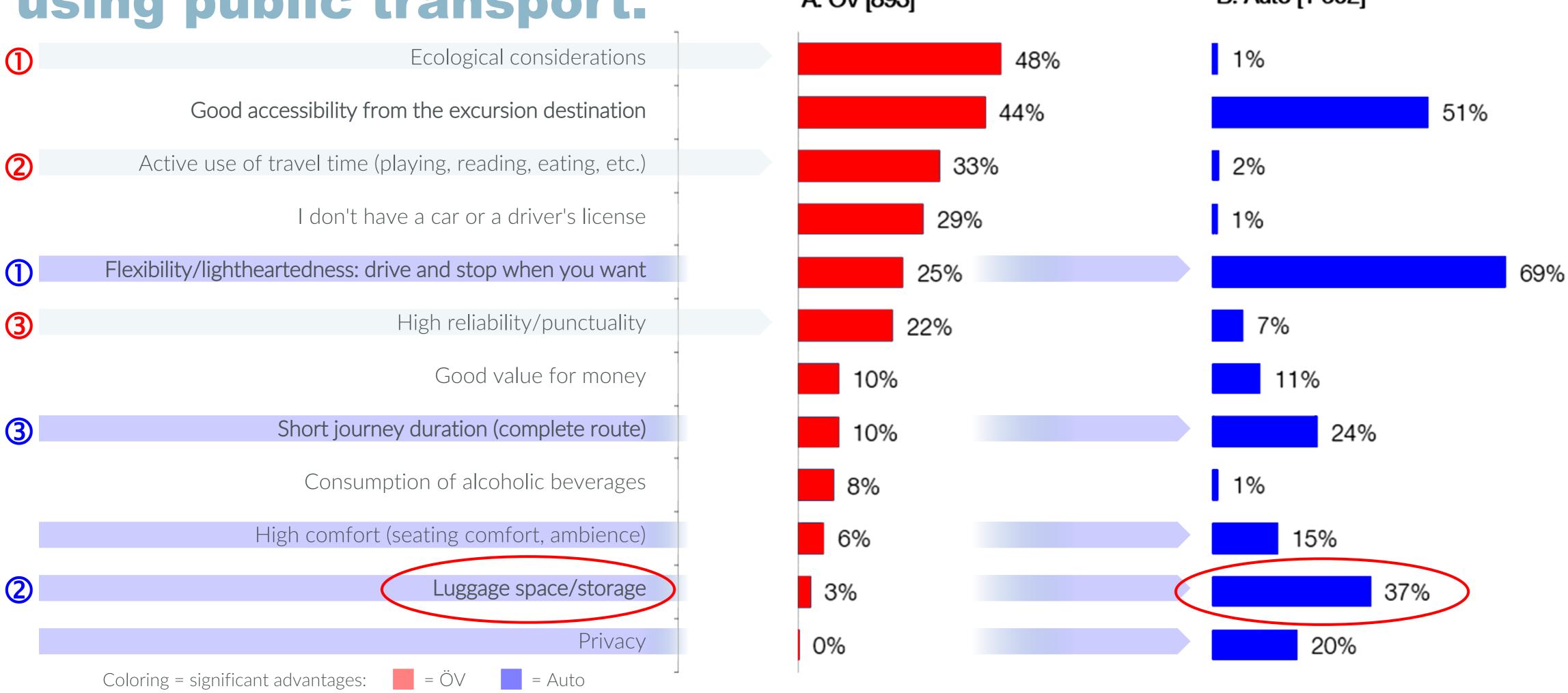
### Luggage special.

You will be able to have your luggage collected from any address in Switzerland or Liechtenstein.

Just two days later, we will deliver your luggage to selected hotels or even straight to your holiday home in some locations.



# Luggage is the third most common reason for NOT using public transport. A: ÖV [893] B: Auto [1'092]



Obstacles to public transport travel:

Lack of flexibility Is the already dense frequency sufficient to move more people onto public transport? Sufficient awareness? Awareness of first-last-mile offers?

Too little space/storage space for luggage Existing luggage offers are well known?

Advantages of public transport:

Good accessibility of many places Emphasise attractive public transport destinations more strongly. Communicate "useful time" and reliability/punctuality (cf. traffic jam) more strongly & Sustainability concrete comparisons (less CO2 emissions + no battery charging.

Quelle: SBB MAFO 2021/22

# TEST

Join at menti.com | use code 8189 7600

If you could bring any item on a train ride (without any limits on space), what would it be?

A bike for a scenic ride at the destination

A full picnic set for a luxurious meal on board

A foldable kayak for spontaneous adventures

A pet alpaca for some fuzzy companionship



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If you could bring any item on a train ride (without any limits on space), what would it be?

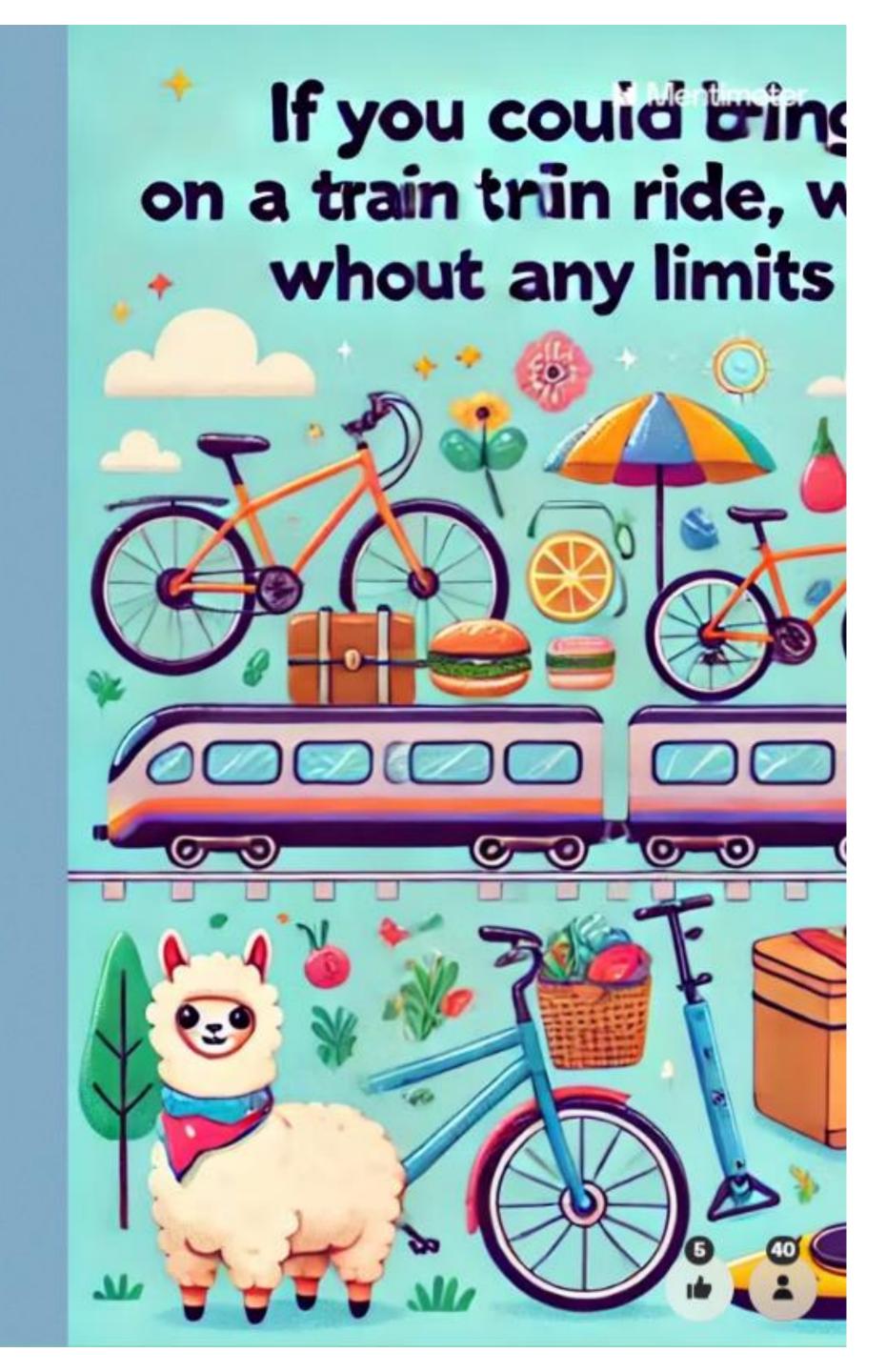
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A bike for a scenic ride at the destination

A full picnic set for a luxurious meal on board

A foldable kayak for spontaneous adventures

A pet alpaca for some fuzzy companionship













# Keynote Speeches



Jan Brumagne

Legal Officer at European Commission

**DG Move** 



**Fabian Küster** 

Director Advocacy and EU Affair

European Cyclists' Federation



Alessandro Vannucchi

Head of Portfolio

HITACHI



# Keynote Speeches



Jan Brumagne

Legal Officer at European Commission

DG Move



# Optimizing Bikes and Luggage Transportation in Railway Systems

UIC CEMP Workshop – 4 October 2024

Keynote speech by Jan Brumagne DG MOVE B5, Passenger rights

# **European Cycling Declaration – 8 principles & 36 commitments**

- 1. Developing and strengthening cycling policies
- 2. Encouraging inclusive, affordable and healthy mobility
- 3. Creating more and better cycling infrastructure
- 4. Increasing investments and creating favourable conditions for cycling
- 5. Improving road safety and security
- 6. Supporting high quality jobs and the development of a world-class European cycling industry
- 7. Supporting multimodality and cycling tourism
- 8. Improving the collection of data on cycling















Principles and a guide to action for more cycling in the EU





#EUGreenDeal



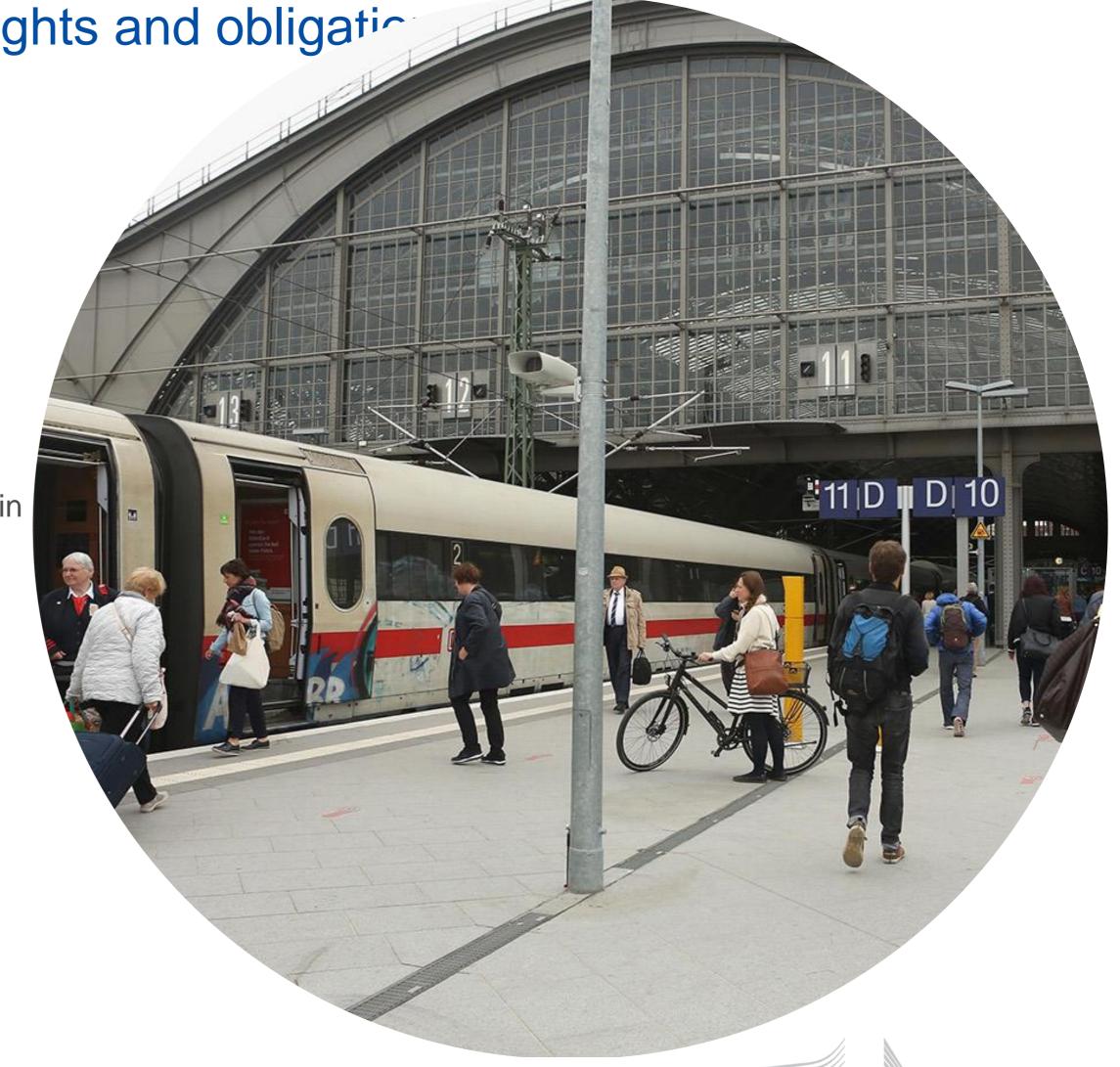
Regulation (EU) 2021/782 on rail passengers' rights and obligation

- Right to take bicycles on board trains
  - Fees
  - Reservations
  - Designated places for bicycles
- Limitations
  - Operational or safety reasons
  - Weights and dimensions of bicycles
  - ➤ Website → conditions



Regulation (EU) 2021/782 on rail passengers' rights and obligation

- Bicycle plans
  - Railway undertakings or competent authorities (PSC)
  - Public consultation
  - Published on website
- As of 7/6/2025: as a general rule, at least 4 places for assembled bicycles in new rolling stock or major upgrades to existing rolling stock
  - Bicycle plans
  - Member States can set a higher number for certain services
  - Restaurant cars, sleeping/couchette cars



European Commission Regulation (EU) 2021/782 on rail passengers' rights and obligation

- Scope of application
  - Long-distance rail services
    - Cross-border
    - Domestic
  - Regional services
- Possible exemptions
  - (Sub)urban services



European Commission

# Thank you

Contact: MOVE-RAIL-PASSENGERS-RIGHTS@ec.europa.eu



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# Keynote Speeches



Fabian Küster

Director Advocacy and EU Affair

European Cyclists' Federation



# The bike and train eco-system

Fabian Küster, Director Advocacy and EU Affairs 4 October 2024, UIC webinar





# ECF's distinctive success factors

- Leading European voice of civil society for cycling
- Strength of our pan-European and global networks
- Platform and communications reach
- Expertise, reputation, credibility with policy makers









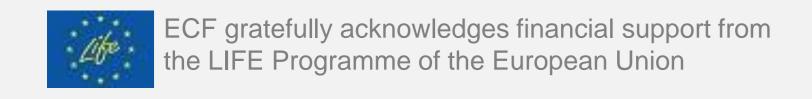
















# Together we are stronger!

- Inherent weakness of trains: first and last mile
- Inherent weakness of cycling: long distances

To break the dominance of the private car, we need to pool our strengths and offer an alternative that is as fast, easy and enjoyable as a car ride.







# The Bike & Train eco-system: The Netherlands

- 40% of all train customers cycle to the railway station;
- 10% from the railway station to their point of destination
- Bike-parking + OV-fiets + bicycle carriage on trains





# Eco-system: Bicycle and Train

Hardware

Software

Orgware





# Hardware

- Rolling stock
  - Bicycle spaces
  - Accessibility of the rolling stock
- Railway station
  - Bicycle parking (Quantity and Quality)
    - Charging infrastructure; space for non-standard bicycles;

. . .

- Accessibility
  - Of the railway station
  - Of the platforms
- Intermodality: Bicycle hire system
- Rail network
  - Interfaces with cycle infrastructure (bridges, tunnels)
  - Cycle paths along railway lines

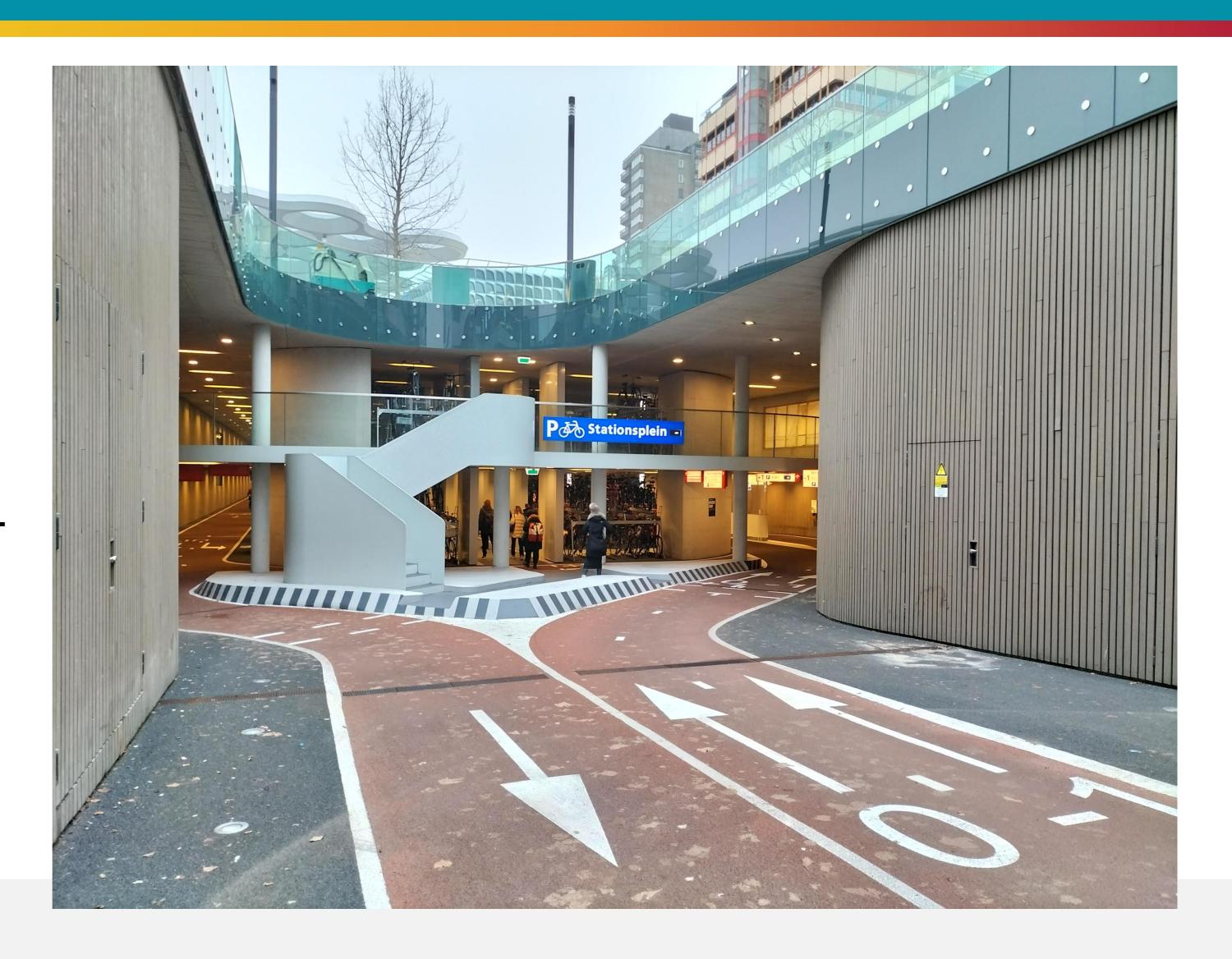




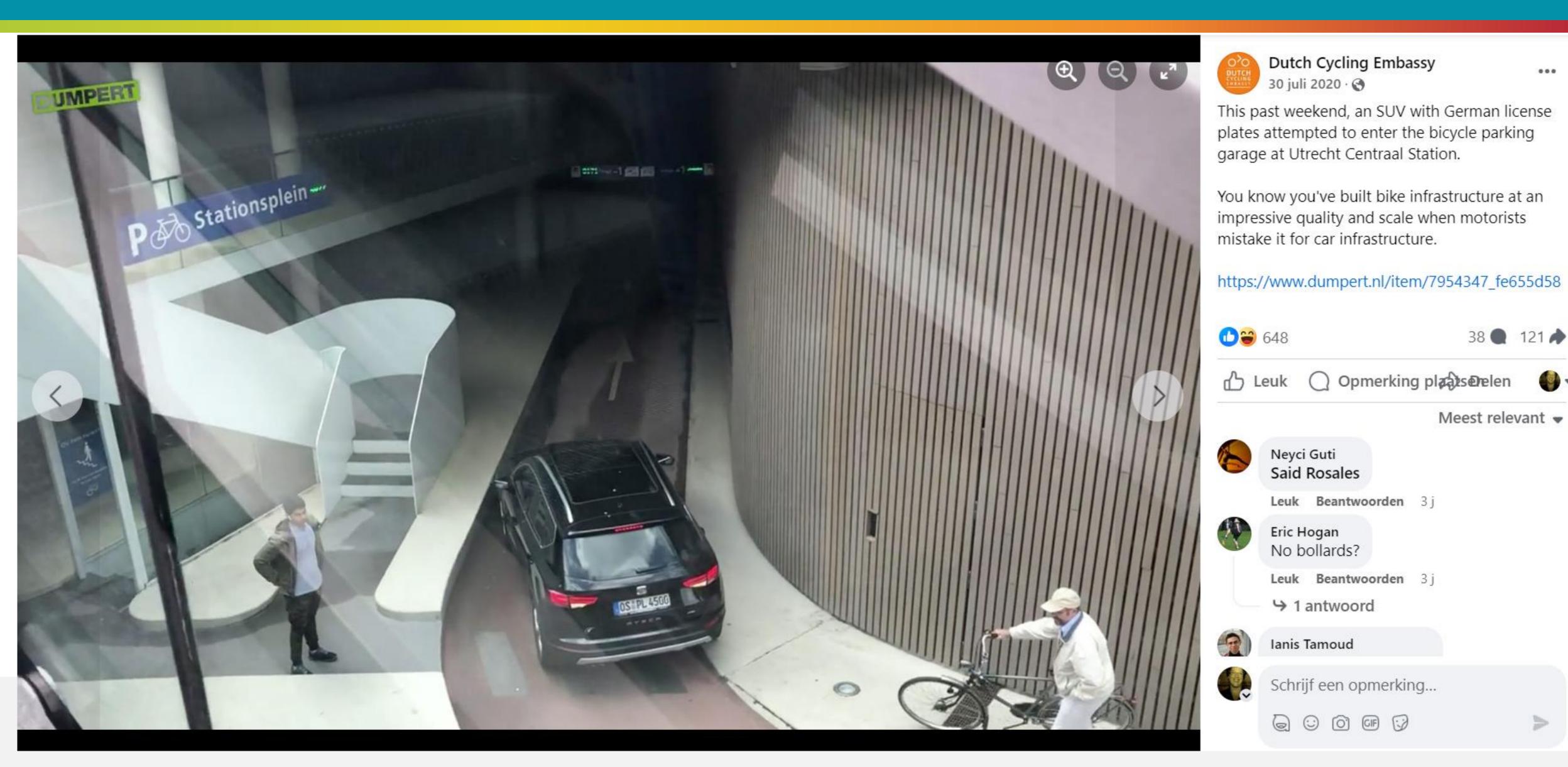


# Good practices: The Netherlands

- Bicycle parking spaces at railway stations: 510,000 → 600,000 (2027)
- New railway concession 2025-2035:
  - Free bicycle parking at railway stations for the first 24 hours





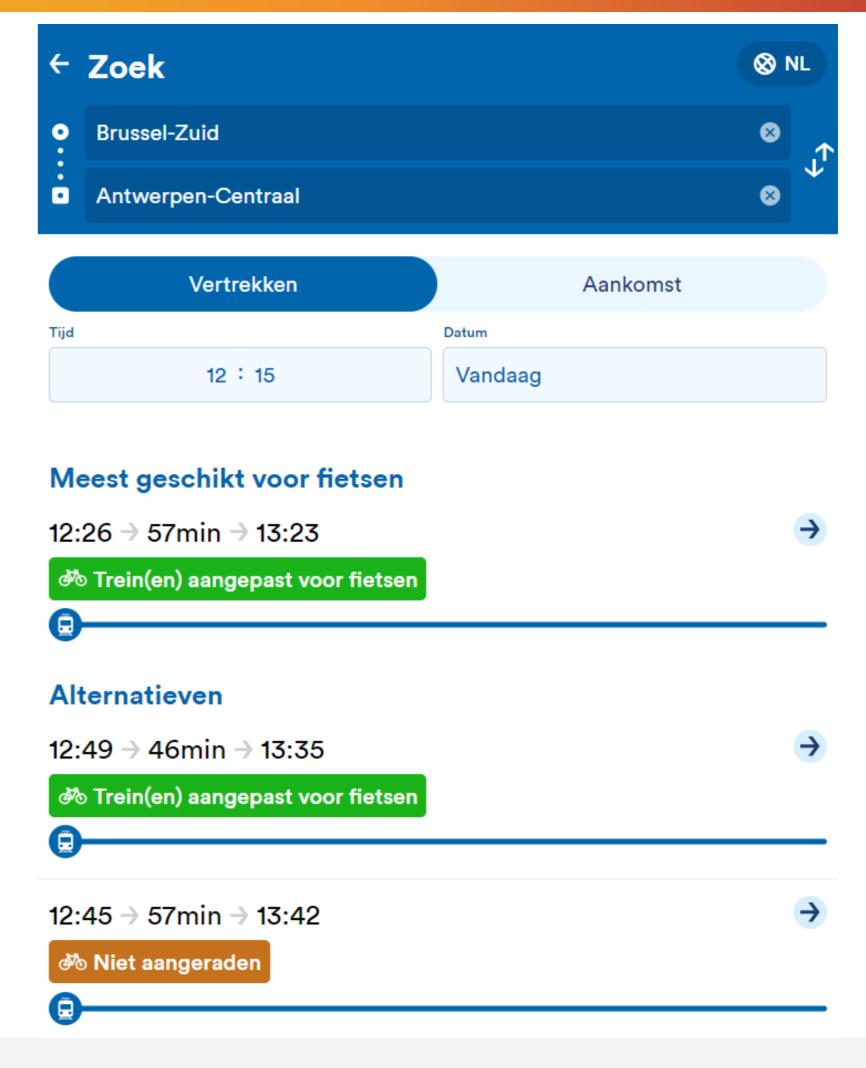




# Software

- Communication:
  - What are the conditions for bicycle carriage?
    - E.g. Transport requirements for folding bikes, standard and non-standardised bikes such as hand-bikes, tricycles, tandems
  - Bicycle transport function in the route planner!
     What train do I take best?
  - Where is the bike compartment? (Bike logo rolling stock, on screen, in the app)
  - Website languages
- Bike carriage reservation channels
- Costs for bicycle carriage and bike parking

•







# Orgware

- Training/ friendliness of train staff
- Bicycle strategy

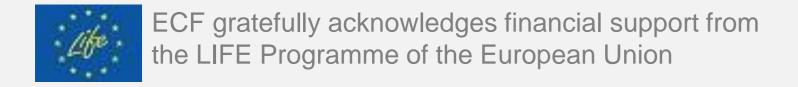
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Die neue Fahrradstrategie der CFL







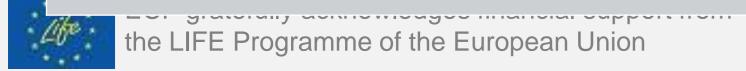


3



# Different users have different needs

Type of User	User needs
Commuter (Daily/ Several times a week – Prefers to park bicycle at railway station, use shared bike or travel with folding bike)	<ul> <li>Accessibility of the railway station</li> <li>Accessibility of bike parking facility, its quality and capacity, distance to walk to the track</li> <li>Folding bike rules</li> <li>Bike-sharing</li> </ul>
Recreative cyclist (Day trip/ weekend – Spontaneous; prefers own bike, but shared bike might be okay too)	<ul> <li>Capacity: How many bikes can be carried on the train? (multi-flex area, shared with wheel-chairs, strollers, etc.)</li> <li>Bicycle ticket fee</li> <li>Bike-sharing</li> </ul>
Cycling holidaymaker (Holiday season – Planning long in advance; Want's to use his/her own bike)	<ul> <li>Capacity: How many bikes can be carried on the train? (dedicated bike compartment/space)</li> <li>Long-term bookability (DB: numbered bicycle parking space)</li> <li>Bicycle ticket fee</li> <li>Accessibility of track, rolling stock</li> <li>Website with foreign languages</li> <li>Assistance in case of delays, cancellations</li> </ul>







# EU Passengers' Rights and Obligations Regulation (EU) 2021/782

- Passengers are entitled to bring fullyassembled bicycles onboard of trains (against a fee)
- Statutory minimum of 4 bicycle places per train composition
  - From 7 June 2025 onwards when rail companies initiate procurement procedures for new and renovated rolling stock
  - Rail companies can determine the adequate number of bicycles places by drawing up bicycle transport plans
- Rail companies must inform passengers about bicycle carriage conditions on their websites

**ECF Policy Brief** 4 spaces become the new statutory minimum: Bicycles and the new Regulation on rail passengers' rights and obligations (Art. 6 of Regulation (EU) 2021/782) June 2023



### Introduction

Beate Schusta – Policy Intern b.schusta.ecf.com

Fabian Küster - Director for Advocacy and EU Affairs <a href="fkuester@ecf.com">fkuester@ecf.com</a>

From the point of view of people cycling, the update of the regulation on rail passengers' rights and obligations in 2021 is worth celebrating: The new provision as set out in Regulation (EU) 2021/7821 is a major upgrade from the old one. While the old Article 5 established the right of bicycle carriage but offered rail companies so many loopholes that it became meaningless, the new Article 6 firmly strengthens the right to bicycle carriage by introducing a mandatory minimum of 4 places for bicycles for new and renovated rolling stock. Existing rolling stock however that is not being renovated is not affected by the Regulation (see para 3).

### General remarks

As this provision is part of an EU regulation, it will apply in the entire union without Member States first having to transpose it into national law (as would be the case for a directive). Put simply, it will apply and be enforced just like a national law. The regulation will also override any national laws that are in conflict with it. Starting from 7 June 2023, the old regulation (Regulation (EC) No 1371/2007) is replaced by the new one and will no longer have legal value, though a number of provisions remain the same or similar. Article 6(4) will enter into force two years later from 7 June 2025.

Article 2(6) and (8) limit the scope of the regulation as regards bicycle transport by allowing Member States to exempt urban and suburban services from the provisions of Article 6. Additionally, Member States can also exempt rail services that are only operated for touristic or historical use according to Article 2(2).

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0782



# ECF recommendations

- A minimum of 8 bike spaces on new rolling stock (respective) national laws in Belgium, France, Internal policy of Deutsche Bahn)
- Disassembled and bagged bicycles as well as folding bikes fall under luggage provisions! Size of folding bikes similar to that of luggage.
- Clear communication about bicycle carriage conditions
- Bicycle fee:
  - Depends on the context
  - Max 10 Euro for domestic service
  - Max 20 Euro for international services



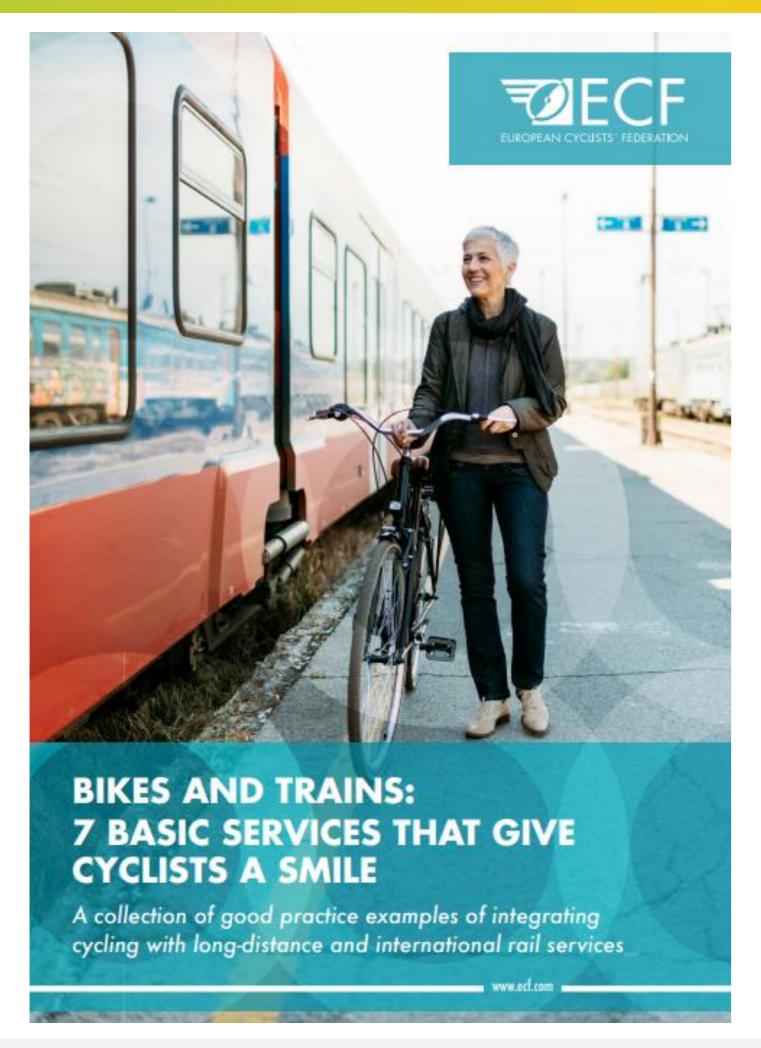


# Evolution carriage of assembled bicycles

	NMBS/SNCB (all trains)	SNCF (IC Intercités + TGV Inoui)	Deutsche Bahn (IC, EC, ICE trains)
2019	251,000	57,174	393,500
2020	n/a	60,062 (+5%)	
2021	390,300 (+55%)	92,268 (+54%)	
2022	424,000 (+9%	117,462 (+27%)	570,000
2023	451,800 (+7%)	149,784 (+28%)	
Evolution 2019 - 2023	+80%	+162%	+45%
Bicycle ticket per journey	4 Euro	10 Euro	7.50 — 12.90 Euro







ECF Policy Brief
4 spaces become the new statutory
minimum: Bicycles and the new
Regulation on rail passengers'
rights and obligations
(Art. 6 of Regulation (EU) 2021/782)

June 2023





ECF gratefully acknowledges fit cycling industry via Cycling Indu



Beate Schusta – Policy Intern <u>b.schusta.ecf.com</u>
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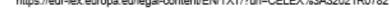
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An analysis of the bicycle friendliness of European railway operators









https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0782



# Thank you!

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# Keynote Speeches



Alessandro Vannucchi Head of Portfolio

HITACHI



# Hitachi Rail

**UIC Webinar** 

Optimizing Bikes and Luggage Transportation in Railway Systems

October 4<sup>th</sup>, 2024

#### Alessandro Vannucchi

Head of Portfolio Management LoB Vehicles | Global Rolling Stock Platforms



## Bikes and Luggage | Key design principles



#### Interior layout flexibility

- configurable multipurpose areas to suit different user needs (bicycles, luggage racks, ski racks, vending/ticketing machines, strollers, etc...)
- wide range of luggage storage solutions, from floor to ceiling luggage racks to under-seat space and overhead luggage shelves

#### Ergonomic and modular design

- ergonomics plays a crucial role to ensure accessibility, ease of use,
   passenger safety, efficient space usage, and to reduce physical strain
- modular solutions allow to improve standardization and maintainability

#### Accessibility and inclusivity for all passengers

- It's key to ensure that passengers of all physical abilities can easily and safely store and retrieve their bicycles / luggage
- entry points and proximity: bike racks should be located near train doors (vestibule area), to facilitate passenger flow
- special solutions for visually-impaired people (e.g. tactile maps) and hearing-impaired people (e.g. induction loops)



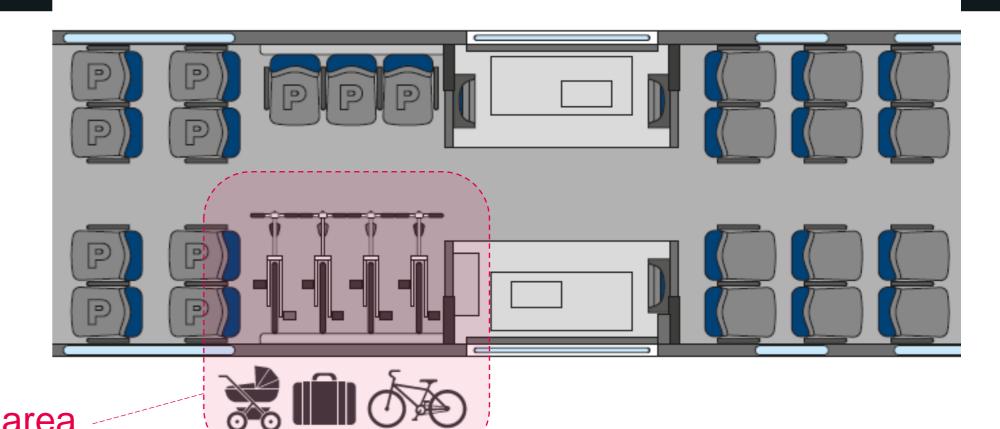


### Bikes | Main solutions in use





- different bike racks solutions (horizontal/vertical installation)
- proximity to the vestibule area, to facilitate passenger flow
- equipped with charging sockets to enhance last mile mobility
- secure holding mechanisms to ensure passenger safety
- easy loading without having to lift or turn the bike awkwardly



Multipurpose area





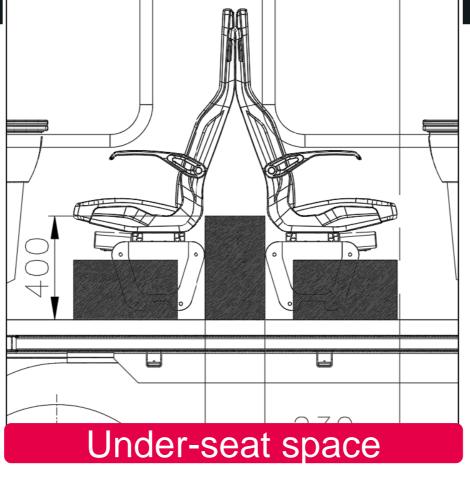


## Luggage | Main solutions in use





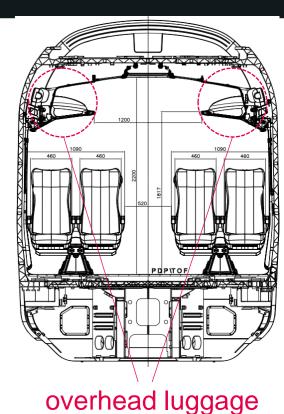


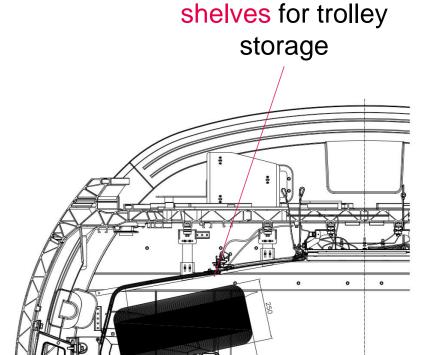












- Wide range of luggage storage solutions
  - Floor to ceiling luggage racks can be placed at an end or throughout the passenger compartments
  - Under-seat space are typically suitable to accommodate medium size bags
  - Overhead luggage shelves are available all throughout the train for trolley storage

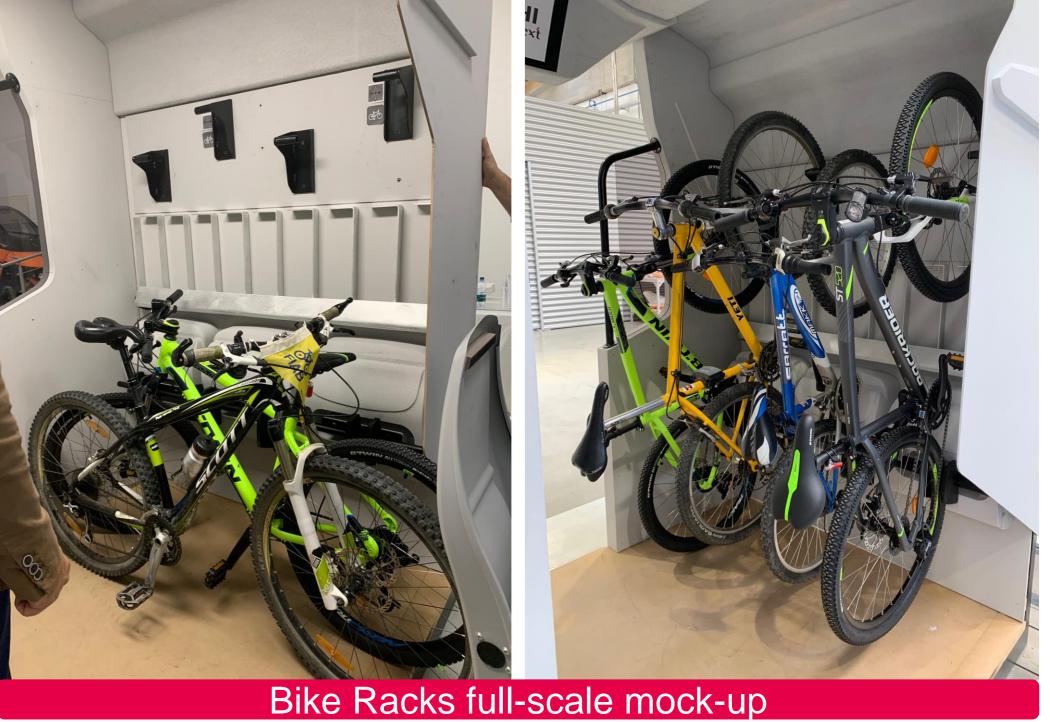
## Bikes and Luggage | Passenger experience



Adopting a collaborative design approach is key to improve passenger experience. Working closely with customers and different User Groups (e.g. bike and passenger associations) since the early phases of the design process, also supported by 3D virtual models and full-scale mock-ups, allows to strongly improve the overall integration and deliver the best fit solution







### Bikes and Luggage | Main challenges and possible solutions



#### Accessibility

- Conflicts between the usage of bike/luggage racks and passenger flow may arise when the design or placement of these elements interferes with the ease of access for all passengers
- Accurate ergonomics analysis and industrial design powered by a collaborative design approach – are of utmost importance to overcome such challenges

# Various boostores for bispeds are been arranged all along the tous. Electric bise charging societs are available tou.

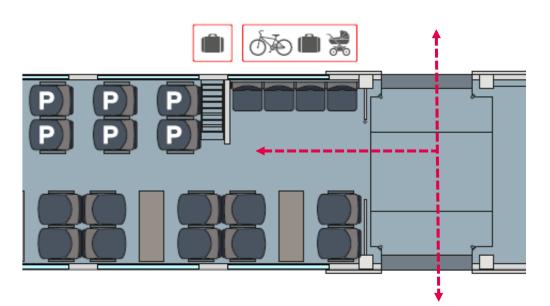
#### Transport Capacity

- Seating capacity can be negatively affected by the presence of bike/luggage racks
- The use of flexible multipurpose areas can help find a good tradeoff.

#### Sustainable Mobility

- Bike and luggage racks on trains are essential for encouraging multi-modal travel.
   Nevertheless, some challenges are present, e.g.:
  - Inadequate integration with other transport modes (e.g., buses or bike-share programs)
     can lead to inefficiencies in the transportation network
  - Concerns over the safety and security of bikes and luggage can deter passengers from using these facilities.

Stronger institutional support may be needed to help overcome such challenges.



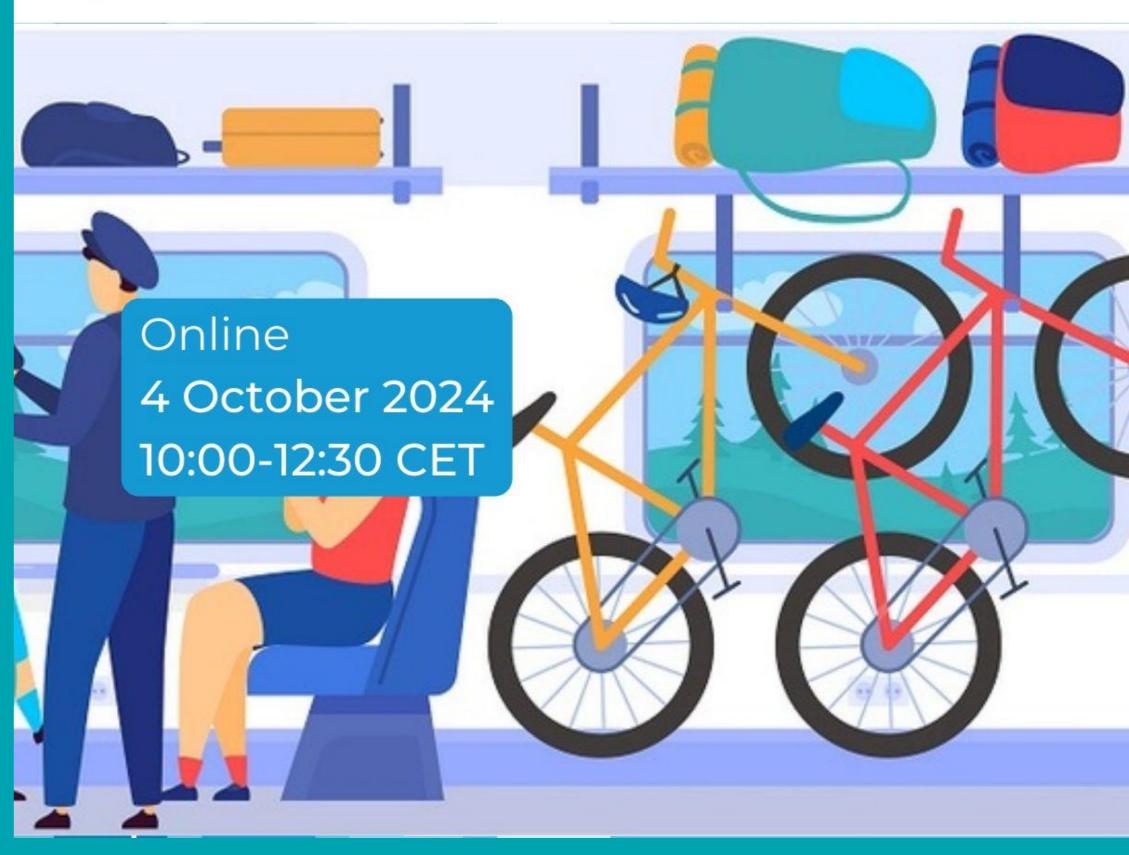


# Interactive Session



# OPTIMIZING BIKES AND LUGGAGE TRANSPORTATION IN RAILWAY SYSTEMS

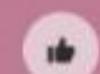




# What strategic impact do you think the integration of bikes & luggage can have on the competitiveness of rail against other modes of transport?

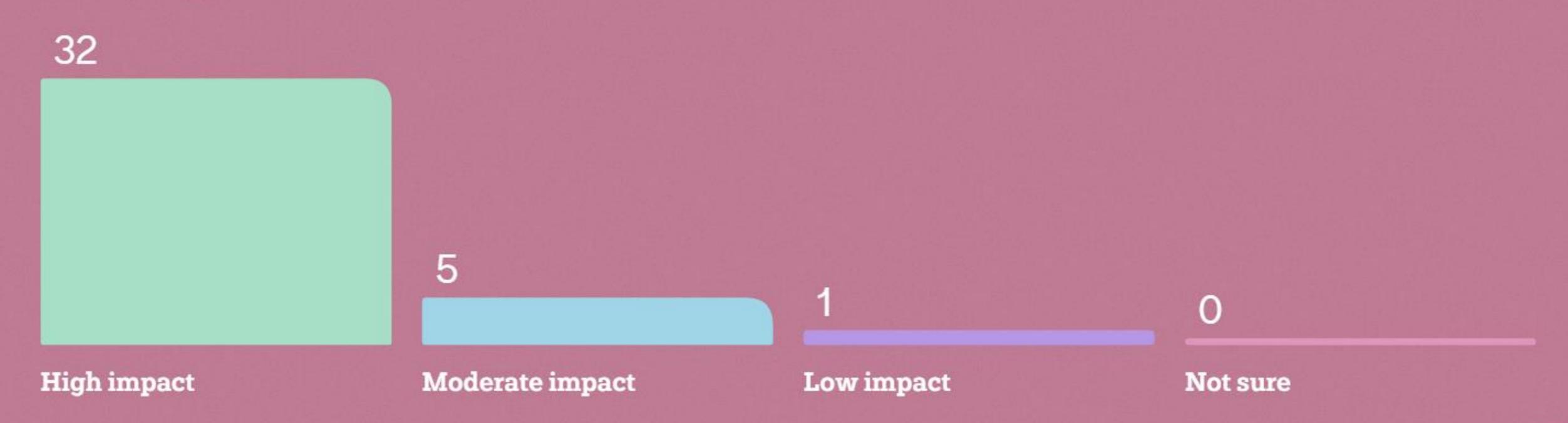
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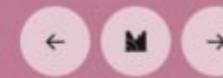
High impact Moderate impact Low impact Not sure





# What strategic impact do you think the integration of bikes & luggage can have on the competitiveness of rail against other modes of transport?



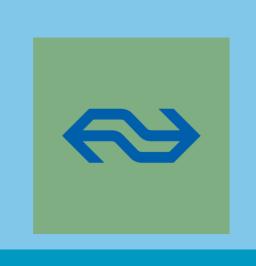






# "The International Landscape of Bikes and Luggage Management on Railways"















#### Denis Brachet

Senior Expert Intermodality

**SNCB** 

# **Brigitte Matheussen**

Lead architect train innovation

NS

#### Magnus Just Hansen

Director of International Affairs

DSB

#### Marc Guggenheim

Product manager bicycles and reservations

SBB

#### Silvia Toffoli

Data Analyst

Trenitalia

#### Petra Privsek

Head of Sales and Marketing

SZ

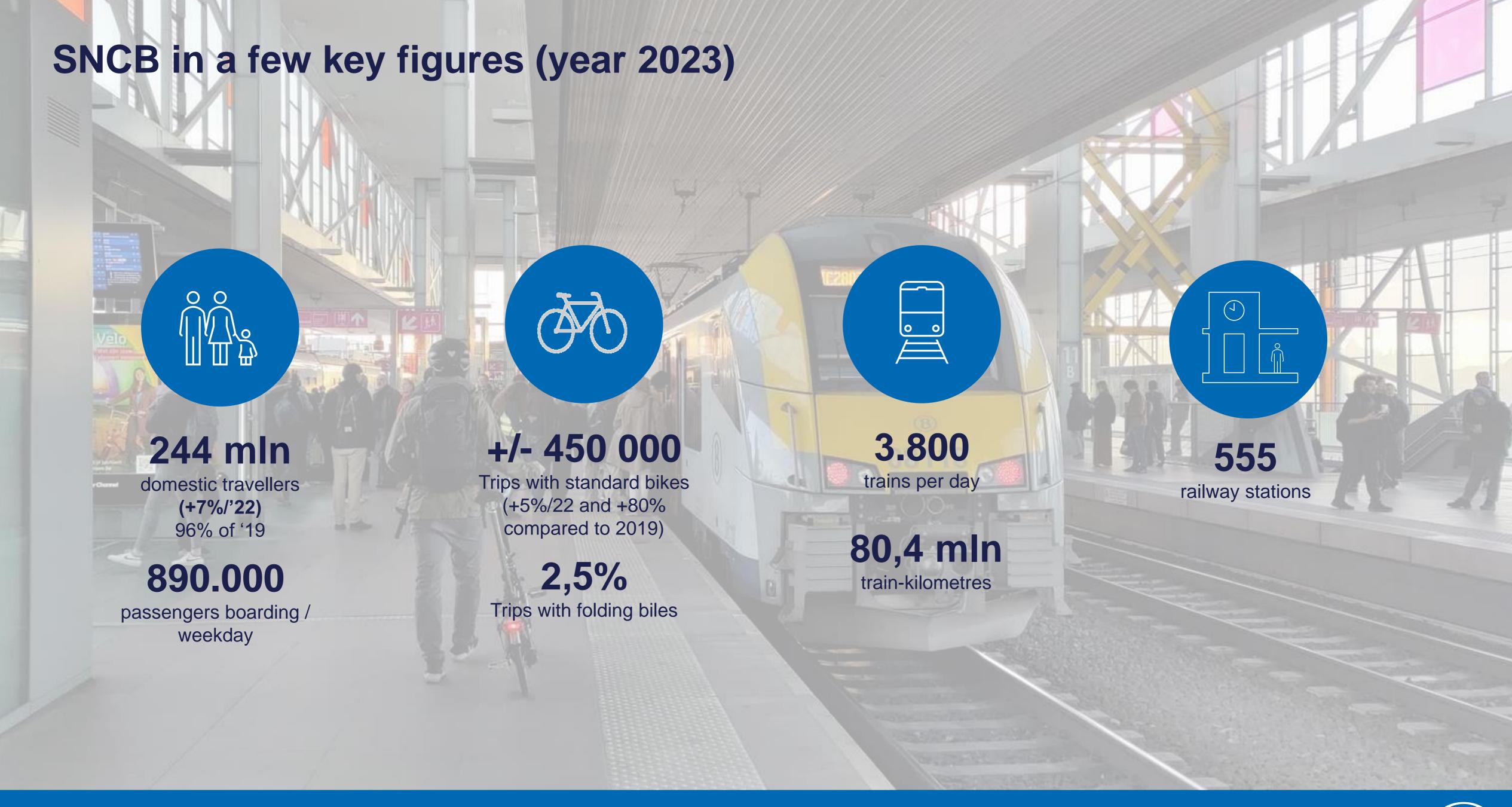
#### Maria Gusarova

UIC Stations
Senior Advisor

Rail4Cities EU Project



En route. Vers mieux.



# Context – SNCB offer for travellers with bicycles



2024

2032 (end PSO)

Key figures			
Capacity in SNCB fleet	5.400 bicycles (+/- 5 places / train or multiple unit)		
Accessible stations	106/555		
Stations with platforms at 76cm	196/555		
Price for non-folding bike	€4/trip		

Key figures			
Capacity in SNCB fleet	+/- 7.800 (+50% / 2022)		
Accessible stations	176/555 (67% of customers)		

#### New rolling stock:

- Min. 8 easy-access bicycle spaces
- More storage space under the seats

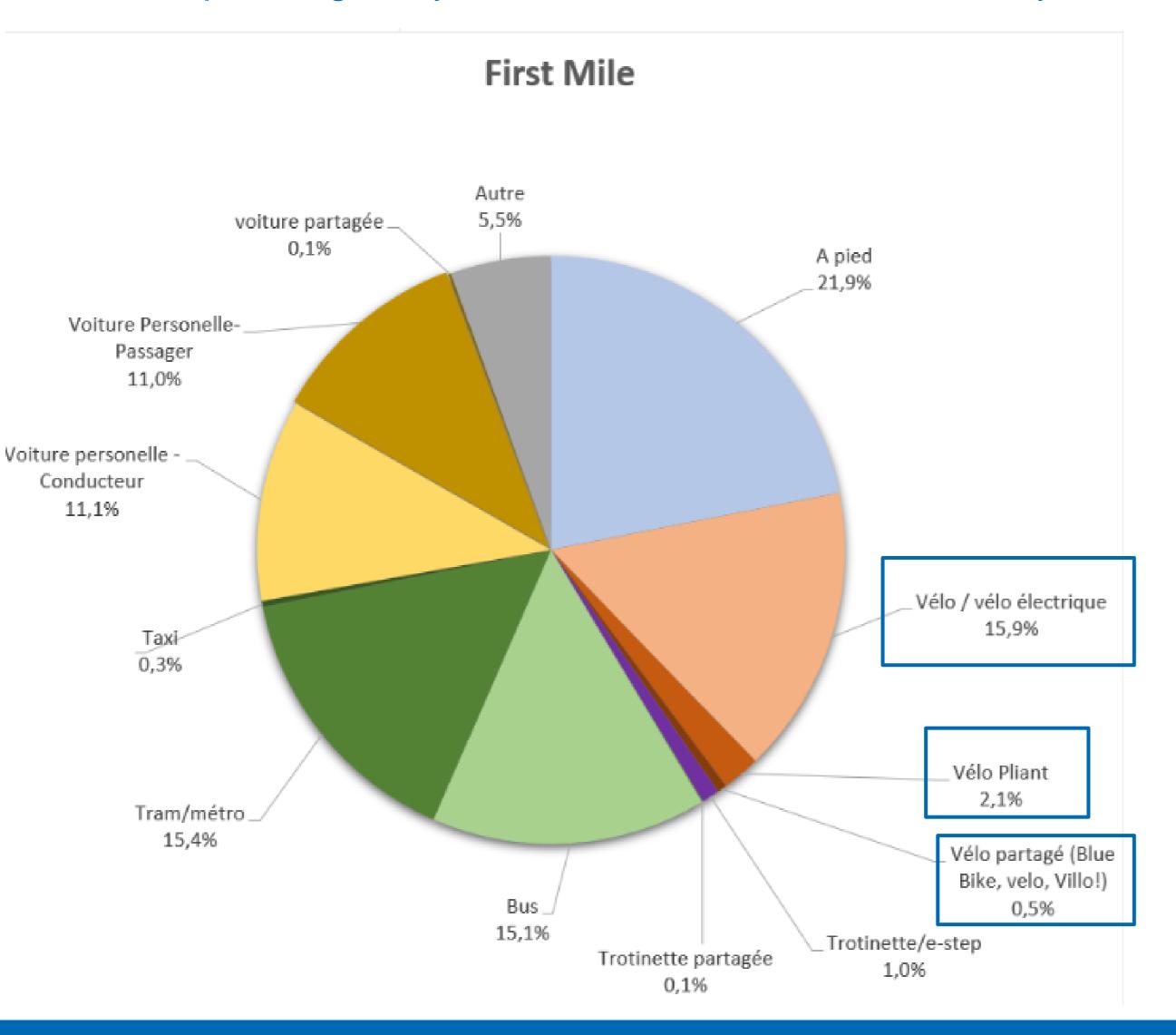
Bicycle supplement: move towards peak/offpeak fare

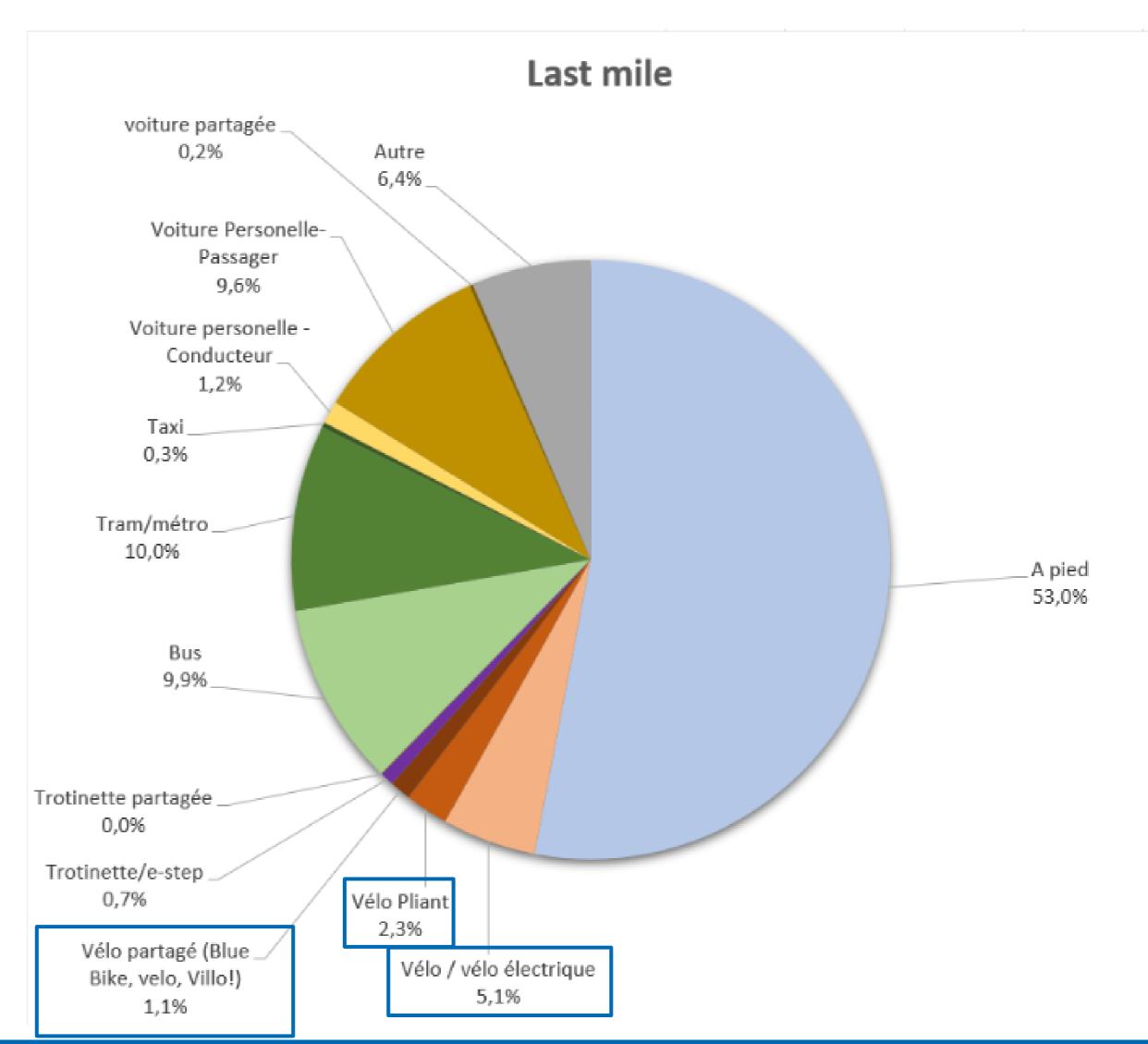
# Bike+Train Strategy Context & customer survey



### Modal split – first and last mile for one-way trips from home (2023)

19% of passengers cycle from home to the station; 8% cycle from the station to their final destination





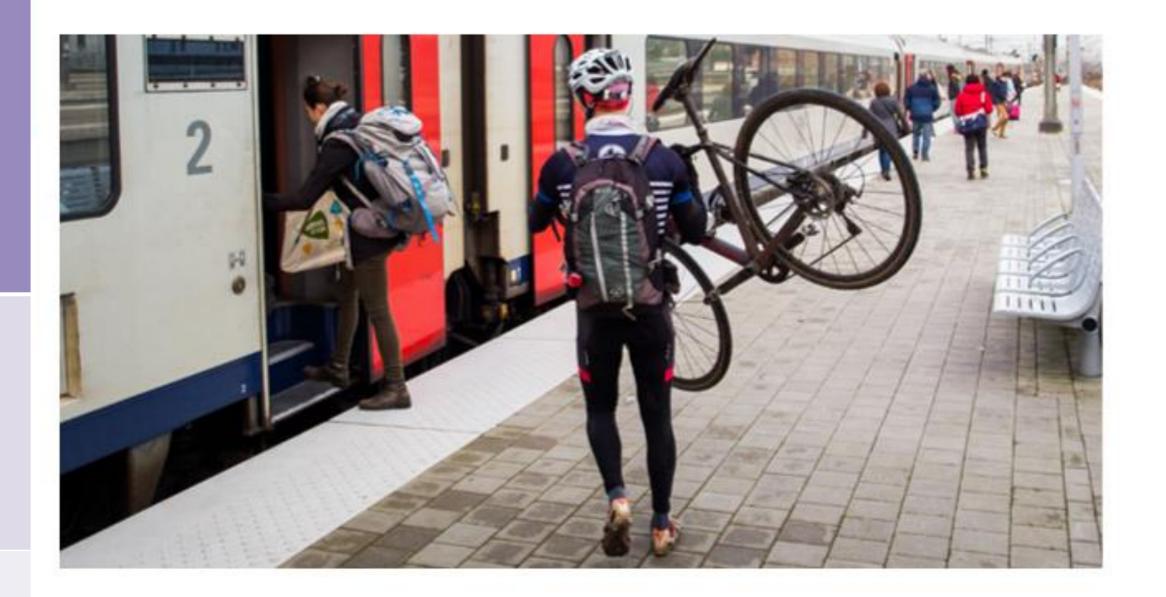
# Bike on train – learnings from the customer survey

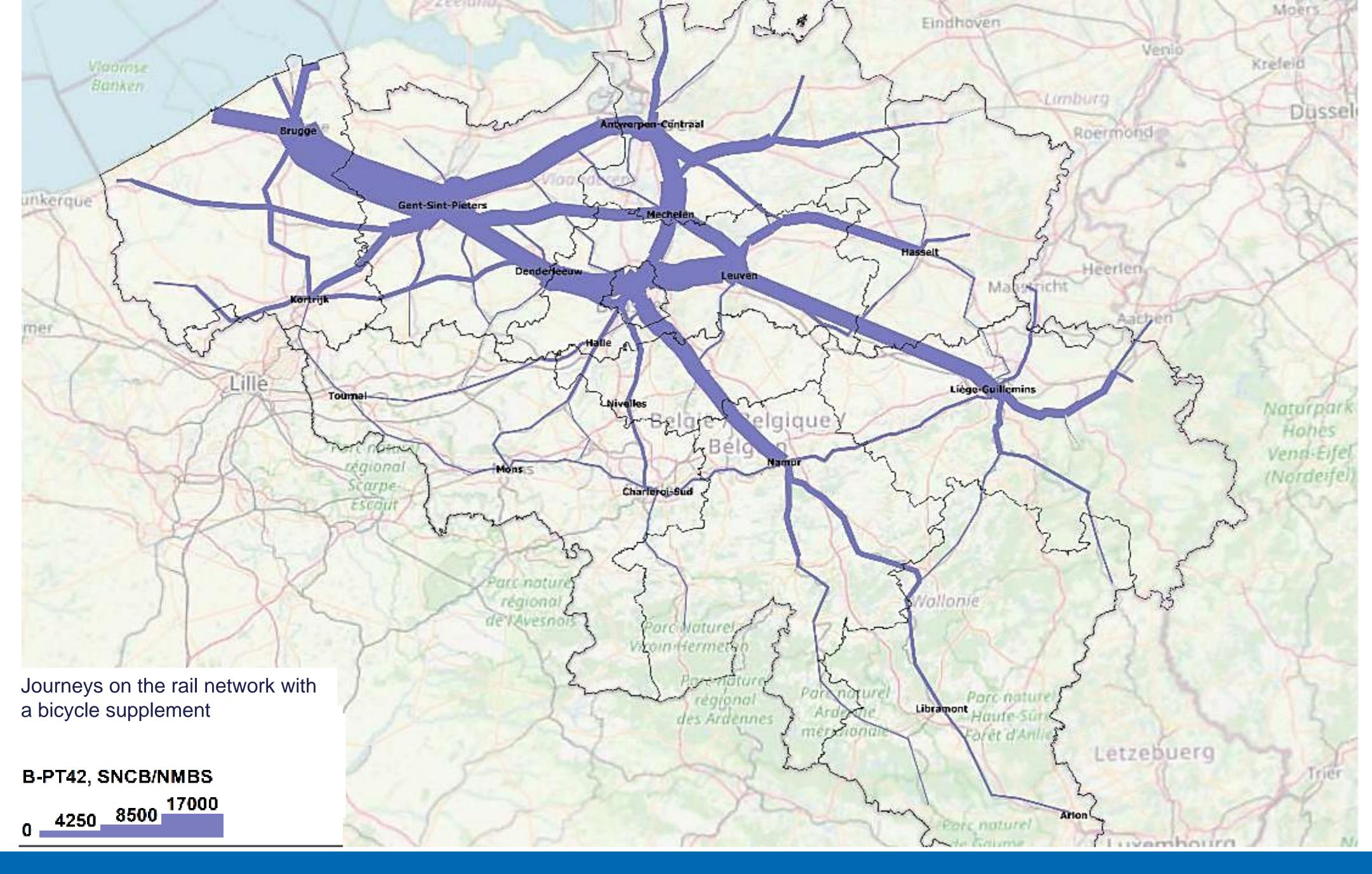
#### Two cyclist profiles on the train: folding bike and classic bike

	Folding bike (free of charge)	Classic bike (fee payable)
How?	Frequent trips	Occasional trips (around 2 times a year)
When?	Mainly during weekday rush hours	At weekends and during school holidays (1/3 of users only during this period)
Why?	Mainly commuting (home to work)	Mainly for leisure (bike rides)
Who?	≈ 2-3% of travellers	≈ 0,7% of travellers on average

# Bike on train – learnings from the customer survey

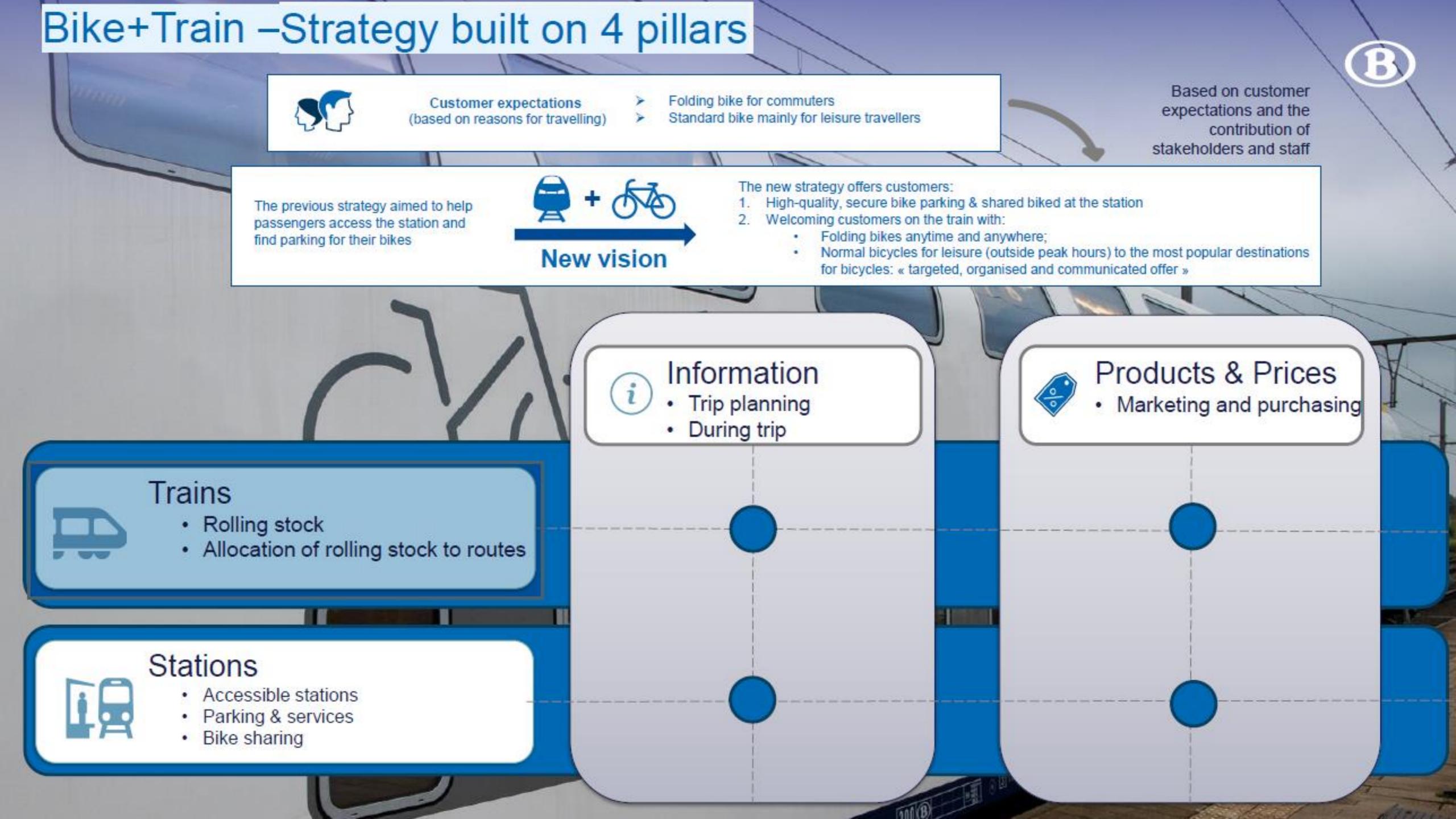
	Bike on train
Satisfaction	<ul> <li>70%, which is comparable to the average satisfaction with SNCB services</li> </ul>
Main obstacles perceived by users	<ul> <li>Fear of being refused access due to lack of space</li> <li>Poor accessibility of the train (and platform)</li> </ul>





# Bike+Train Strategy





# Bike+Train Overview strategic projects



# Evolution – looking back & forward – major projects - TRAINS





Delivery M7 = +2800 bike spaces



MR30 project (new generation trains) – first delivery from +/- 2030



Quick Win I10 (46 customised coaches for 8 seats/coach)



Modification of international coaches i11B (106 modified coaches for 3 seats/coach)



New 'bicycle signalling' on trains (stickers on the outside) on i10, i11, M6, M7, MR08, MR96 and MR80



# Quick wins — traincoach modifications

#### In 2021-2022: i10 BV

- → 8 bicycle spaces/coach
- → Deployed on the follow routes: IC01 (Eupen Ostend); IC16 (Brussels Luxemburg) + Kust Express





#### In 2024-25: I11BV

- → 3 bicycle spaces/coach
- → Deployed for international routes







New bicycle signage









# Train

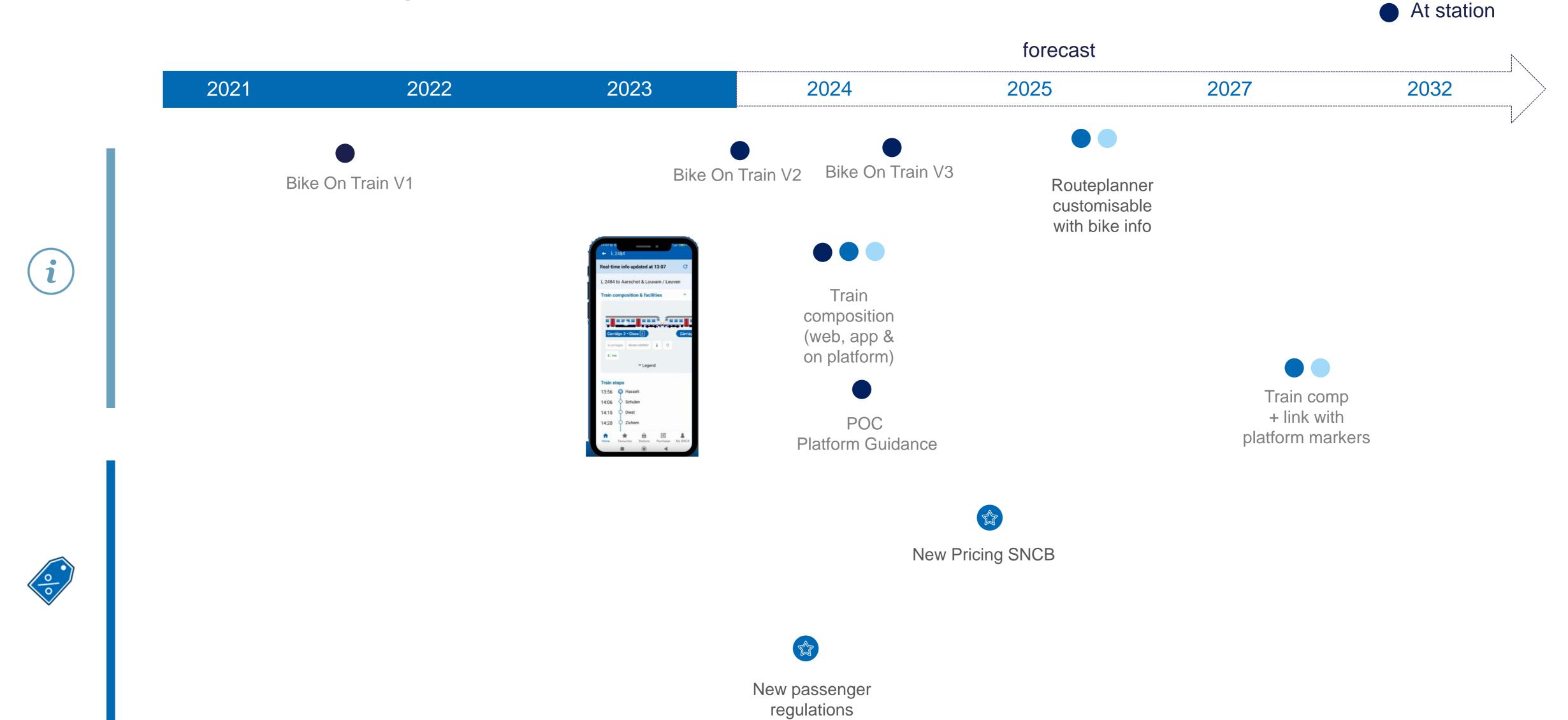
- → Delivery M7 (Ongoing → 2026)
- => Trains from 20 to 48 bicycle spaces

#### → AM30 (from approx. 2030):

- 8 bicycles space / train separated from the disabled area with level access
- Luggage space and space folding bikes
- Flexibility available

# Evolution – looking back & forward – STATIONS & Info

App SNCB
Web SNCB



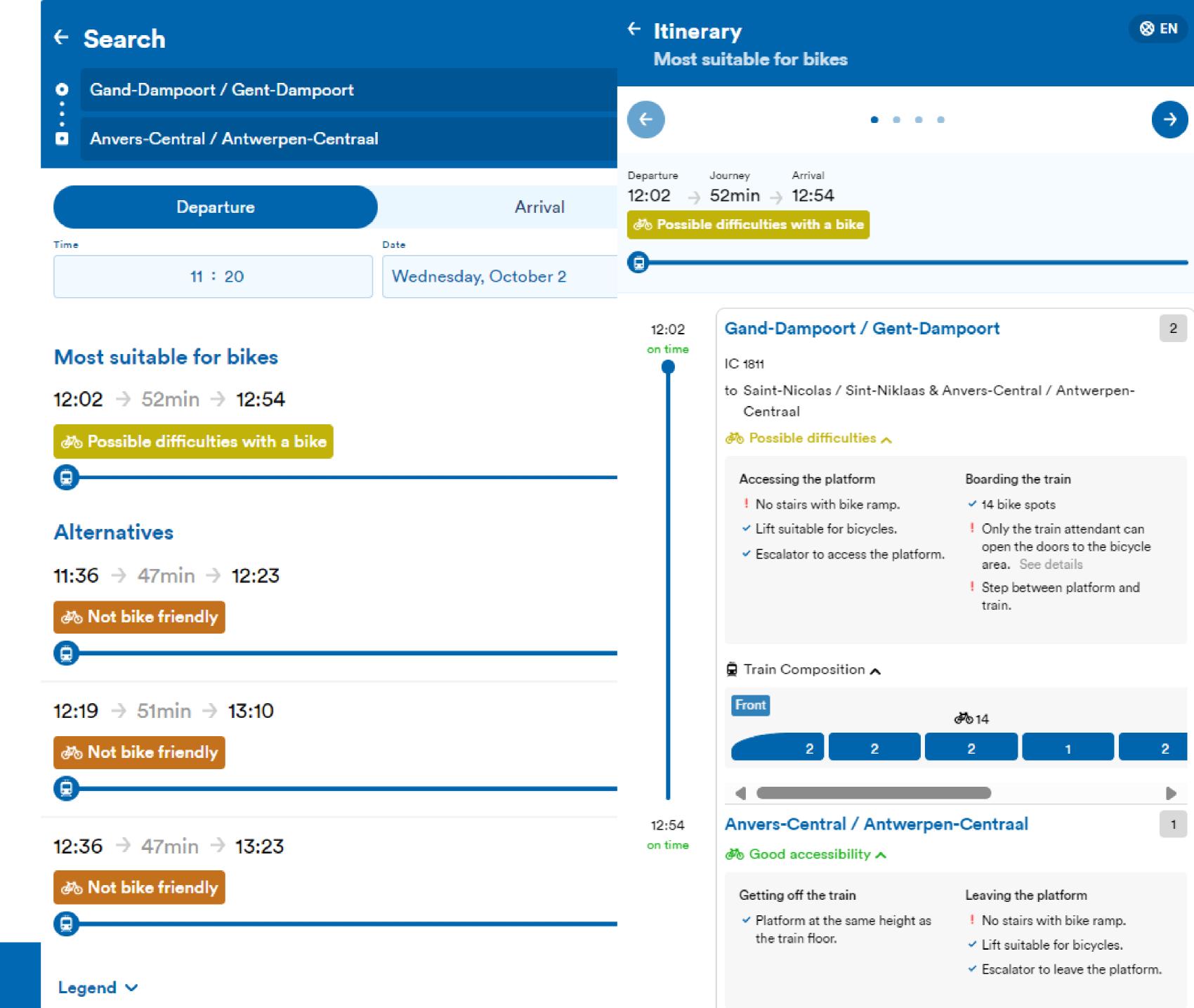
## Bike On Train— Webapp

# Information webapp for users of bicycle on trains

- approx. 30 000 unique users/year
- V1: only train score (2022)
- V2: platform accessibility info (2023)
- V3: train composition (2024)

#### → Next Steps

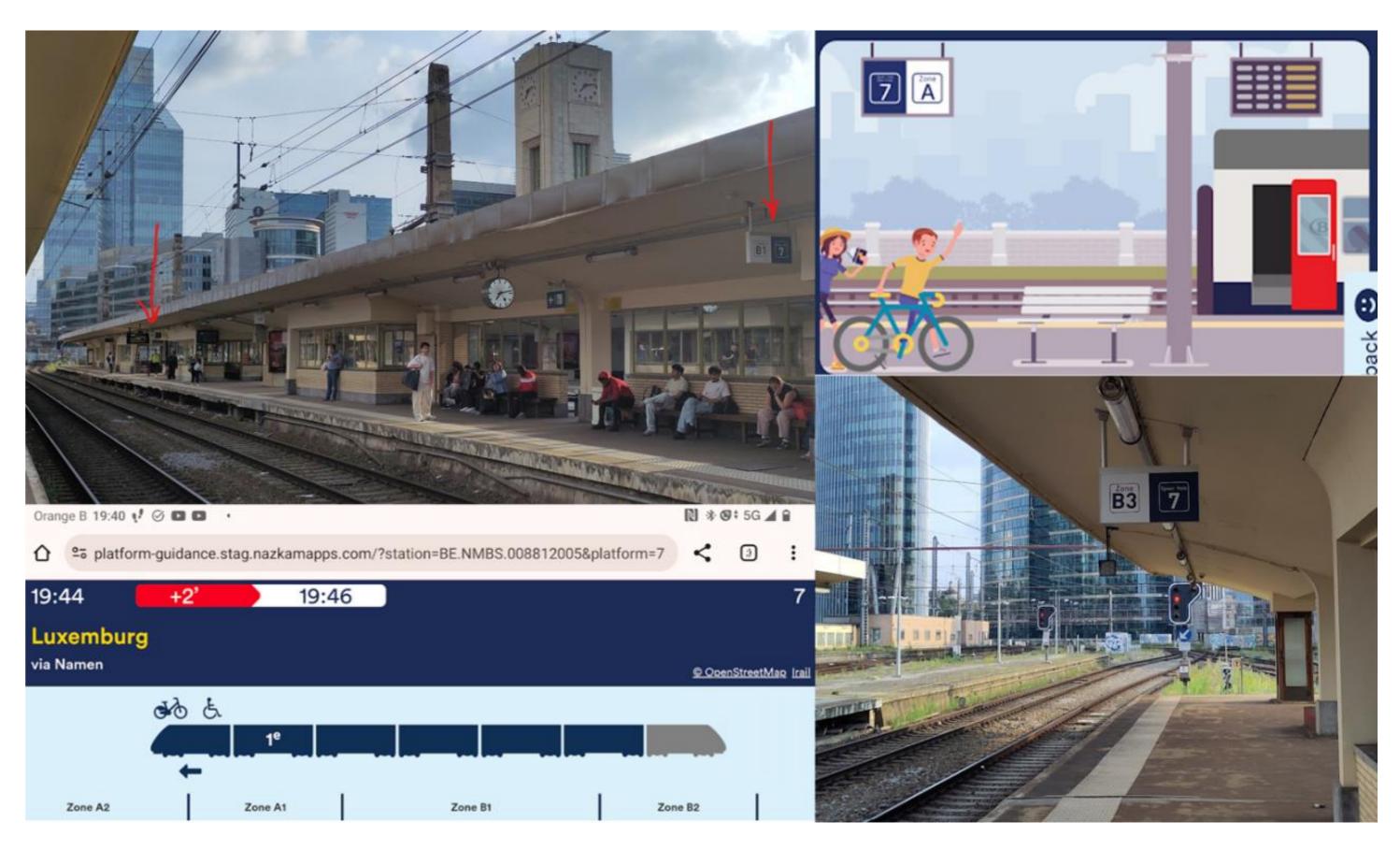
 Preparing for integration with routeplanner web and app (in stages)



# Train Composition announcement on platforms













# "The International Landscape of Bikes and Luggage Management on Railways"















Denis	
Brachet	

Senior Expert Intermodality

SNCB

# **Brigitte Matheussen**

Lead architect train innovation

NS

#### Magnus Just Hansen

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#### **TOPICS**



- Bicycles? Means of transport in trains
- 2) Context
- Design question and key insights
- Design directions
- Dilemma
- Evaluation

Bicycles?

Means of transport in trains...



# Conventional bicycles

- Racing bicycle
- Folding bike
- Mountain bike
- Fatbike
- Electrically powered





















# Recumbent bikes and tricycles

- Also for people with reduced mobility
- Often recumbent bikes are too big for the balcony and block passages
- Electrically powered

















# **Tandems**

- Also for people with reduced mobility
- 3-/4 wheels
- Longtail bicycle
- Electrically powered















# Bicycle trailers























# Strollers

Folding buggies









# Multimobility

- Segways
- Ninebot
- Hoverboard
- Steps
- Electrically powered















# Mobility scooters

- For people with reduced mobility
- Electrically powered











# Walkers







# Wheelchair and - bicycles

- For people with reduced mobility
- 3-/4 wheels
- Add-ons
- Electrically powered

















# Scooters/mopeds

- Petrol or electrically powerd
- foldable









# Context



It is not just about preventing nuisance; in order to reach a structural solution, all different perspectives will have to be taken into account from a holistic approach



### Often is taking your own bike the best option



- 1. Cycling at a destination is the **purpose of the trip** (holiday, weekend away or day cycling trip): comfort of your own bike is desired and/or renting a bike is considered too expensive
- 2. Taking a lot of **luggage** (in bicycle bags)
- 3. Sport activities (mountain biking or cycling) that require your own bicycle
- 4. A **different station** for the outward and return journey (or just a single journey)
- 5. For **onward transport**, public transport options are poor, the distance is often too long for public transport by bike
- 6. Incidental moving of bicycle (bicycle station/moving, etc.)

For only 12% the public transport bicycle is an alternative

These situations appear to be mainly recreational and occur more often during weekends

### Different types of passenger create different challenges for trainmanagers

#### **SUMMER SEASON**

Good weather: spring break, autumn break, weekends

\* Cyclists

Large groups, thin bikes, many situated next to eachother

\* Holidaymakers & tourists

Many at the same time on the same routes, bikes with luggage, passengers not always aware of conditions.

#### **Challenges**

- Space due to large number of bikes and luggage
- No peak hour restriction, but still busy during peak hours
- Passengers want to travel together in groups
- Travel over longer distances on the same routes (towards rural areas)

#### **OUTSIDE SUMMER SEASON / ALL YEAR**

All year

Commuters

Folding bikes, generally aware of conditions

Students

Not always aware of conditions, short distances.

Flight dodgers

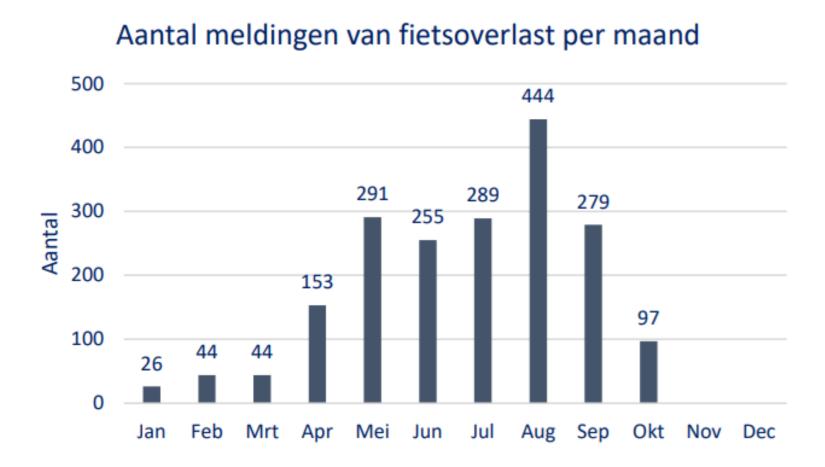
Not aware of conditions, short ditances, don't want anything, can't do anything

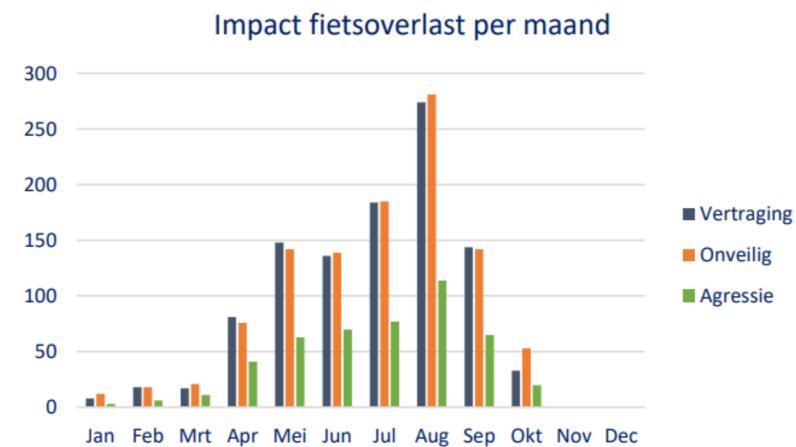
#### **Challenges**

- Passengers who deliberately break the rules:
  - No ticket or just buy it before check
  - Do not place the bicycle in indicated spot
  - Travel during rush hour when this is not allowed
- Often short distances: more difficult to enforce
- Special bicycles / multi mobilty, scooters, etc.
- Demand difficult to predict

### Fietsoverlast maandrapportage oktober 2023

Weer een seizoensgebonden afname van het aantal meldingen





Notifications bicycle nuisance

Impact delays, unsafety, agression

There is a tension between seating capacity and bicycle space capacity

These are both an obligation under regulations and concessions

However, taking a bicycle on the train causes inconvenience to passengers and within the operation, especially in the summer months.

The expectation is that if no action is taken, **this problem will only grow**. In order to create a structural solution, this issue was examined from various perspectives.

<u>Design question</u>: "how can we make taking a bicycle on the train a more pleasant experience for our passengers and train staff?"

**€** 

Bron: Fietsoverlast maandrapportage

Design question and objective Key insights

Design directions



#### **MANAGEMENT SUMMERY**

### **Design question**

How can we make taking a bicycle on the train a more pleasant experience for our passengers and train staff?

### **Objectives**

- Insight in most important pain points for passengers and train staff
- Prioritization of search directions
- Validation and selection



#### **MANAGEMENT SUMMARY**

### Analyses defined five most important pain points for passengers and train staff



I bought a ticket but couldn't go because there was no room

How can we expand capacity (particularly on busy routes/periods in a smarter way?



I am trying tot estimate how busy it will be, but i won't know whether I can join until I'm on the train

How can we provide better inside into the available capacity?



It is always difficult to determine where the byicycle compartments are situated and where I should get in

How can we make the onboarding process less stressful?





Passengers do not read the conditions





There is a gray area in the conditions, which causes discussions

How can we inimize discussions about bicycle types, dimensions or travel times?

**€**9

#### **MANAGEMENT SUMMARY**

### Six design directions have been prioritized in terms of feasability, impact en complexity

"NO REGRET MOVE"

Adjust conditions and communicate effectively

**FUNDAMENT** 

Bicycle capacity indication / crowd model

**QUICK WINS** 

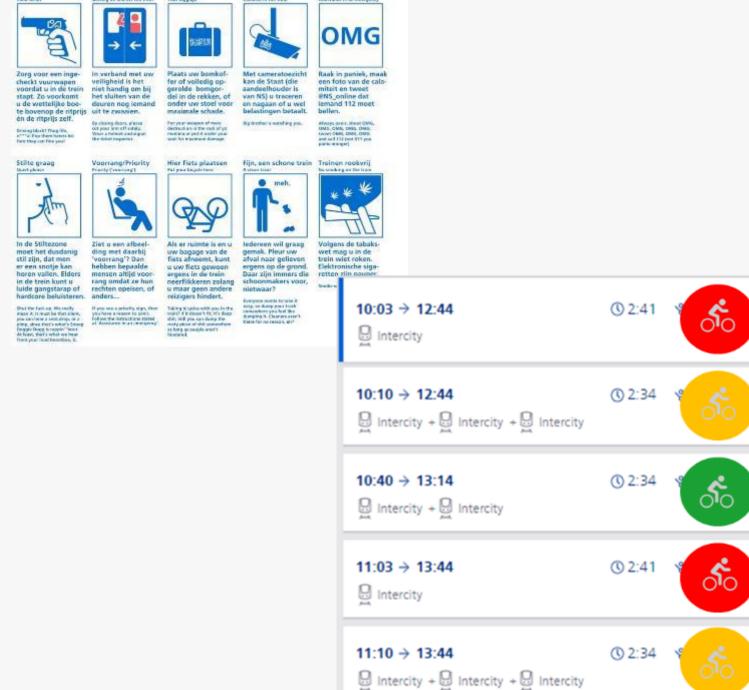
Show bicycle spots on passenger information displays and in app

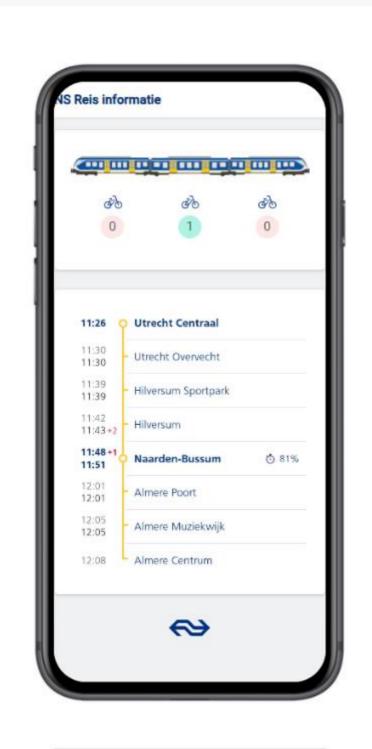
Bicycle stewards in Summer

STRUCTURAL SOLUTIONS CAPACITY

Dedicated rolling stock on busy routes

Create more (flexible) bicycle spots in current trains









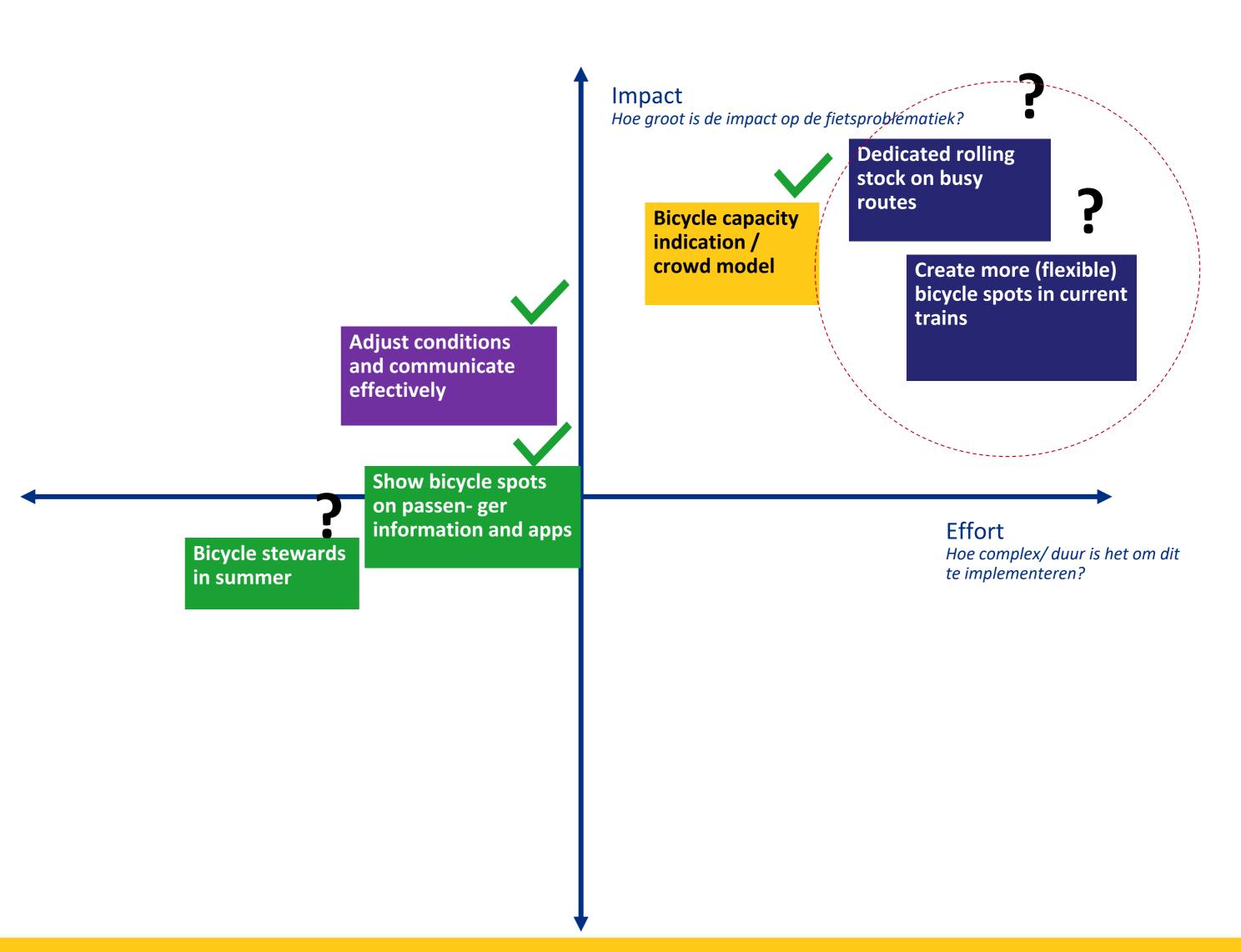




#### **MANAGEMENT SUMMARY**

### Impact vs effort/complexity

- To tackle the core of the problem, capacity will have to be expanded (or bicycle use will have to be discouraged, which is in contradiction with the concession).
- Other solutions are 'symptom control' to alleviate the current problem.
- However, solutions that increase capacity are complex and/or require high investments



# Not one golden egg

- The bicycle (means of transport) problem is a **multifaceted** and complex issue where there is no single solution that removes all pain points.
- Imbalance between demand and capacity will continue to exist.
- The greatest gain can be achieved by expanding bicycle capacity, but this is also the most expensive and complex solution.
- A combination of solutions will be necessary, ranging from adjustments to conditions and improved communication to more structural solutions.
- In addition, there are a number of quick wins to implement while there are also be solutions that require more time and effort.



# Dilemma



### DILEMMA: the role of bicycles on the train in relation to sustainability

### What is our vision for taking bicycles / means of transport on the train in future?

One could argue that this is an important component to offer a sustainable alternative to the car and to attract more passengers. Therefore, actively facilitating taking bicycles would fit in well with our ambition.

Given growth in the number of passengers and growth in number of (various) bicycles / means of transport, demand will probably increase. Since limited bicycle capacity is the bottleneck, investments will have to be made, but these are also precisely the most complex and expensive solutions.

That brings us to the question:

How much does the bicycle problem weigh and how much are we prepared to invest?

## DILEMMA: role of bicycles on the train in relation to sustainability

#### Where are we on the scale below?

#### Minimal facilitation

- Comply with legal requirements
- Clear communication
- Keep discussions outside the train
- Discourage unnecessary use through restrictive policy

#### **Facilitation**

- Smart interventions to try to make the journey as pleasant as possible within limited capacity
- Optimizing the customer journey
- Providing good information

#### Stimulation

- Expand capacity in the train
- USP / way to attract new passengers
- Smart adjustments to optimize experience



# Thank you for your attention





# "The International Landscape of Bikes and Luggage Management on Railways"















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Senior Expert Intermodality

**SNCB** 

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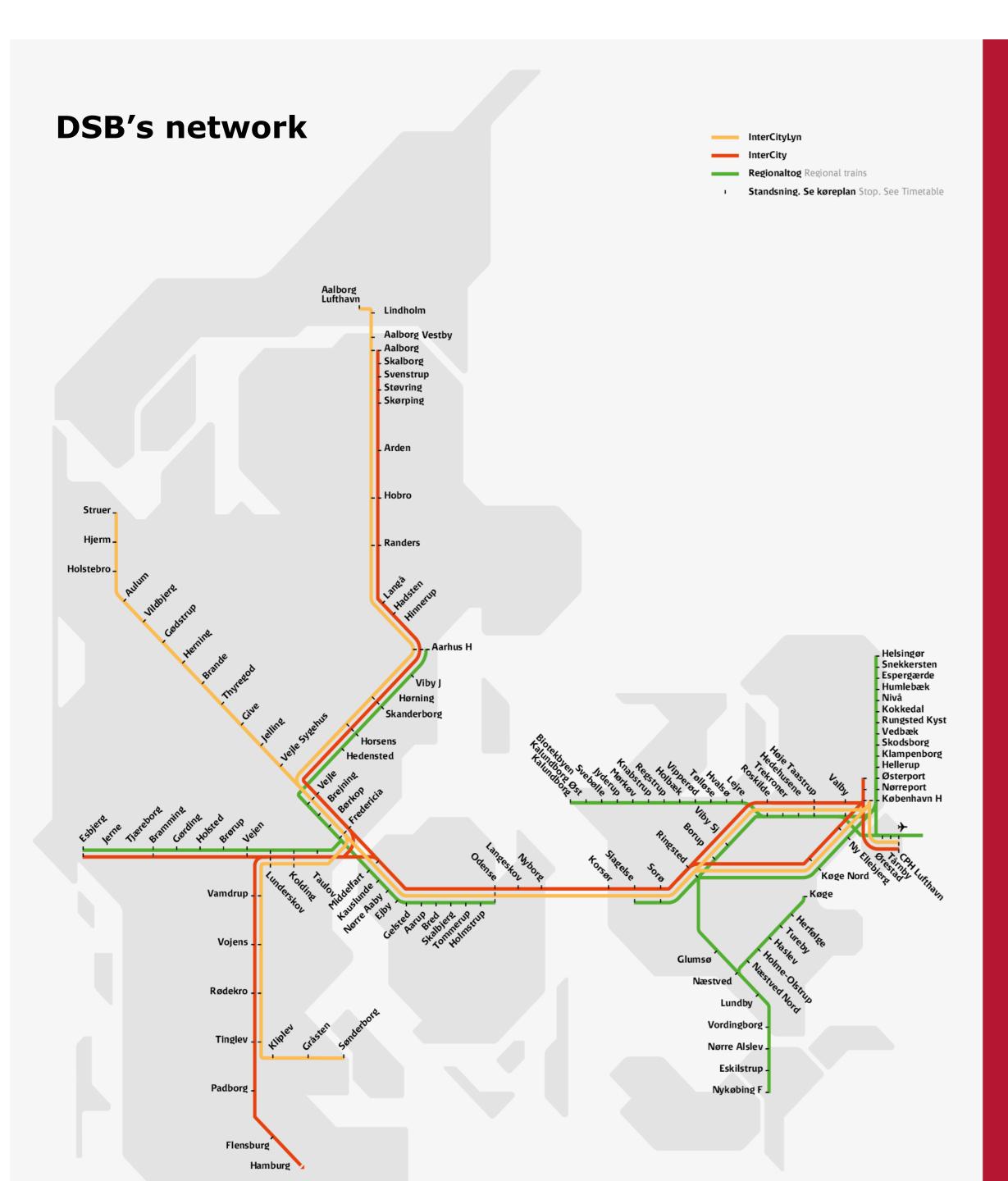
SZ

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UIC Stations
Senior Advisor

Rail4Cities EU Project







# We operate for and with everyone in Denmark

We are owned by the Danes, have a board of directors - and operate on a contract with the state. But we are driven as a commercial enterprise.

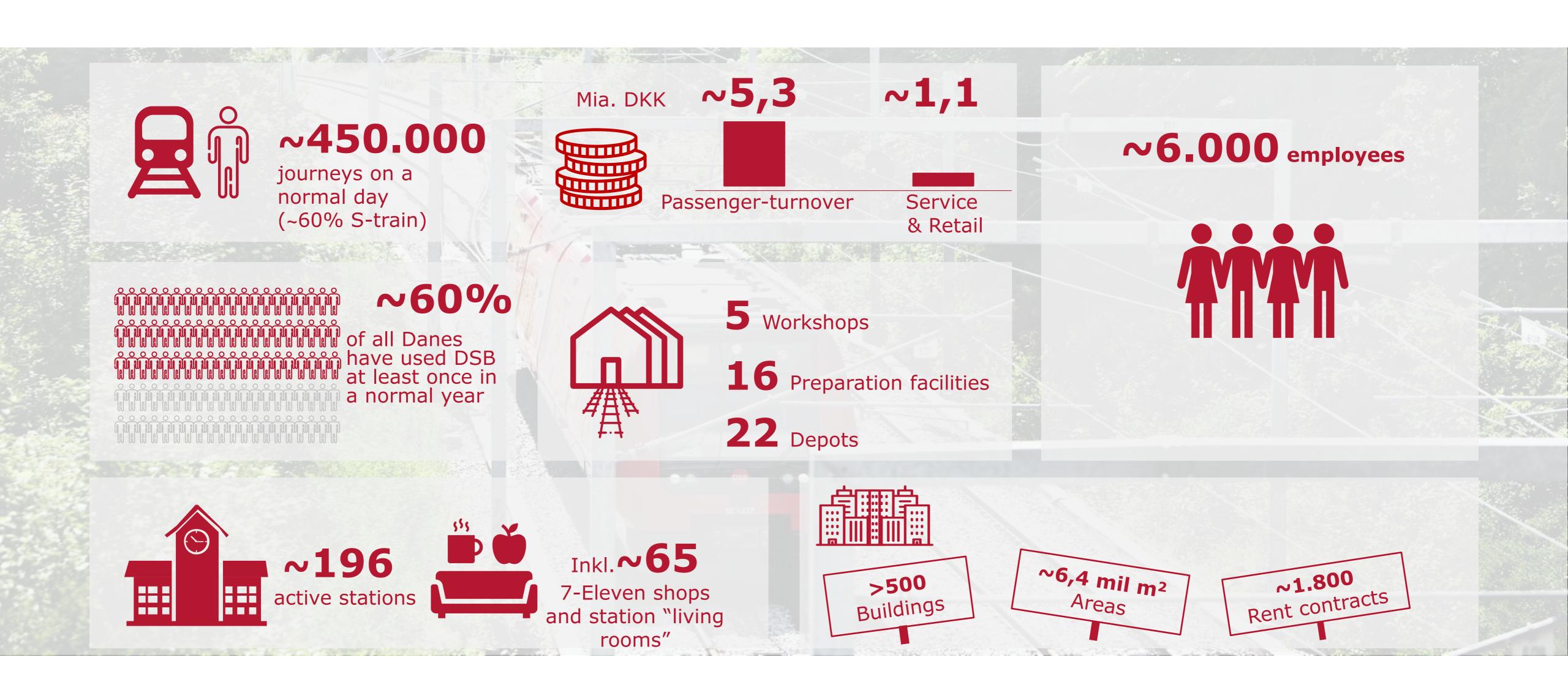
450.000 customers per day

We have 196 active stations and have one of Denmarks largest area and property portfolios

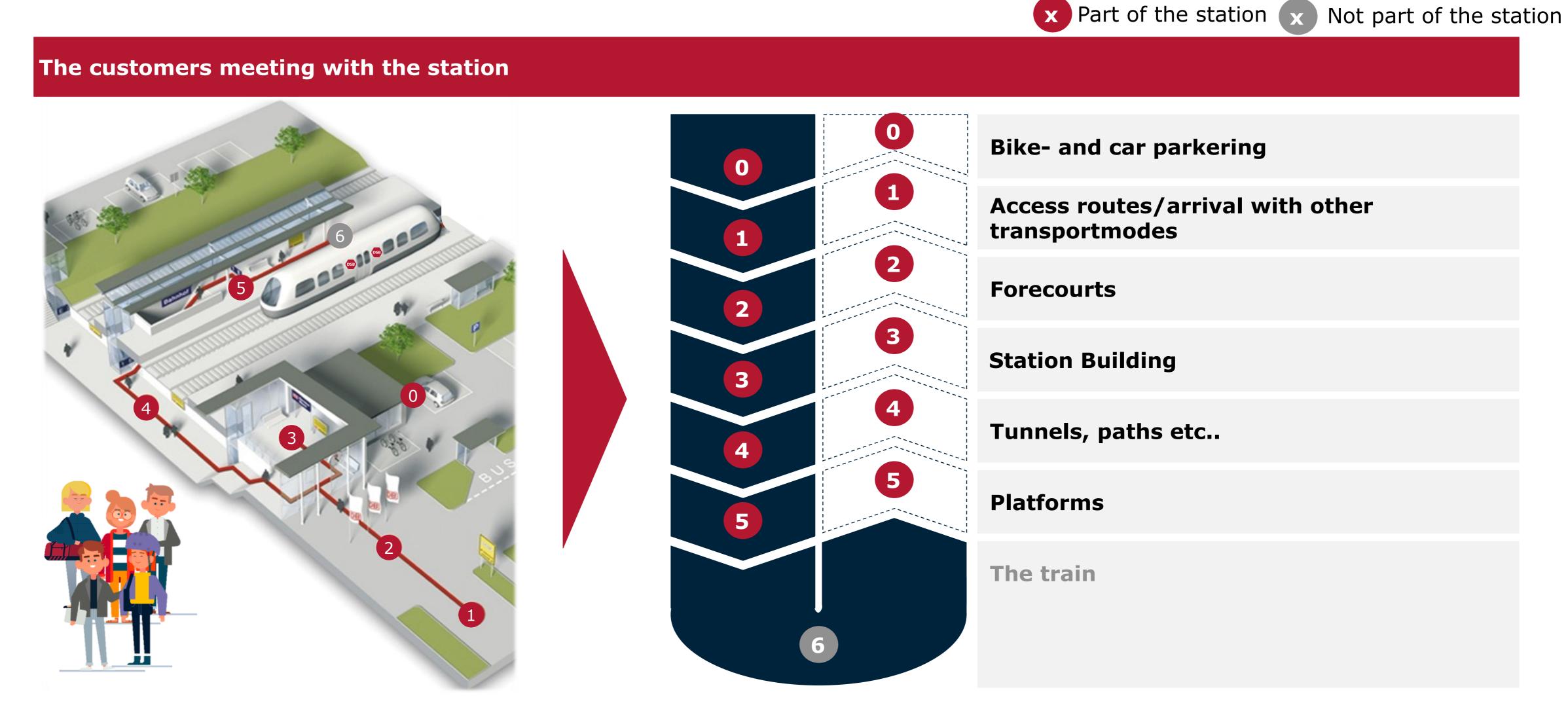
We have 6.000 employees distributed across more than 70 nationalities

# **DSB - Key figures**





# "Stations" covers the customer's meeting with the physical DSB from DSB arrival to boarding the train and return



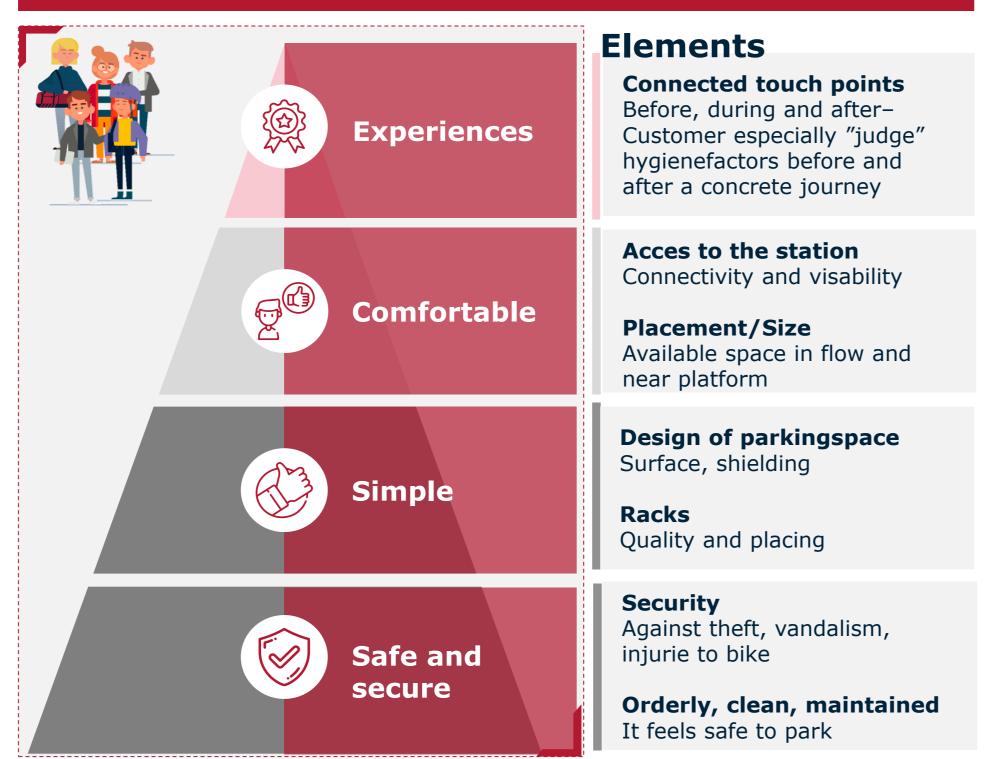
### **Customer journey – bicycle parking at the station**



3. Plan 5. Evaluation 2. Descision 4. Travelchain 1. Opening From the **Trigger Unwittingly Adjust Choice Planning Purchase Before** At the platform **Onboard Experienc** At the station departure filterring ment the train station

Before During After

#### **Bikeparking and Customer needs**



**Sufficient capacity** 

**Location close to the platform** 

Possibility to cycle all the way to the bicycle parking

That the bicycle parking is illuminated

That there is plenty of space between the bicycle racks

That the bicycle racks are of good quality

That the bicycle racks are covered

That the bicycle parking is clear

That the bicycle parking lot is cleaned up regularly and "forgotten" bicycles are removed.

## Its free to travel with bicycles in DSB's S-trains



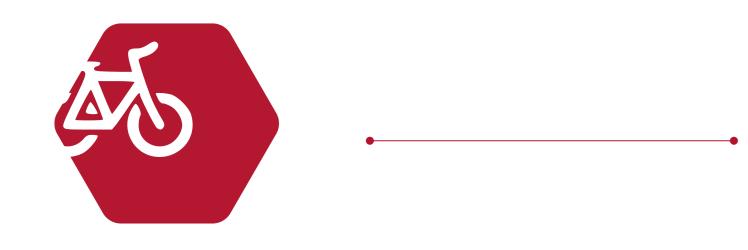
- The 1. january 2010 DSB introduced a one-year test with free travel with bicycles on S-trains (suburban trains in the region of Copenhagen).
- In 2010 DSB decided to make the test permanent and in 2011 DSB started to refurbish the flex areas in the Strains to create more space for bicycles.
- In 2023, 10.4 million out of 106 million S-train customers travelled with a bike.
- The initiative has made public transport more attractive for customers with bikes.
- A reservation is needed to bring a bike on DSB's regional and long-distance trains which costs approx. 3 euro.
- DSB has implemented a test regarding free transport of bikes on two regional railway lines outside rush hours.





### S-trains & bikes

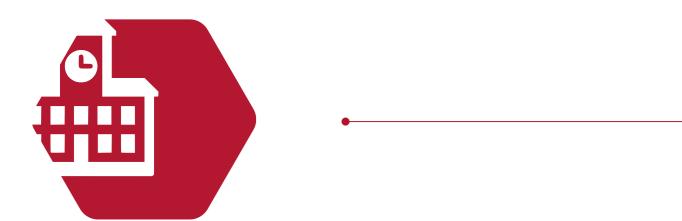






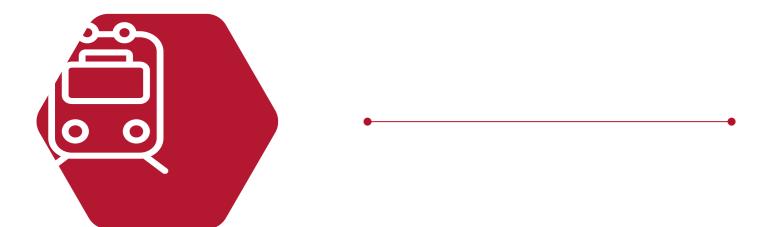
DSB has been working with bikes in combination with S-trains as a First mile solution, on board and as a last mile solution.

High level of complexity in developing good solutions - important to coordinate and plan concepts with owners and stakeholders and design and evaluate with customers



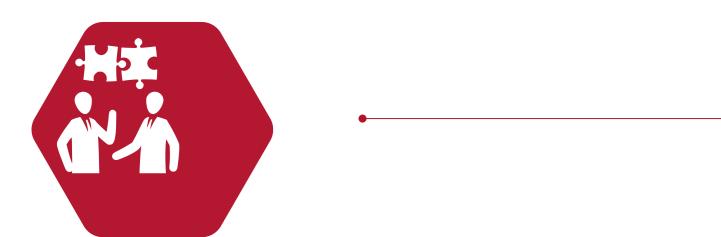
#### Bikes at the stations

Many facilities are required to support bicycles at the stations eg. sleds by the stairs, elevators, parking with different types of racks, covered and locked sheds and access to pumps and bike repair



#### **Bikes on board the S-train**

Since 2010 it has been possible for customers to bring their own bike for free. The trains have been modified to have capacity for 14-28 bikes. There is also folding seats for the customers. DSB transports approx. 10 mil. bikes a year with the S-trains



# Bikes and partnerships

DSB is testing different types of concepts with last mile partners and is right now working on scaling a solution.

### Bikes on board - customer insights







#### Market

90% of all Danes own a bicycle East (Zealand and Copenhagen) bicycle travels per year with DSB

F/R = 280.000

S-train= **10M** 

#### **Purpose bicycle customers S-train**

**64%** Commute (frequent trips)

25% Leisure activity

**10%** Both

#### Demand for bicycles on board the S-train

Of all passengers

25% combine bicycle and S-train

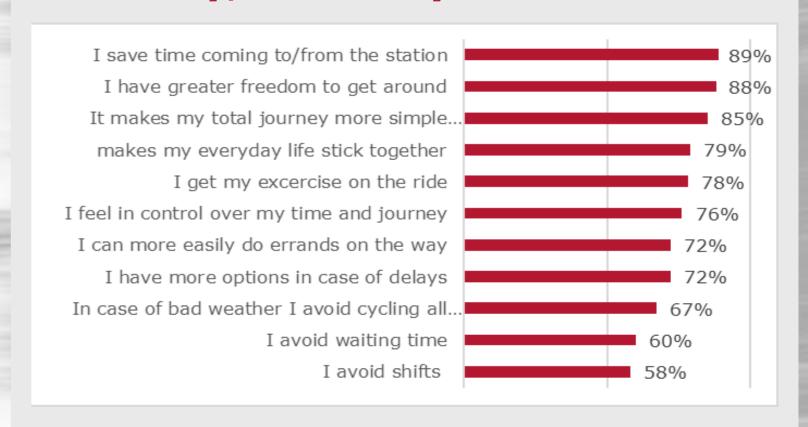
8% use e-bikes or cargo bikes

**11%** bring bicycles onboard

**81%** rate possibility as "satisfactory" or better, only 6% rate as bad/very bad

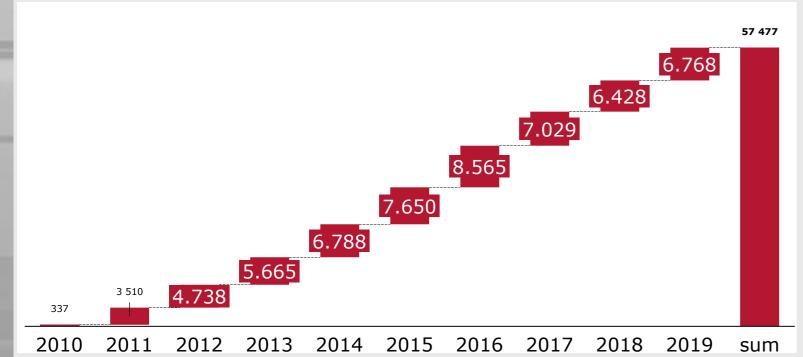
**60%** of users of public transport prefer bringing bicycles onboard vs. development of bike-sharing scheme

# Why cyclists bring their bicycle on board Efficiency, flexibility and Health



#### **Share of travel growth S-train 2010-2019**

**58M** travels or 40% of total growth



#### **Demographics S-train**

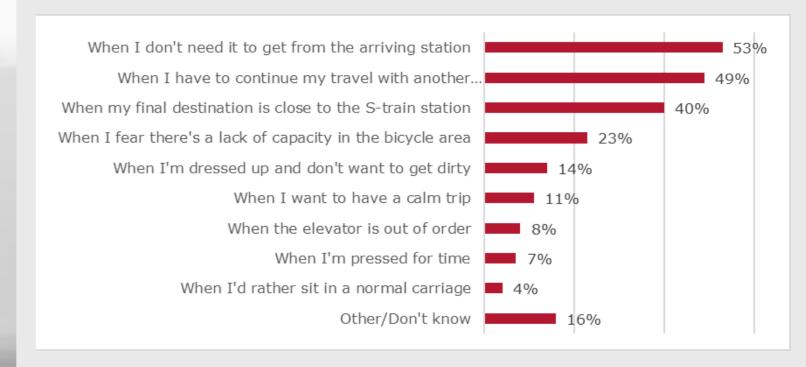
**64%** are younger than 40 years old

**61%** are women



Heavy users and core segments

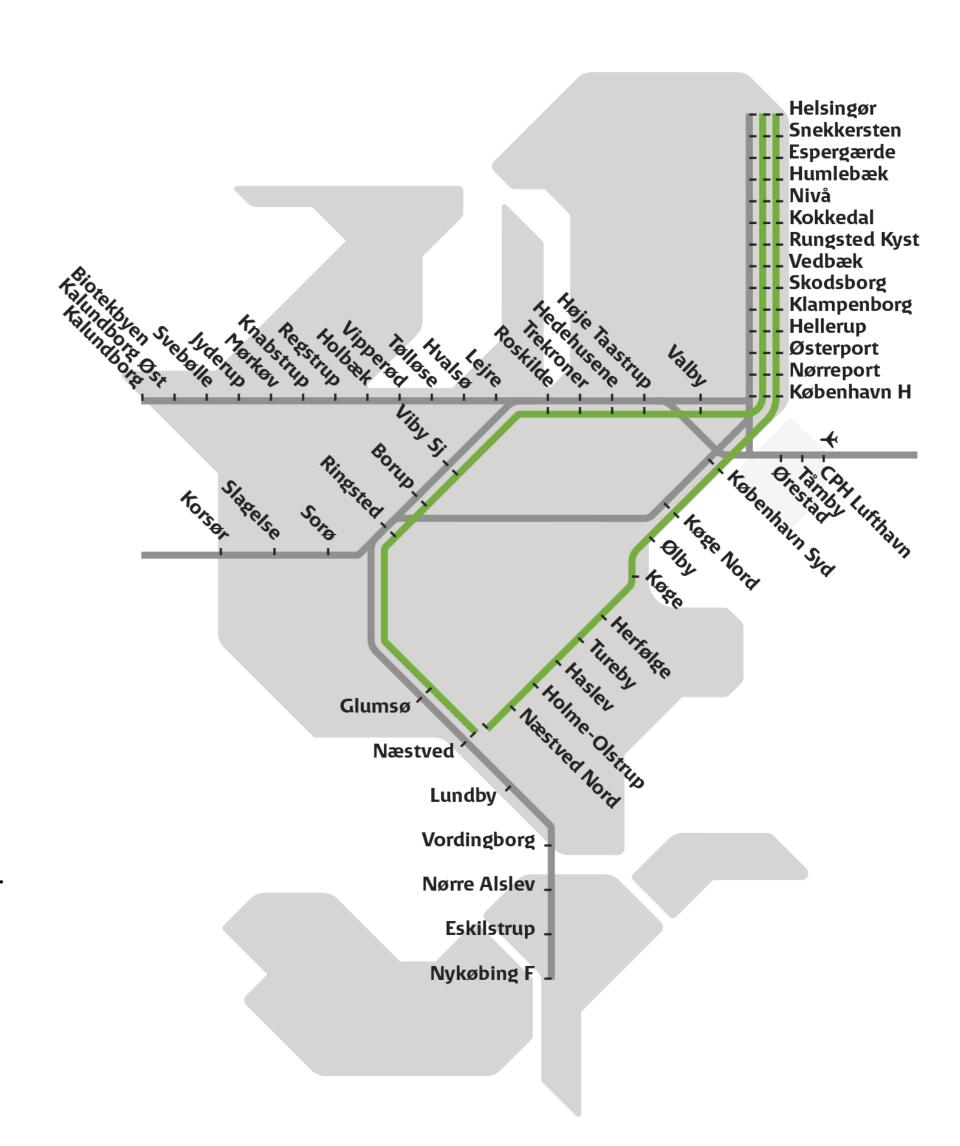
# Why cyclists park their bicycle at the station No need or fear lack of capacity on board



# DSB is testing free bicycle transport on two regional lines – outside rush hour



- → DSB offer free transport of bikes on two regional railway lines every day, except in the morning and afternoon rush hours.
- → In rush hour it costs aprox 3. euro for a bike reservation.
- This applies to DSB's two regional lines the Coastal railway line and Næstved line - the green lines on the map
- Customers are not guaranteed a place for their bike, it is on a "first come, first served" basis and the train staff regulates the final number of bicycles at any time.
- → The train staff will ask the customer to use the next train if its full.
- → The offer includes ordinary bicycles, electric bicycles, scooters or electric scooters
- DSB is currently using IC4-trains and DD-coaches on the two lines.
- → In a IC4-trainset there is space for 4 bikes. DSB is currently rebuilding our DD-coaches to have space for 18 bikes instead of 4 bikes. It is expected that the refurbishment is completed ultimo 2026.
- → The test runs from 1 July 2024 until the timetable change 8/12-24. DSB will evaluate whether the test should be made permanent.



## Preliminary insights from the test

- Very few telephone inquiries in our customer support. A few written inquires almost all of which are about how the customer can get a refund for a bicycle ticket. DSB can't close the sale of bike tickets outside rush hours on the two lines in the payment system.
- No press inquiries.
- → DSB have seen an increase in the number of bikes June-July-Aug (where June was the payment month, the test started 1/7).
- The Danish Cyclist Association awaits the outcome of the test with excitement, in relation to how DSB will manage bikes on regional trains throughout Denmark.
- → Feedback from train staff:
  - From Copenhagen to Næstved only positive, good space and happy customers
  - On the Coastal line: too little capacity during the week for bicycles - especially on Saturday between 10-16
  - No discussions with customer about a valid bicycle ticket outside rush hours.
  - Challenge regarding the "first come, first served" policy regarding bike spaces on the train.



## Locked bike sheds in 72 stations including 30 S-train stations





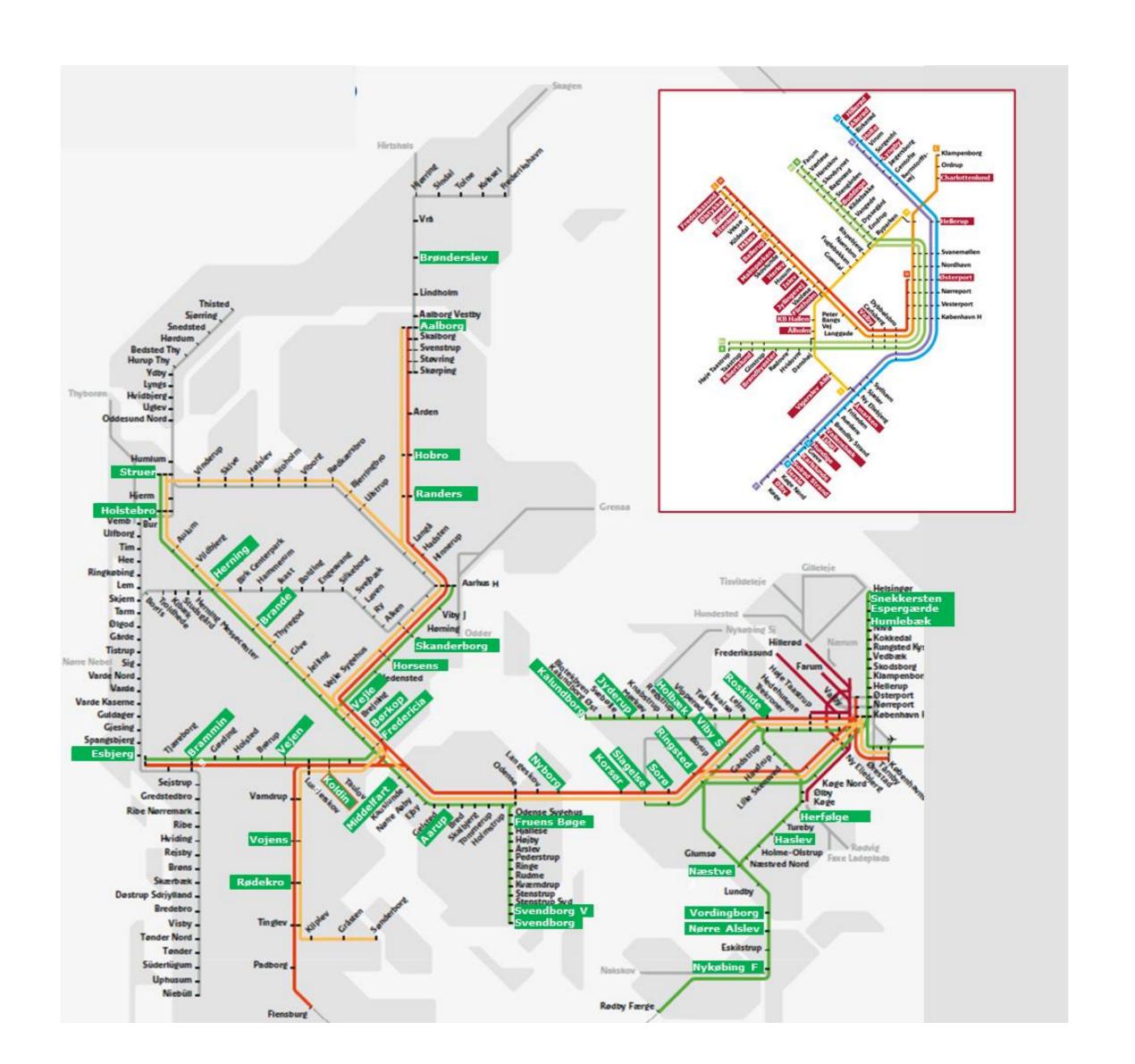
**Customer sign up** 

Digital sign up in DSB's loyalty program

Unlock with travelcard or SMS

Users used to pay for the service and customer surveys supports a willingness to pay

Access is free



#### DSB is investigating Bikeep solution

Bikeep solution is for the many everyday bike commuters



A metal arm to secure your bike, which uses an app or card Currently at 4 DSB stations through local initiatives. DSB has learned:

#### Positives:

- Customers experience the lock as an extra strong chain lock
- Customers enjoy being able to lock the frame and not just the wheel
- Easy and intuitive to use
- The bike won't fall over

#### Negatives:

- Bike is still exposed to weather, vandalism, parts theft
- The technology 'could be hacked' or could freeze while your bike is locked
- Uptake can be slow







## "The International Landscape of Bikes and Luggage Management on Railways"











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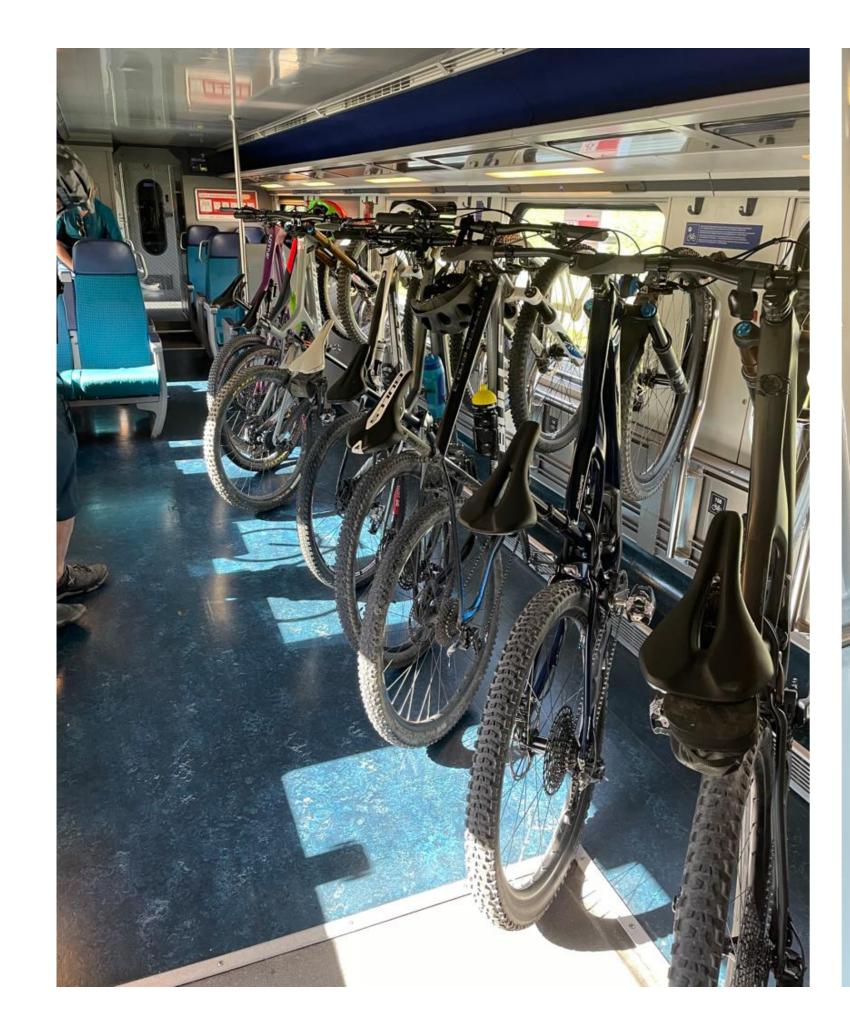
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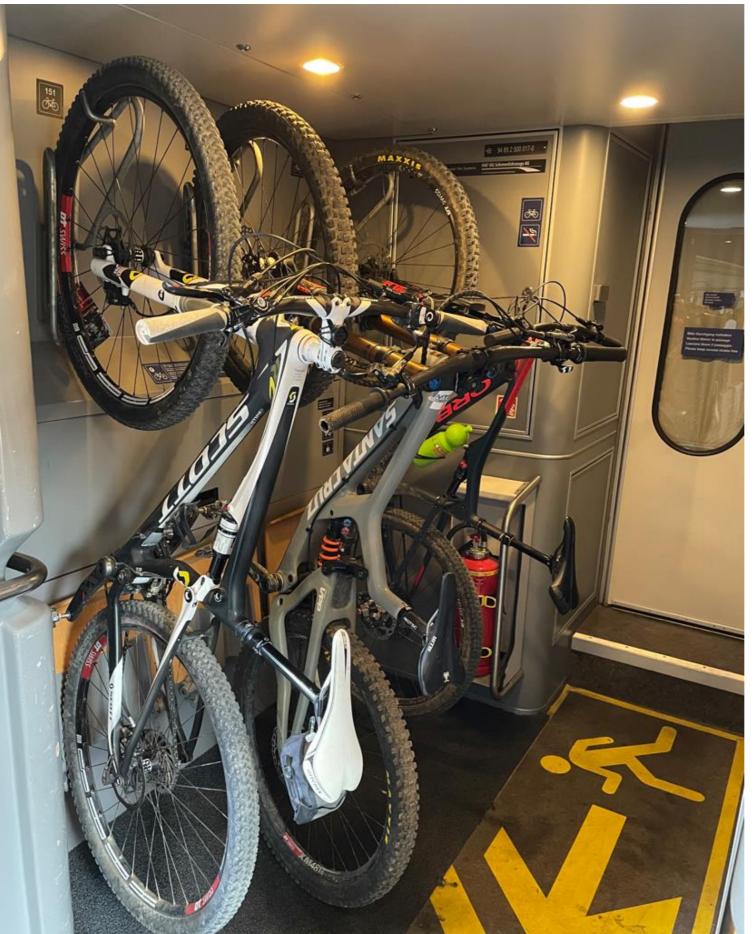
Rail4Cities EU Project

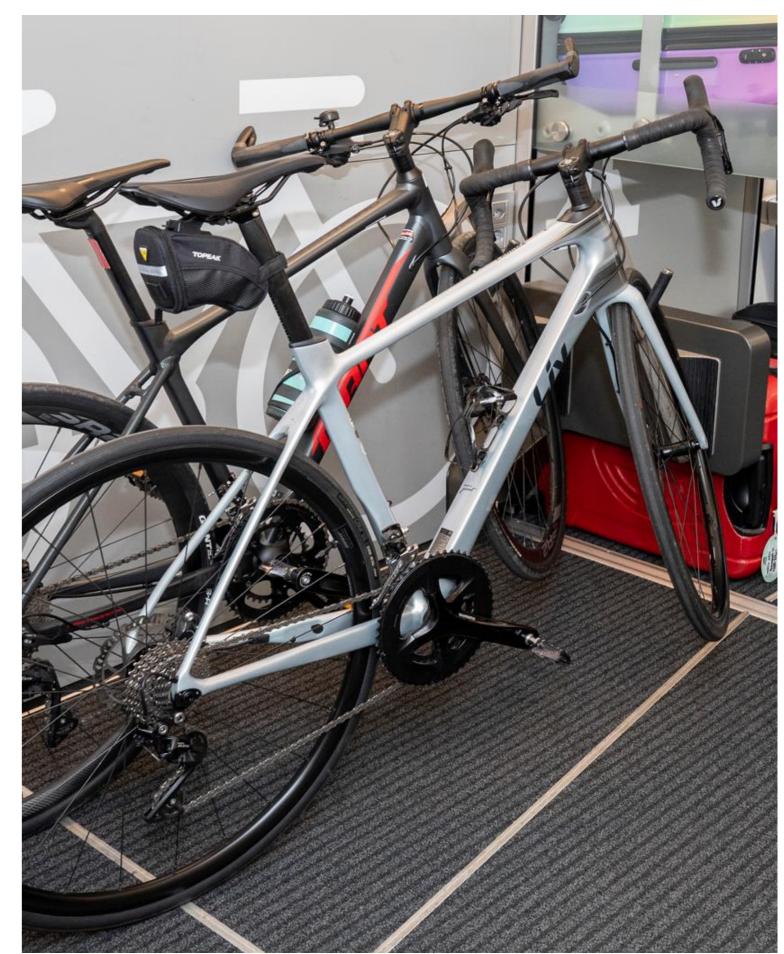




#### SBB doesn't have any issues with bikes on trains...

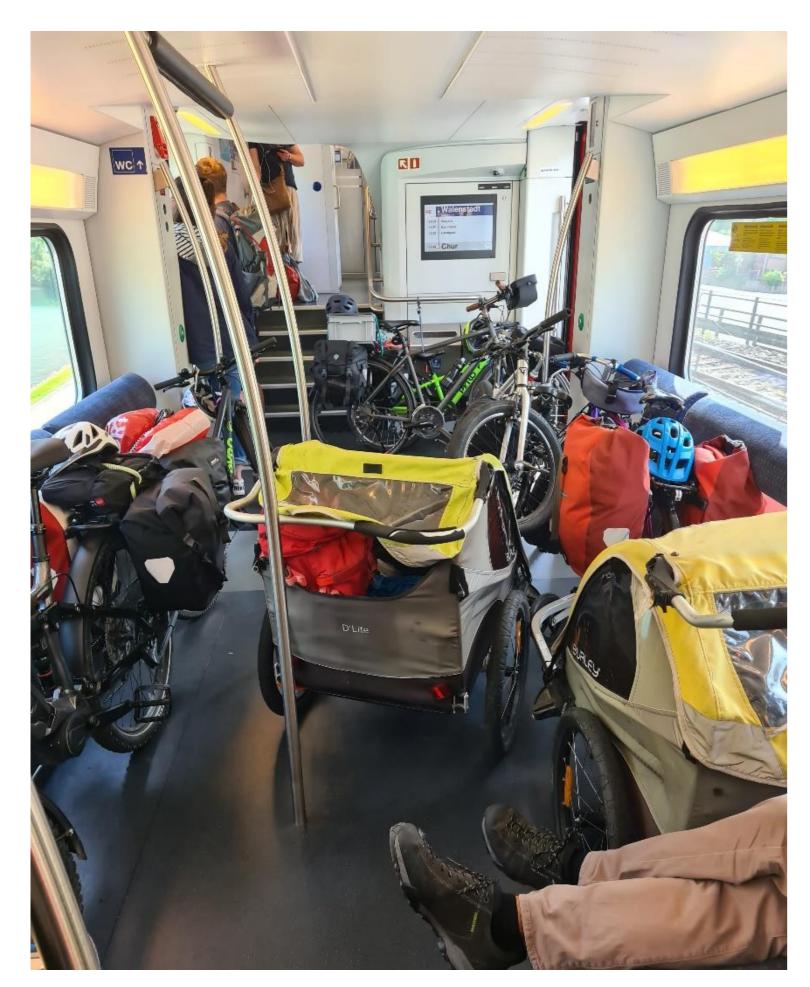


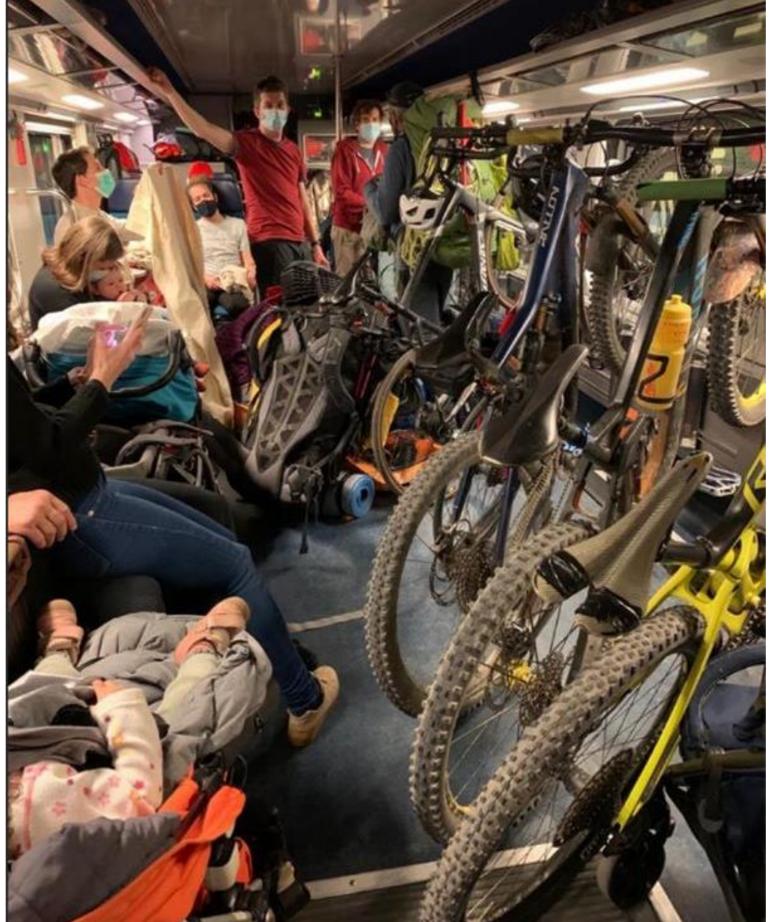


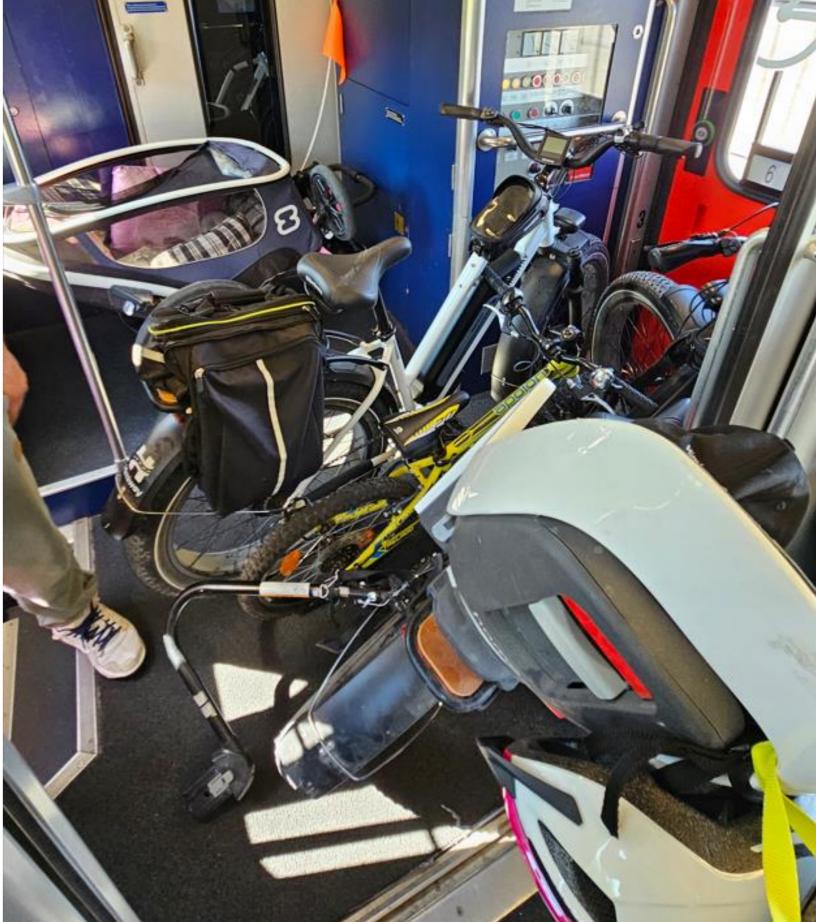




#### Of course we have issues.



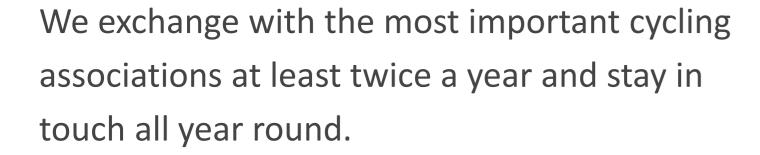






#### What are we currently doing to improve?







On peak days we offer additional capacity for bicycle transportation on our trains.

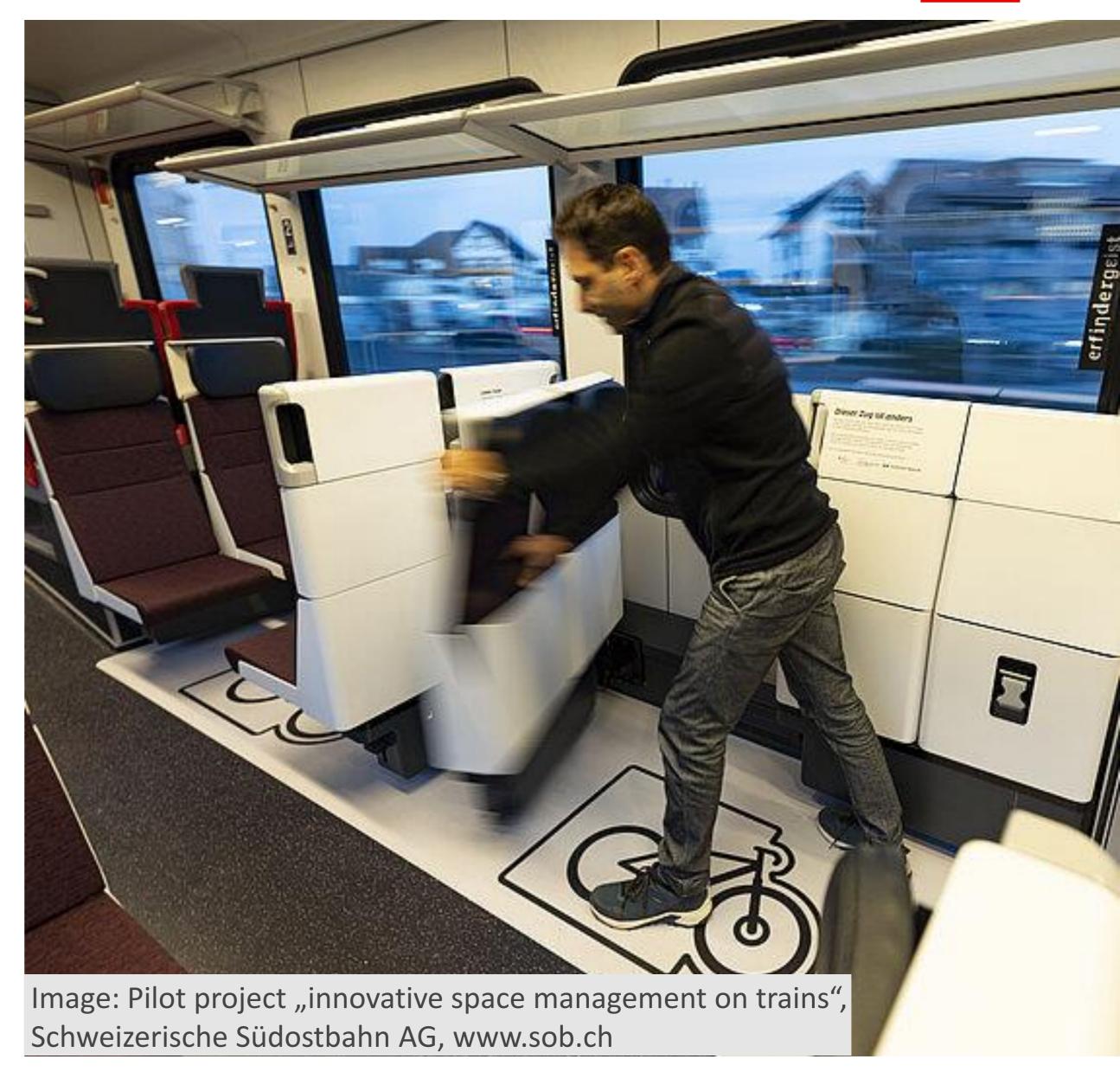


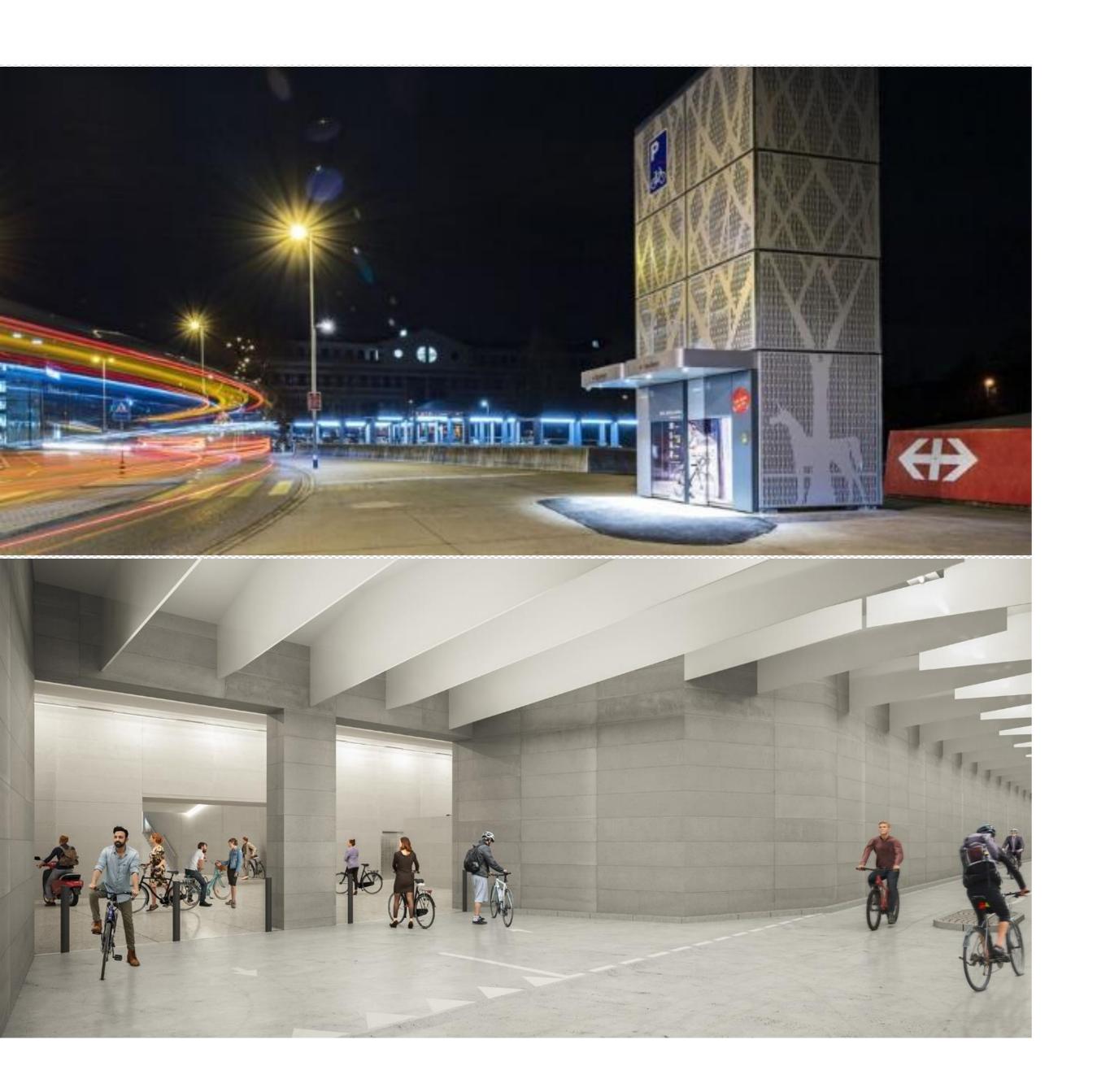
We add 530 bicycle hooks to our existing long-distance fleet by the end of 2026.



## What are our ideas for our future long-distance fleet?

- In general: higher capacity for bicycles than in current fleet
- Partly flexible interior design: change of layout in specific areas of the train within a short time
- Bike hooks suitable for heavy bikes and elderly people: no more vertical wallmounts
- No more bike hooks in the family coach (pushchairs occupy bike hooks)





## Workshop «Bicycle and Train» in Zürich 2025.

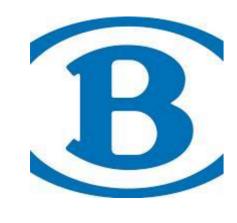
- Introduced by colleagues from CFL in November 2023, SBB will host the next edition on 8 and 9 April 2025 in Zürich.
- Participants from DB, ÖBB and CFL
- The workshop is focusing on bicycle parking, sharing/renting and transportation on train.
- We currently work on the program (e. g. we intend to visit the new «Velotunnel» with large bicycle parkings underneath Zurichs main station.
- Workshop language: German (English/French on demand)
- More information: marc.guggenheim@sbb.ch

Image top: bicycle parking tower in Zürich-Stettbach Image bottom: bike tunnel/station Zürich HB 2025





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SZ

#### Maria Gusarova

UIC Stations
Senior Advisor

Rail4Cities EU Project



#### s

#### Regional Business Department and intermodal development











ca 6.000 trains per day 1.170 trains fleet

144 M train\* km 1.700 stations

404 M

passengers

(2023)

1.100.000 travels per day



#### Bike transport on regional train





#### Bike transport on regional train



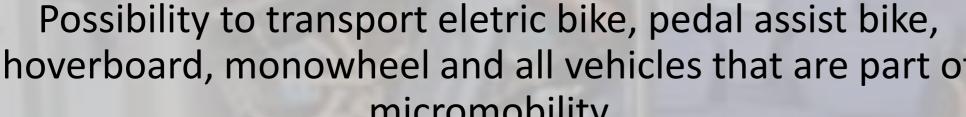


Bike diassambled can be transported on all regional trains (considered baggage)

Due to the Regional Authorities, there are many different Term and Conditions, basically one for any region and PSO contract.

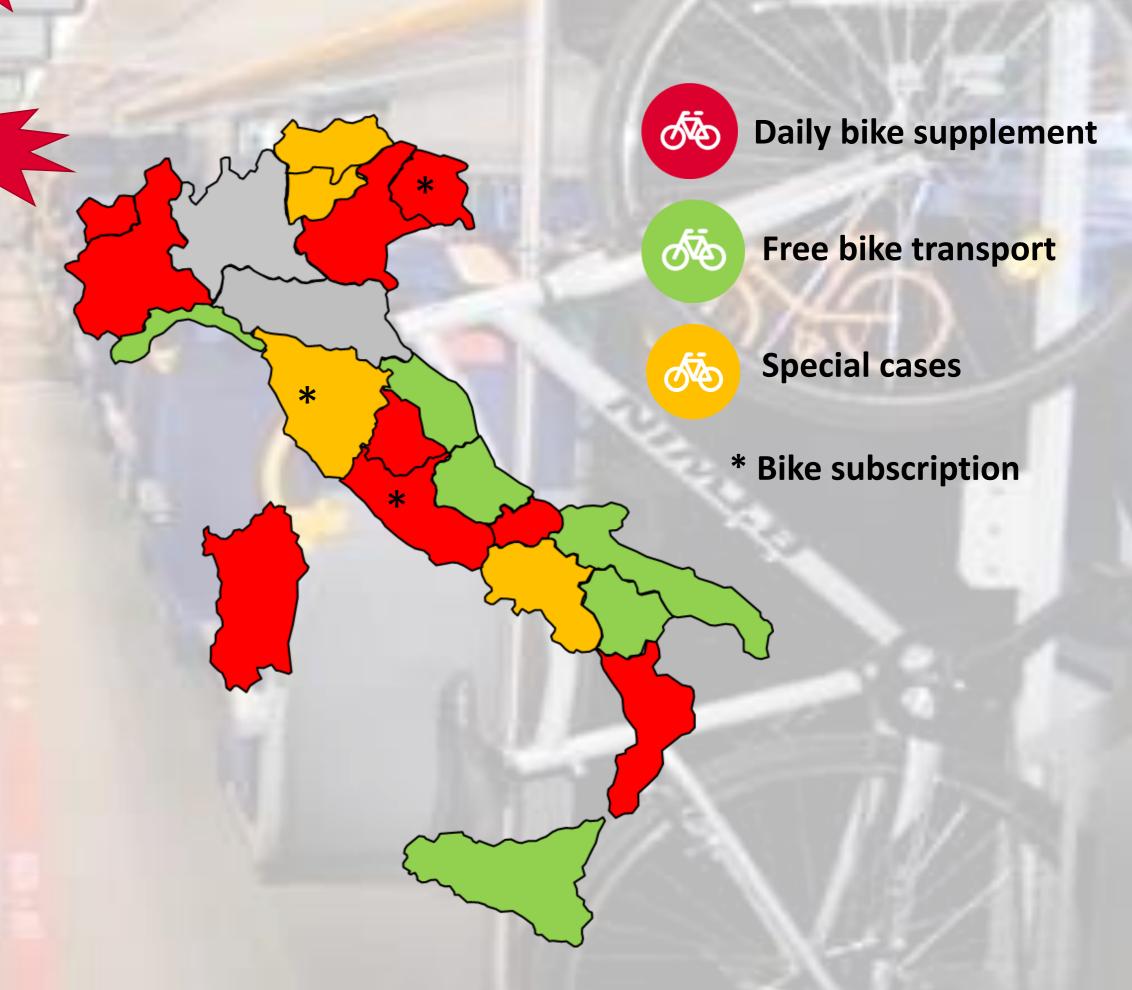
Bike not diassambled can be transported only on trains with special pittograms indicated on official timetemble

**Ticket** 



hoverboard, monowheel and all vehicles that are part of micromobility









#### Bike transport on regional train

TO BE



Train overcrowding problem without bike space reservation. According to the EU Regolation 782/2021 train staff may not pick up passegers with bicycles due to safesty raisons



Carrieges with bike space editable accorting to the season

**Implemented** 

Train carrieges exclusive for bike

**Project** 

Bike space reservation





#### Luggage on regional train

The needs and requirements of passengers traveling on regional trains are changing especially on some more touristic lines

Needs



In some cases there are problems link to baggage space: touristic – airport, cruise routes



Projects to increase luggage space on trains (Vivalto).

The latest generation (POP, ROCK, BLUES) trains are already designed with luggage space.

Pictograms on trains that help people understand where to place the baggage.

Luggage compartment in the middle of the trains.









## "The International Landscape of Bikes and Luggage Management on Railways"















	Der	nis
E	Brac	het

Senior Expert Intermodality

SNCB

#### **Brigitte Matheussen**

Lead architect train innovation

NS

#### Magnus Just Hansen

Director of International Affairs

DSB

#### Marc Guggenheim

Product manager bicycles and reservations

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#### Silvia Toffoli

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Rail4Cities EU Project



## BIKES ON SŽ TRAINS Challenges and opportunities

UIC CEMP meeting 4. 10. 2024



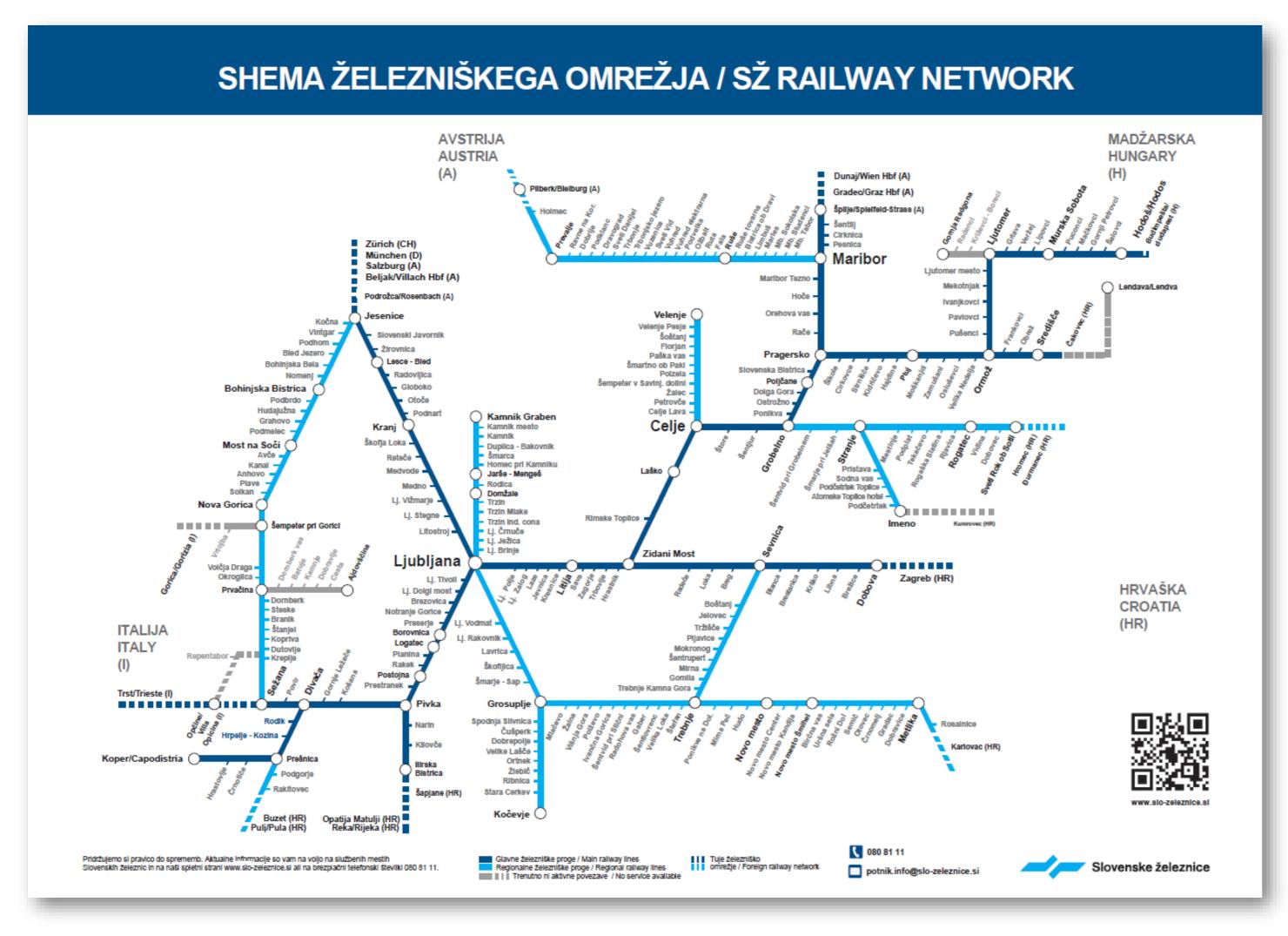
#### **FACTS**

- In Slovenia we actively supports the use of bicycles.
- Flate-rate charge for a day ticket is only €1,5 for an unlimited number of journeys in Slovenia (€3 for an electric bicycle).
- Transporting is possible on domestic and international services.
- The bicycle is carried on and off the train by the passenger on their own.
- The purchase of a bicycle ticket for train journeys in Slovenia is only possible on the train (payment only in cash).
- Reservation is not available.
- Lot of construction works on tracks.

#### In addition ...



#### SŽ RAILWAY NETWORK

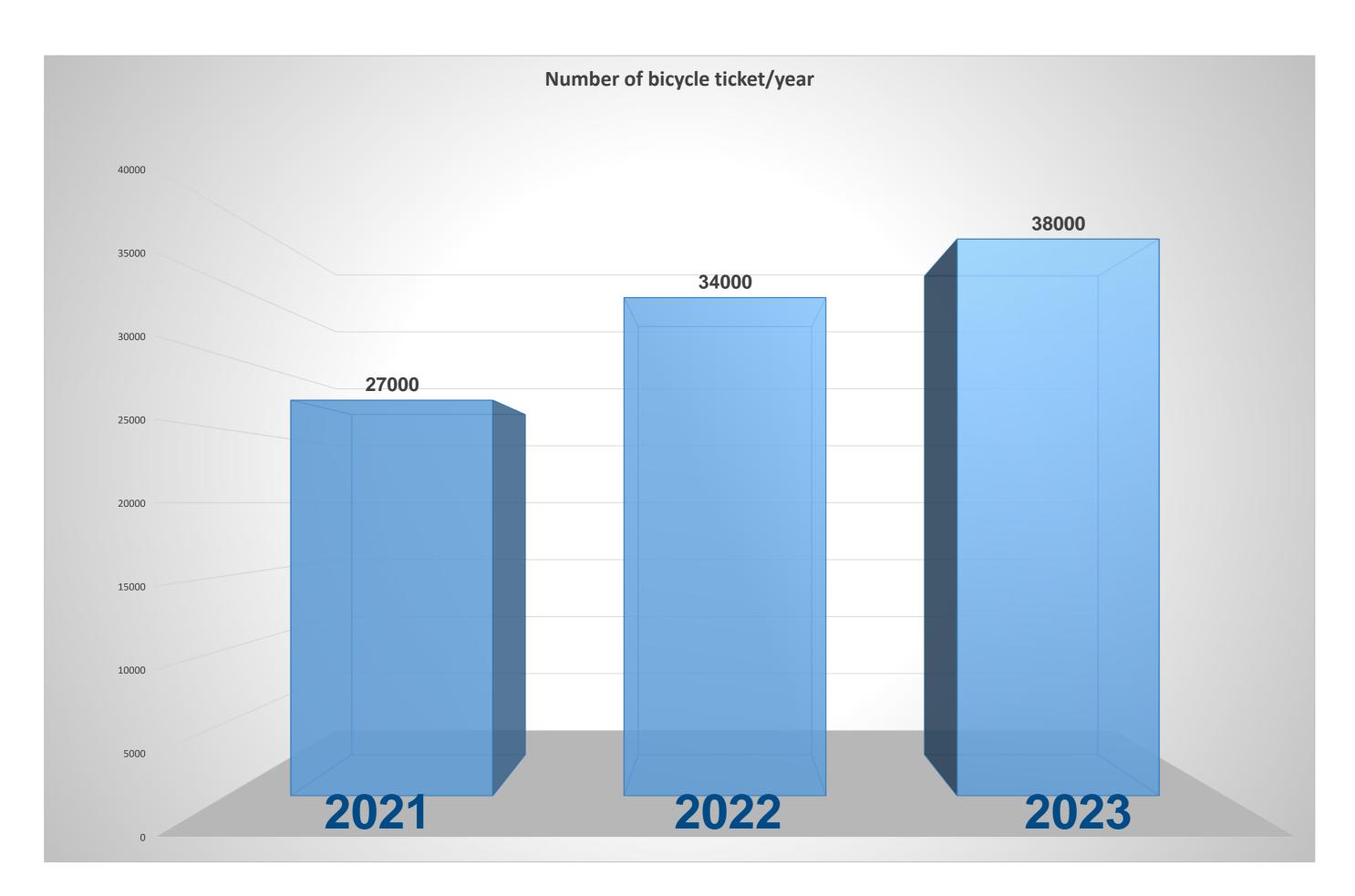


- Extensive network of railway lines
- A lot of small stations and short distances between them





#### NUMBER OF BICYCLE TICKETS CHARGED per year

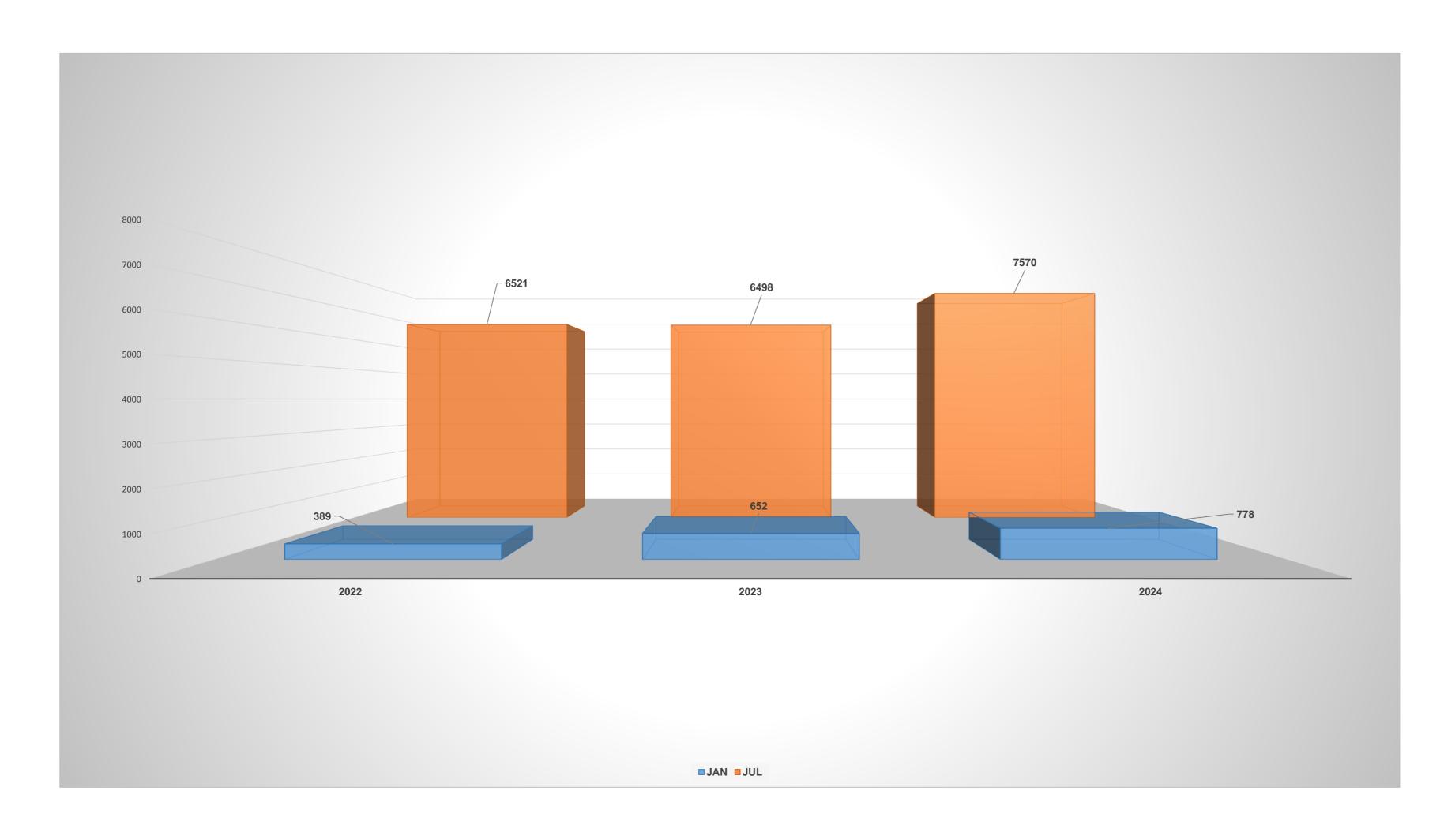


Year 2023 → Year 2024 + 41%

Aug 2023 → Aug 2024 + 30%



#### NUMBER OF BICYCLE TICKETS CHARGED per month



JAN JUL x 10



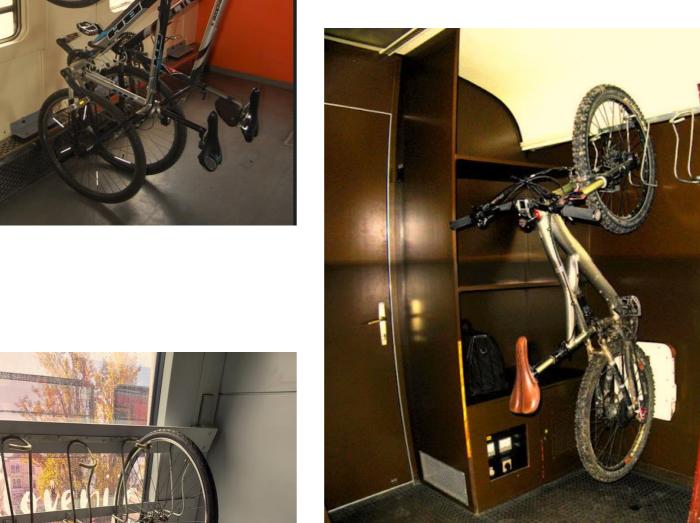
#### LIMITED PLACES FOR BICYCLES











12 units
up to 14 bicycles on each





30 units 6 to 10 bicycles on each



#### RENOVATION OF SŽ ROLLING STOCK

From 2022: 52 new Stadler units up to 10 bicycles on each unit







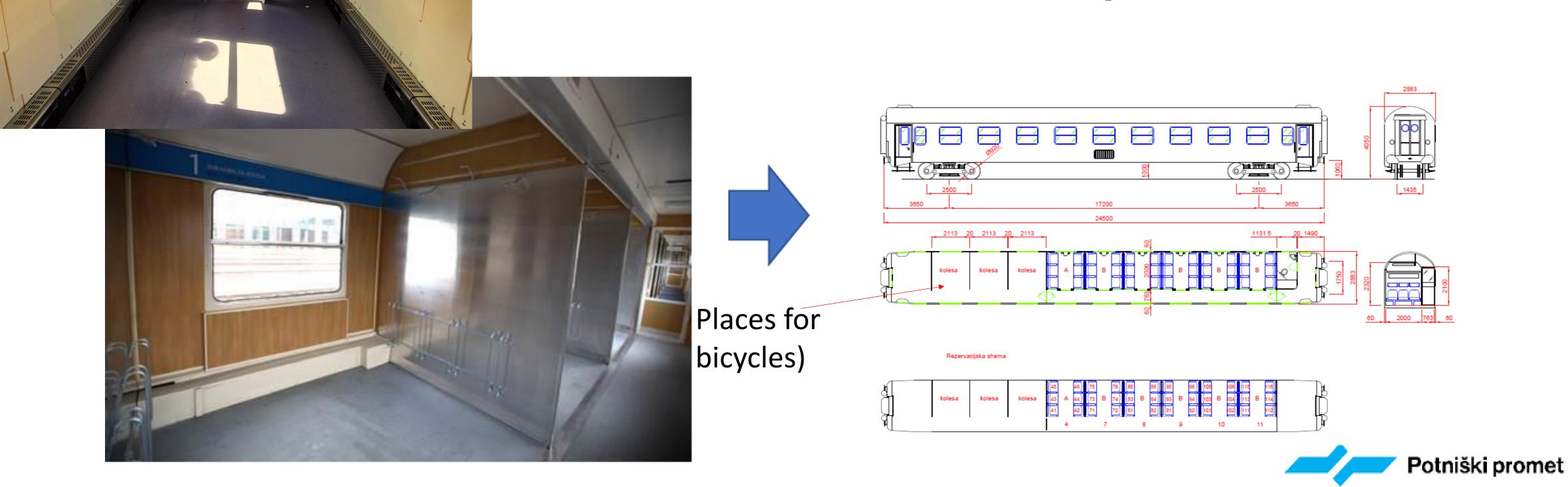


#### HOW WE ARRANGE ADDITIONAL SPACES?

wagons – some compartments and seats are permanently removed

Before season for cycling starts

units 813 – some seats are temporarily removed, after the season, the seats are placed back



#### LARGE GROUPS OF CYCLISTS ON TOURISTIC LOCATIONS



Unannounced

Demand far exceeds possibilities (70 passengers with bikes, the police had to intervene)

#### **OUR CURRENT CHALLENGES**

- 1. How to manage transportation of bikes during construction works?
- 2. How to deal with larger (unannounced) groups of cyclists?
- 3. No special storage space for scooters and e-scooters?
- 4. How to keep bicycles and e-scooters in a way that they do not interfere (other) passengers?
- 5. The right price to charge for reservation?

## THANK YOU and WELCOME ON OUR TRAI Slovenske železnice



## "The International Landscape of Bikes and Luggage Management on Railways"















Denis	
Brachet	

Senior Expert Intermodality

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# RAIL4CITIES Toulouse-Matabiau railway station: strengthening the interconnection between trains and bicycles

Bike and Luggage Management on Railway Systems workshop



The project is supported by the Europe Rail and its members



Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or of the Europe's Rail JU. Neither the European Union nor the Europe's Rail JU can be held responsible for them.



## UIC & Station Managers Global Group

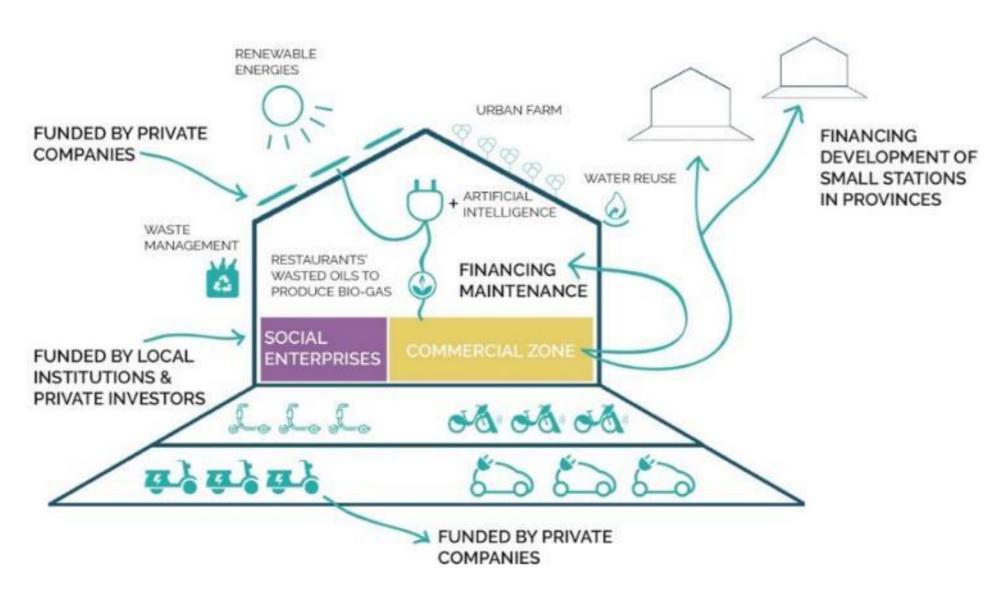
In the Rail4Cities project, the Passenger Department of UIC is responsible for WP5 Communication, Dissemination, and Exploitation, as well as the international advisory board, which consists of a pool of railways, experts, cities, and industries.

The Station Managers Global Group, a sector within the UIC, is actively involved in Rail4Cities project and is addressing the management of bikes and luggage at railway stations through its various working groups, such as Station & Urban Design, Facility Management & Operation, Retail & Commercial Affairs, and Small Stations. It also conducts various surveys and collects benchmarks dedicated to this topic.

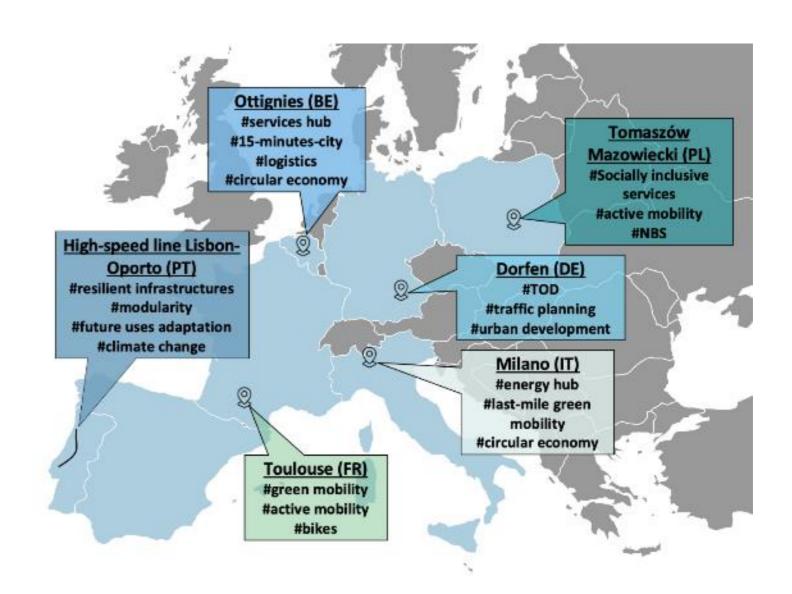




## Vision and methodology



The SCP concept



The Living-Labs and case studies

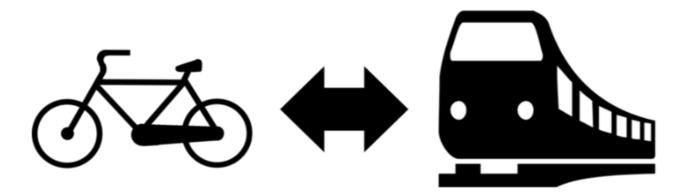
The central ambition of *RAIL4CITIES* is to develop a new operational, readily available and highly applicable model of stations (SCP model), a respective EU-wide methodology for its efficient application, and a tool, which takes into account these interdependent impediments (profit-orientated business model, complex web of agents and stakeholders, policy gaps) and that decision makers can utilize for transforming stations, existing and new, into real promoters of sustainable cities.

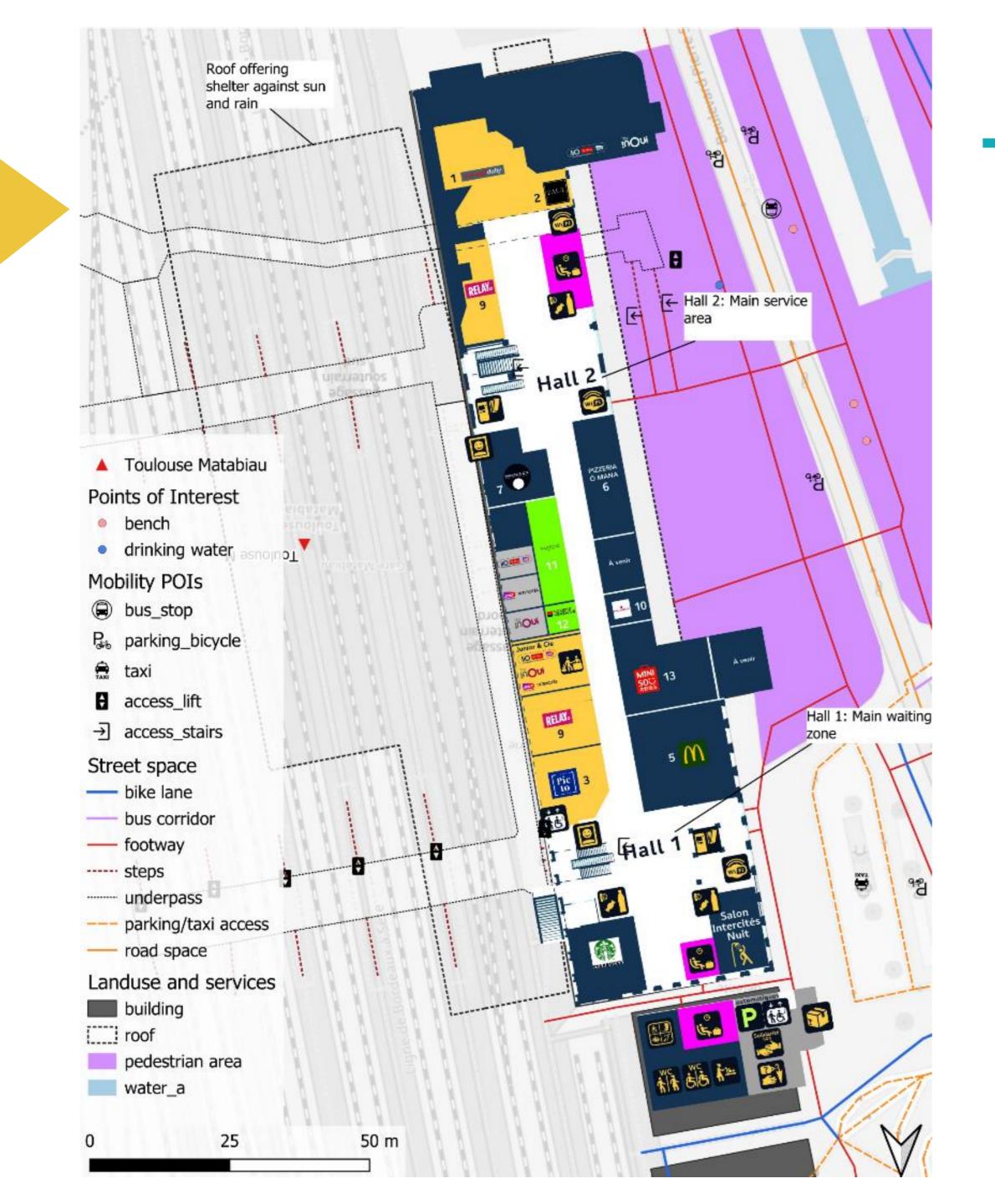


## Toulouse-Matabiau: Living Lab Objectives

The Toulouse-Matabiau Living Lab's main objective is to transform into a "green mobility hub" by through the use of intermodal solutions between active modes of transportation (with a focus on bicycles in combination with the train). The key focus areas within this objective include:

- How to strengthen the interconnection between trains and bicycles while limiting the number of bicycles carried on-board
- 2. Finding a solution for motorised two-wheelers that lack or have limited parking options near the train station
- How to encourage current car-users to opt for using bicycle + train instead.







## Toulouse-Matabiau: Station at a glance



ACTUAL 2023 50 000 pers./day



TO BE 2028 150 000 pers./day (x3)









## Images of the station's Main Entrance







## Current state – Active & green mobility

#### Basic facts about the station related to the field of action topic:

- By 2028, the number of station users will **have tripled** (new metro line arriving in 2028 and the LGV high-speed rail line in 2032)
- The Canal du Midi is a major attraction for cyclotourists, especially at weekends and during the summer vacation
- In 2023, 2,6% of commuters use a bike and train combination (2,1% with personal bike; 0,5% with bike-sharing)

#### **Services** currently provided to station users:

- Secure bike parking (operated by EFFIA) with 678 places (sizes from 1m60 to 2m70), 64 lockers, sockets for electric-assist bike batteries, air-filling station and small reparation tools, a water fountain NOT FULLY USED!
- Bike racks on the station forecourt USED BUT NOT SECURED
- Information hubs with intermodal signage (bus, metro) NOT EFFECTIVE, AS PEOPLE DON'T KNOW ABOUT THE EXISTANCE OF THE BIKE PARKING
- Elevators with bike parking facilities



## Current state - Assets analysis

#### What is working well?

- A high global satisfaction rate of the station: 8,15/10 and **8,12/10 "The station**" is committed to green mobility" (September 2023)
- Strong intramodality with public transport: more than 48% of the station's commuters take the bus or the metro (September 2023)
- High occupancy rate of the secure bike station (operated by EFFIA) and use of services and facilities (lockers, charging of e-bike batteries, etc.) by commuters
- A wide range of services and shops at the station since the NéÔmatabiau renovation and modernization project
- Good relationships with the local stakeholders

#### What is missing / not working well?

- Overcrowding of train coaches with bikes at peak hours and during summer period
- Services and facilities for cyclotourists who have specific needs (personal and valuable bike, luggage, etc.)
- No luggage storage solution at the station (existing partnership with Nannybag)
- Allocation of parking spaces among different modes of transportation (conducting to unauthorized parking of scooters at the front of the station)

#### What could be exploited more?

- Improved communication and signage of the bike services and facilities at the station (operating mode, price, free places, etc.)
- Communication about alternative solutions to car usage (impact in terms of time, economics, and the environment)
- Developing the station as a starting point of cyclotourism routes



## Potential solutions for end users from a dedicated ideation workshop



Enhanced signage to indicate bicycle-related services



A dedicated shop at the station for bike mobility (accessories) & bike repair area (self-service or with repairers)

A bicycle path leading to the bicycle parking area (like the one at Gare du Nord station)



Bicycle secure parking with humanized and/or security cameras and counting solutions









## Potential solutions for end users from a dedicated ideation workshop

Commercial incentives
between the various
players (discount on TER
tickets when using the
bicycle parking area, for
example)



Best overall communication about the bicycle facilities and services at the main station and at the stops in the Toulouse region









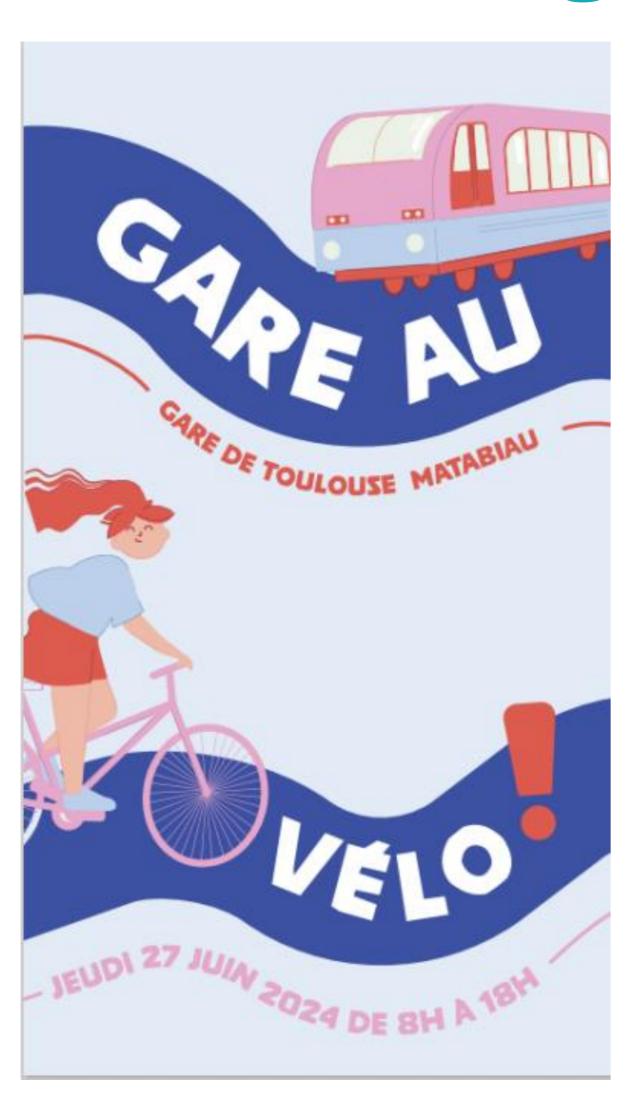
Direct access (via mobile app) to available spaces in the region's bicycle parking facilities



Make Toulouse-Matabiau station the starting point for cyclo-tourism routes



## Placemaking "GARE AU VELO" (1/3)



#### **Key objectives:**

- 1. Organize a fun, visible all-day event to raise awareness of the cycling services available at or near station.
- 2. What is stopping people from using their bikes?
- 3. How can we change things so that people use their bikes more?

#### **Expected results:**

- Make many users aware of the services available at stations
- A better understanding of the barriers to cycling and the solutions that could be found.

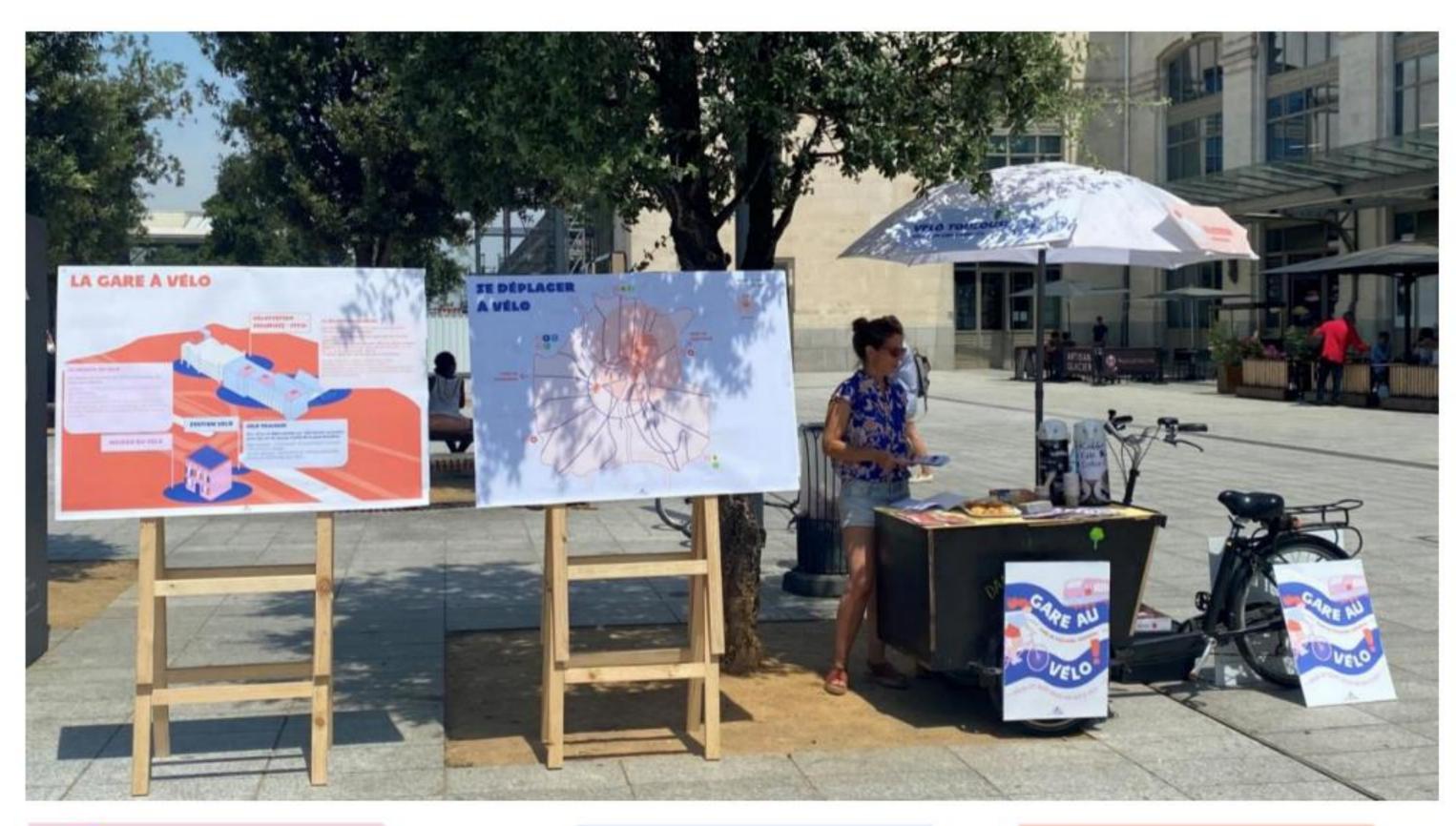


## Placemaking "GARE AU VELO" (2/3)

#### Highlighting the presence of:

- La Vélo station
- Vélô Toulouse bike sharing-service
- La Maison du Vélo

at a fun and interactive communication event in front of the station.





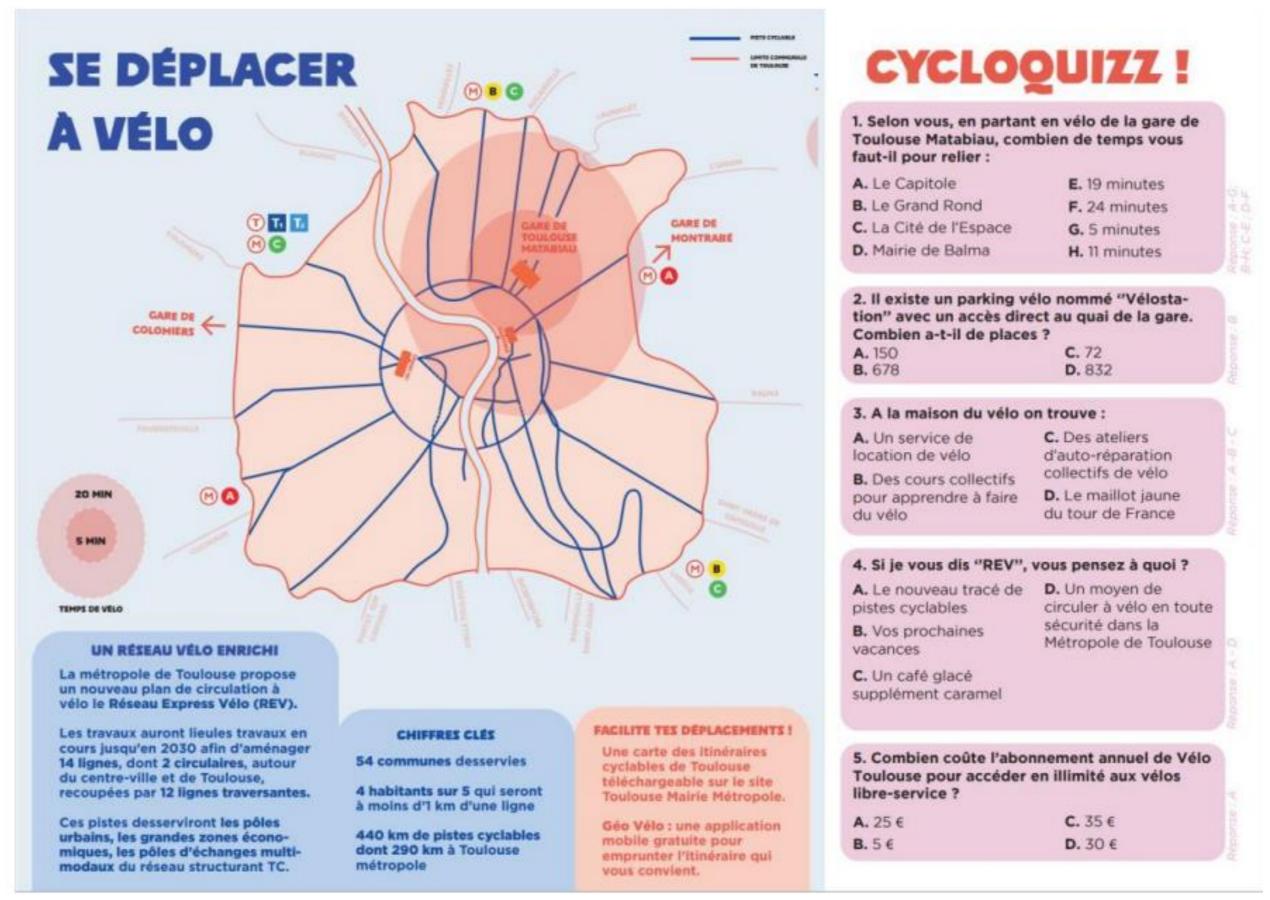






## Placemaking "GARE AU VELO" (3/3)





Quiz flyer distributed during placemaking with free one-month subscriptions to the "vélostation" to be won

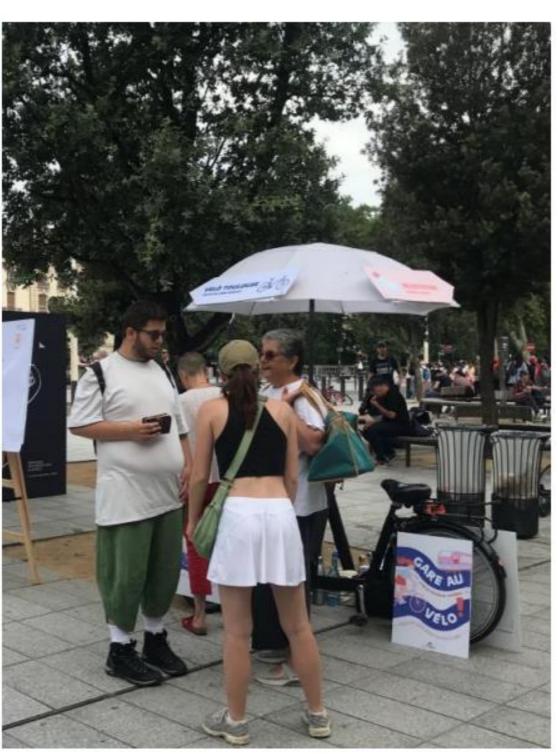


## Placemaking "GARE AU VELO" – in images









Event from 8 a.m to 6 p.m on Thursday June 27, 2024 4 people mobilized all day More than 300 users reached during the event



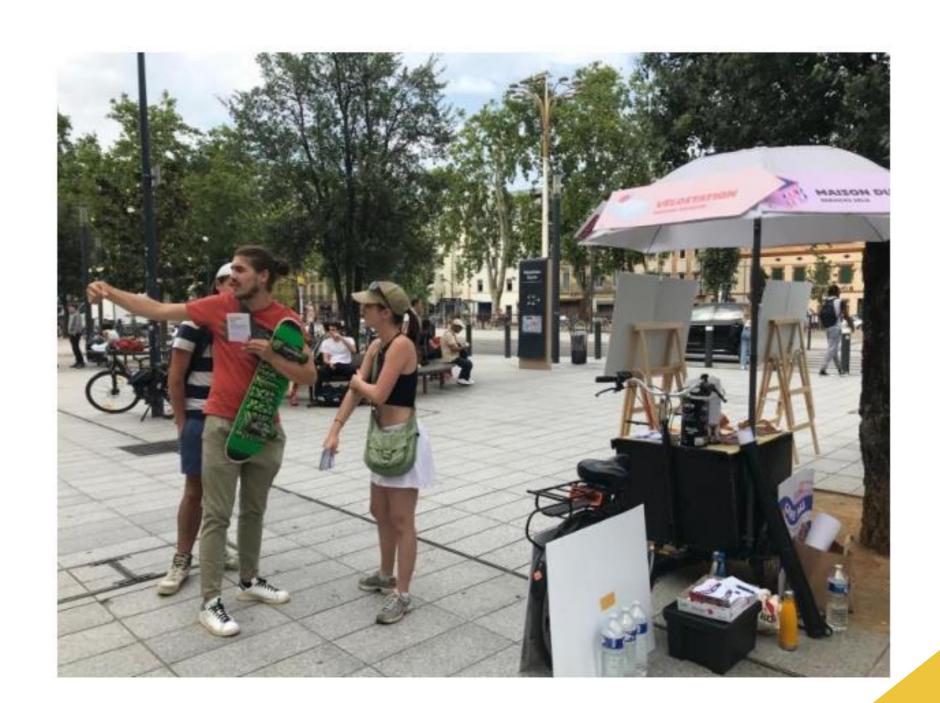
## Placemaking "GARE AU VELO" - results

78,2% of the people interviewed indicate that they do not come to the station by bike because:

- They are passing through the city
- They have luggage that does not enable them to take a bike
- They have a feeling of insecurity due to the lack of cycle paths
- They prefer the car because they live too far from the station
- They prefer walking because they live near the station
- They prefer public transport to avoid physical effort

The creation of cycle paths within Toulouse and its employment areas clearly appears to be a determining element in changing user behavior.

Only 13% of those questioned knew of the existence of the bike station.





# THANK YOU FOR YOUR ATTENTION



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## Interactive Session



## OPTIMIZING BIKES AND LUGGAGE TRANSPORTATION IN RAILWAY SYSTEMS





# Which of the following innovations implemented in international cases do you find most applicable to the rail system?

0

Digital pre-booking systems

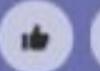
0

Dedicated bicycle and luggage cars 0

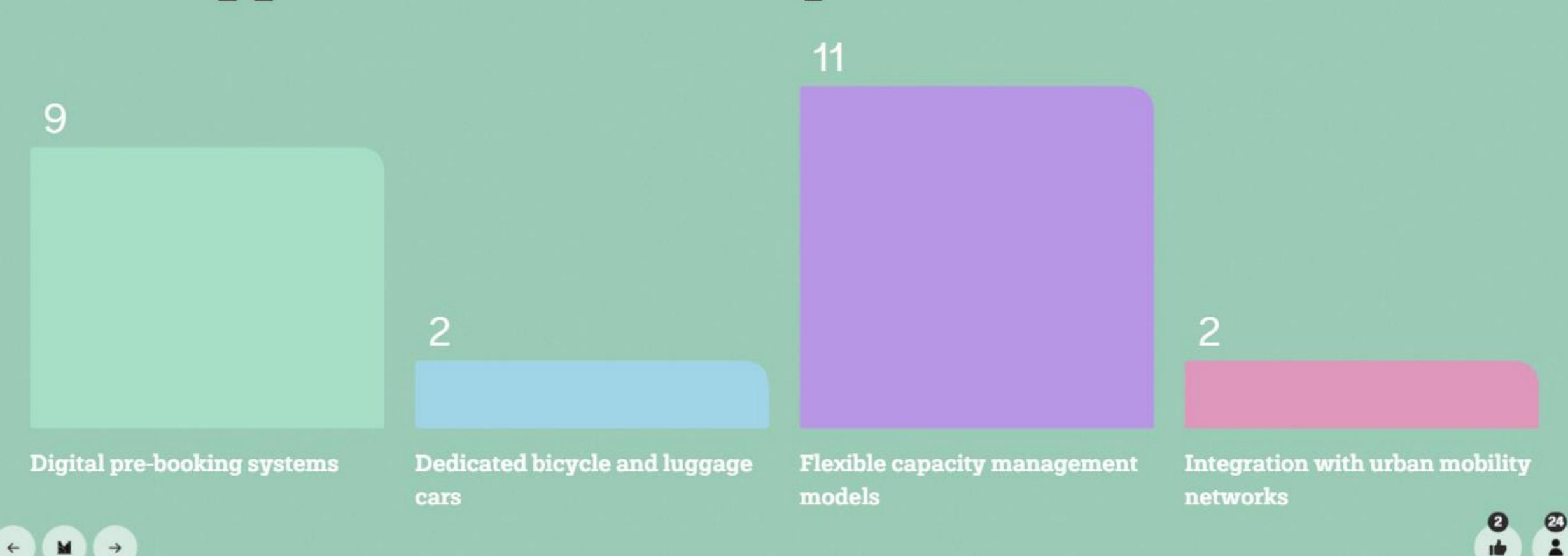
Flexible capacity management models

0

Integration with urban mobility networks



# Which of the following innovations implemented in international cases do you find most applicable to the rail system?





### Panel Discussion

#### "Balancing Accessibility, Capacity, and Sustainability in Railway Services"



Jan Brumagne

Legal Officer at European Commission

**DG Move** 



Fabian Küster

Director Advocacy and EU Affair

European Cyclists' Federation



Alessandro Vannucchi

Head of Portfolio

HITACHI



**Brigitte Matheussen** 

lead architect train innovation

NS



**Jorge Morera** 

Member of the Management Board

European Passengers' Federation

#### Conclusions

### ųíc)

## UIC Customer Experience Platform (CEMP) Chair

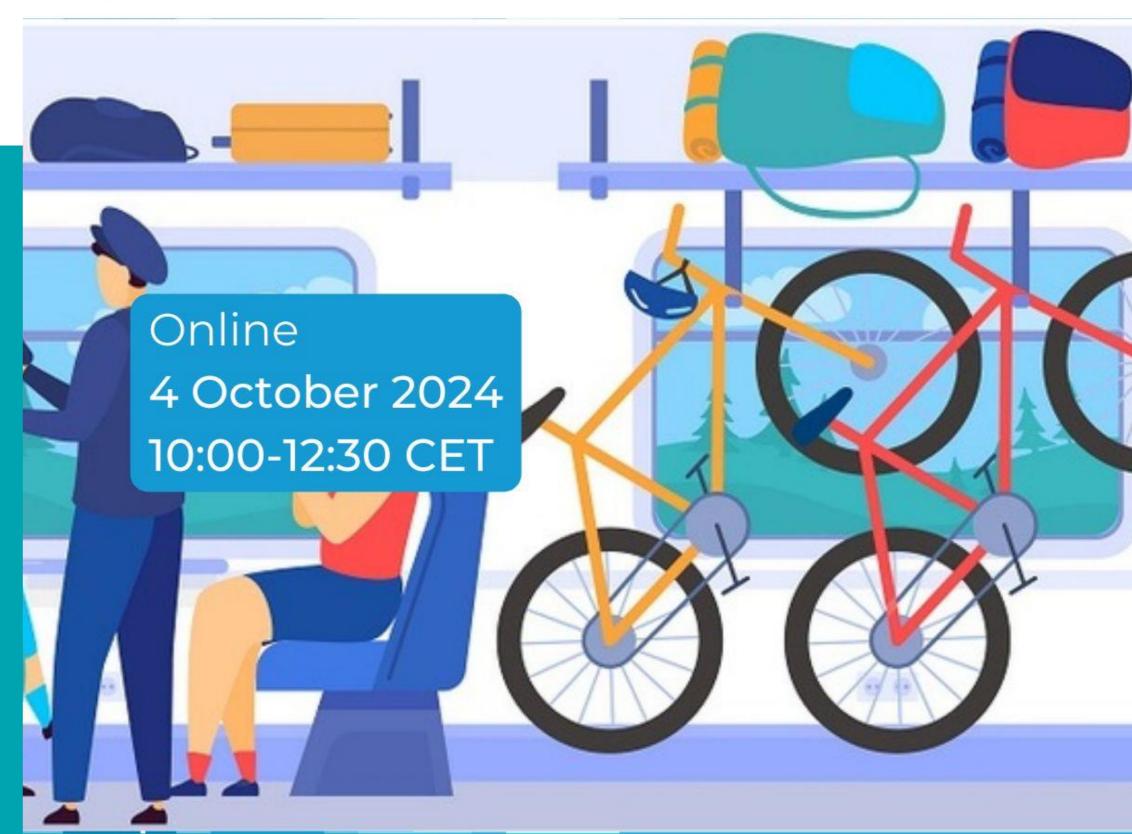


Jörg Ostwald

Head Product and Services
SBB Passenger Department

OPTIMIZING BIKES AND LUGGAGE
TRANSPORTATION IN RAILWAY SYSTEMS





## Lessons learned are written down in CEMP report hand books.











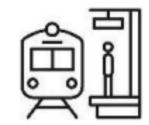




January 2022

## From Individual Analysis

#### **Current Situation**



Evaluating service quality <u>individually</u> by nation and company with <u>different standard and grade</u>



by governmental (ORR) and civic organization



by railway company



by professional agency



Evaluating ASQ by ACI with the global standard

- ASQ: Airport Service Quality
- ACI: Airports Council International

## **To Cooperation**

International Railway Service Quality Index



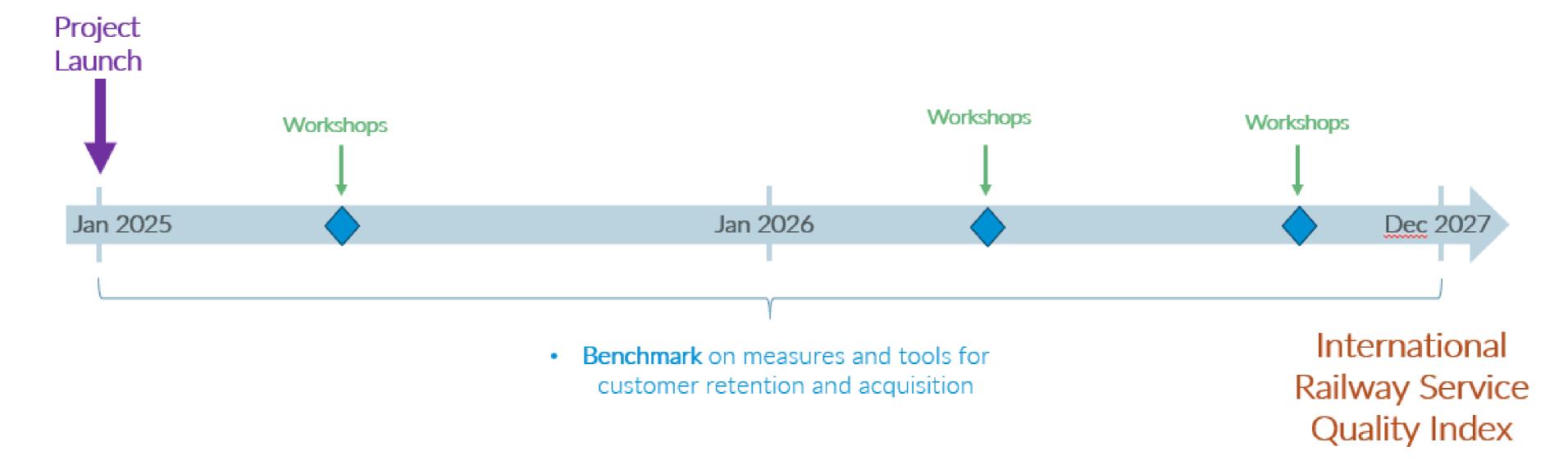


**Development of a Quality Index:** Establishing a universally recognized index to measure and improve service quality across the rail industry.

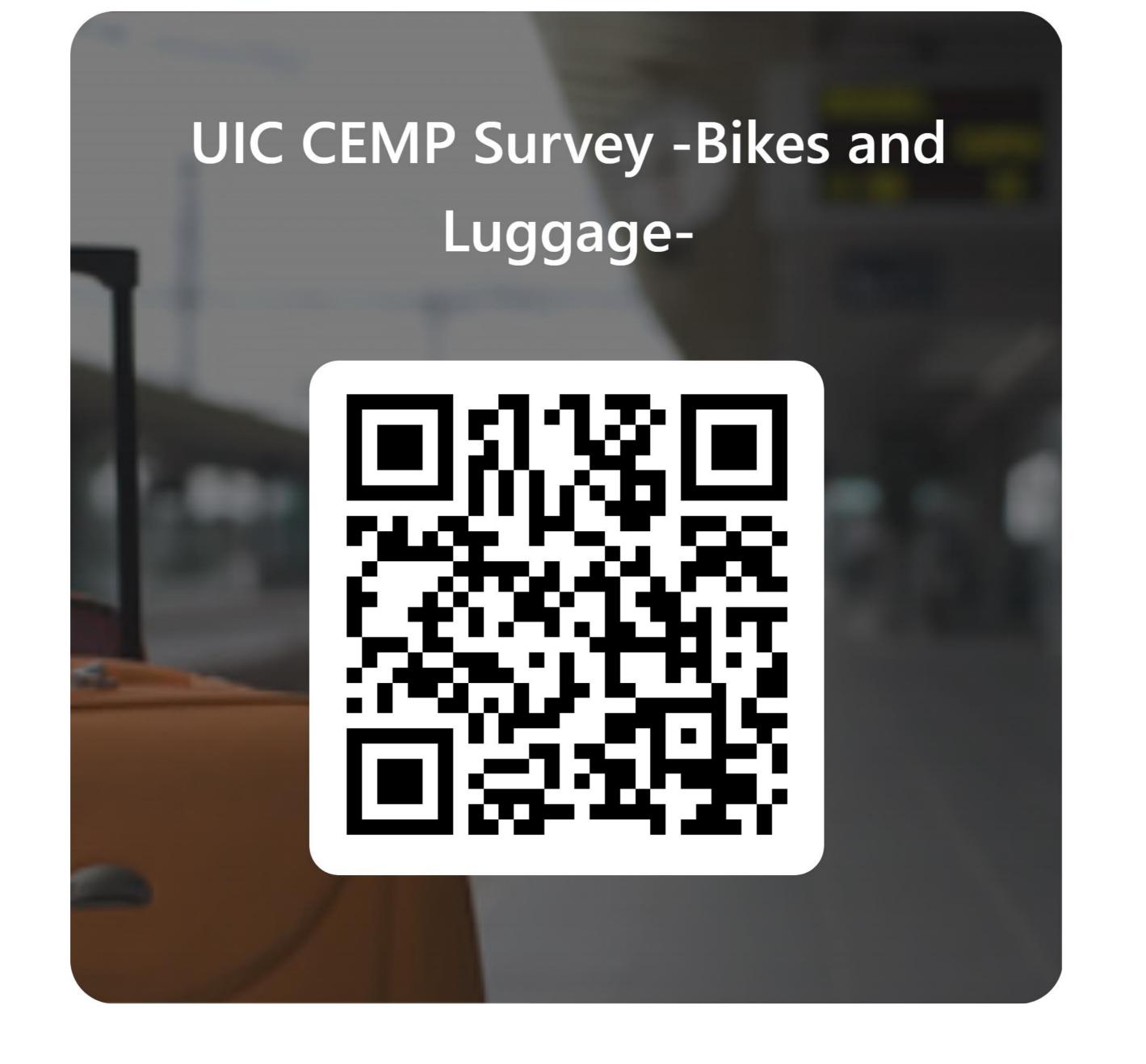
Customer-Centric Policies: Exchange on best practices that put passengers at the center, ensuring their needs and preferences drive service development and delivery.

**Digital and Physical Integration:** Creating a cohesive travel experience that merges digital innovations with physical infrastructure, facilitating a smooth, enjoyable, and efficient journey for passengers.











## Thank you for your attention

CONTACT



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