

Denne opsamlingsrapport er udarbejdet af 'fremkommelighedsudvalget' i Cyklistforbundet - et udvalg af medlemmer, der som frivilligt arbejde har beskæftiget sig med muligheder og potentialer i cykelmedtagning i tog. Rapporten er færdiggjort oktober 2023.

Cykelmedtagning i tog – eksempler, erfaringer og ønsker fra europæiske cyklistforbund – og en vision for fremtiden.

Indledning.

Cykel og tog er en unik kombination – kombinerer togets hurtighed med cyklens individuelle og fleksible muligheder på de sidste kilometer.

I Danmark er kombinationen kendt fra såvel S-tog som fjern- og regionaltog med stor kapacitet og kundetilfredshed i førstnævnte og beskeden i sidstnævnte. I en rapport om cykelmedtagning fra European Cyclists' Federation (ECF) er DSB bedømt i den dårligste tredjedel blandt europæiske togoperatører inden for regional- og fjerntog.

Formålet med denne opsamling er at give Cyklistforbundets medlemmer indtryk af de forskellige muligheder i udlandet, at vise nogle af de konkrete løsninger, som findes, og at skitsere mulige forbedringer for at øge medtagningens kapacitet.

Fokus er på selve medtagningens kapacitet, vel vidende at med til den samlede cykel-tog kombination hører også stationsnær parkering i begge ender for pendlere, samt cykeludlejning. Herunder en diskussion af begrænsninger og hvilke udformninger, der fra et cyklistsynspunkt vil være ideelle.

Først gennemgås de forskellige, eksisterende muligheder med fordele og ulemper og illustreret med billedmateriale. Dernæst et afsnit med rapporter og korrespondancer med europæiske forbund, inkl. rapporter fra disse, og til sidst et bud på mulige forbedringer med udgangspunkt i eksisterende, tekniske anordninger.

Eksisterende muligheder.

Cykelmedtagning i tog er velkendt i ind- og udland. Kapaciteten og måden at arrangere det på er vidt forskellig, der er ingen standardløsninger.

Der er grundlæggende 3 principper:

- 1) Cyklen står i cykelstativ på gulvet lidt skråt ud fra væggen, som det kendes fra de danske S-tog.
- 2) Cyklen står langs en væg i én eller begge sider, enkeltvis eller i lag.
- 3) Cyklen placeres vertikalt i en krog med hjulene vinkelret mod væggen evt. lidt på skrå.

Eksempel på 1):

Dansk S-tog.



Eksempel på 2):

DSB dobbeltdækker tog, Arriva (Skive-Aarhus), Skånes PÅGA tog



Eksempler på 3):



Fransk intercity-tog

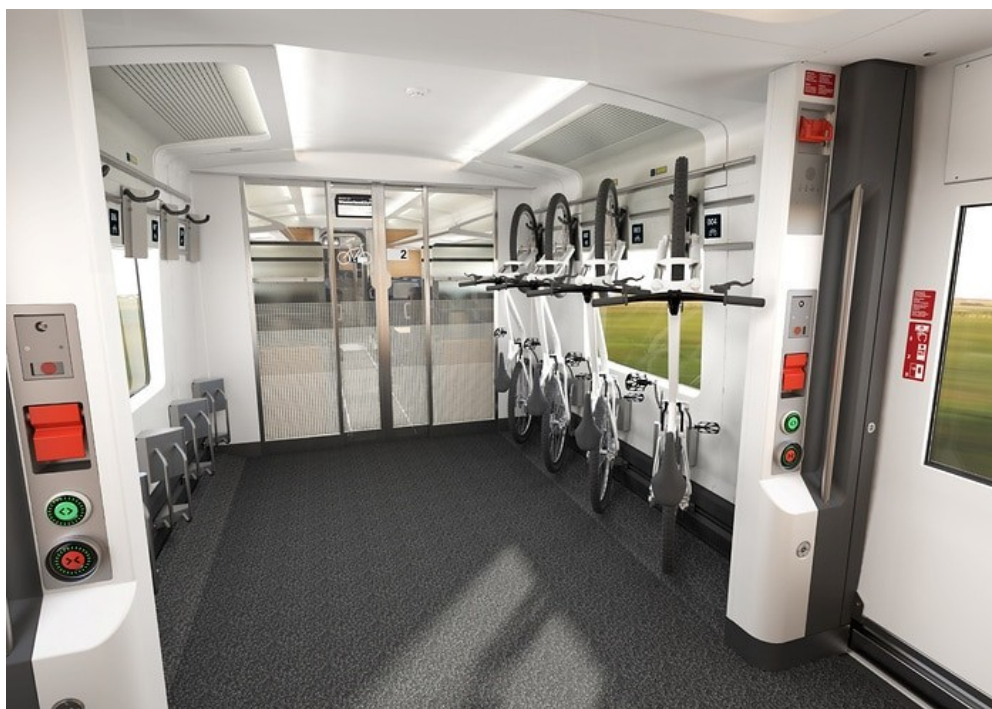


Tysk regionaltog, vertikal ophængning, forskudt højde med større kompaktthed og kapacitet. Cykler i begge sider, ikke vist på billede.

Tjekkisk regionaltog:



Talgo-toget, som DSB har købt, i DK dog uden vertikalt ophæng:



Se andre eksempler i rapporterne fra henh. ECF og Holland. Sektionen udvides desuden med

billeder fra mail-korrespondance fra de tyske og franske forbund. Yderligere kommer der billeder fra Fremkommelighedsudvalgets medlemmer, hovedsageligt fra DK, Tyskland og Sverige.

Vurderinger af de forskellige løsninger:

Ad 1) S-togsløsningen er relativt brugervenlig med nogen kapacitet, men optager ganske meget plads, og er ofte kaotisk pga. langt flere cykel-passagerer end der er plads til. Cyklerne står usikkert og svinger frem og tilbage.

Ad 2) Løsningen er ringe både brugsmæssigt og kapacitets mæssigt. Inviterer ofte til kaos. Uegnet til pendlere i større omfang.

Ad 3) Uden at være perfekt er det nok den bedste løsning. Relativt pladsbesparende medførende større kapacitet, ulempen er, at man selv skal kunne løfte cyklen, hvad nogle ikke kan, især ikke med tunge damecykler og el-cykler. Dette kan medføre, at det er svært at komme ud til tiden, evt. forsinkelser. Det kan også være et problem med kurve og sidetasker, førstnævnte må tømmes før placering.

Visioner for fremtiden.

Med udgangspunkt i vertikal anbringelse vil én eller anden form for mekanisk optræk være nødvendigt for at alle kan få deres cykler på plads, og for at det kan ske nogenlunde hurtigt, så der ikke opstår forsinkelser.

Vertikal anbringelse vil i brede togvogne og især i S-toget give mulighed for placering i begge sider, og dermed yderligere øge kapaciteten. Det findes allerede i de nye Talgotog, som DSB har bestilt, samt som vist i det tyske regionaltog. Kræver evt. at cykelophænget er lidt skråtstillet.

Der findes allerede tekniske anordninger til privatbrug, som kan give inspiration til noget lignende, som dog skal udvikles til brug i tog. Vi har afprøvet et produkt fra Parkis, og det virker som lovet til privatbrug, og der findes et lignende produkt, Bicyclejack. Se videoer.

Én vision kunne være en skinne med en slæde, som har en griber, der fanger og fører cyklen op, når en sensor registrerer hjulet. Den skal endvidere kunne holde cyklen på plads i skinnen også med vægt. Udløses ved tryk på en pedal eller sensor i gulvet.

Der vil være to muligheder for at gøre cykelophænget mere kompakt. Den ene vil være at cyklerne står skiftevis med forhjulet opad og nedad. Rent teknisk nok den bedste løsning, da det ikke er et problem at få styrene forbi hinanden, men det kan være et spørgsmål om brugerne kan finde ud af at bruge det rigtigt. Også her kan sensorer måske være en løsning. Den anden måde vil være at forskyde cyklerne i højden som i det tyske tog ovenfor, men man må forudse problemer med at få styrene forbi hinanden.

Uanset effektiviteten af ovenstående tekniske løsninger vil der formentlig blive behov for kombinationer med mere konventionelle løsninger, således at ikke alle er tvunget til at bruge den vertikale placering.

Vejen frem.

Hvordan fremmes vertikal cykelmedtagning i tog ?

Det mest ideelle vil være, at togproducenterne udarbejder en fælles-europæisk standardløsning. Det vil give mulighed for masseproduktion og billiggørelse. Desuden vil det være en fordel ved internationale rejser, at det er det samme system.

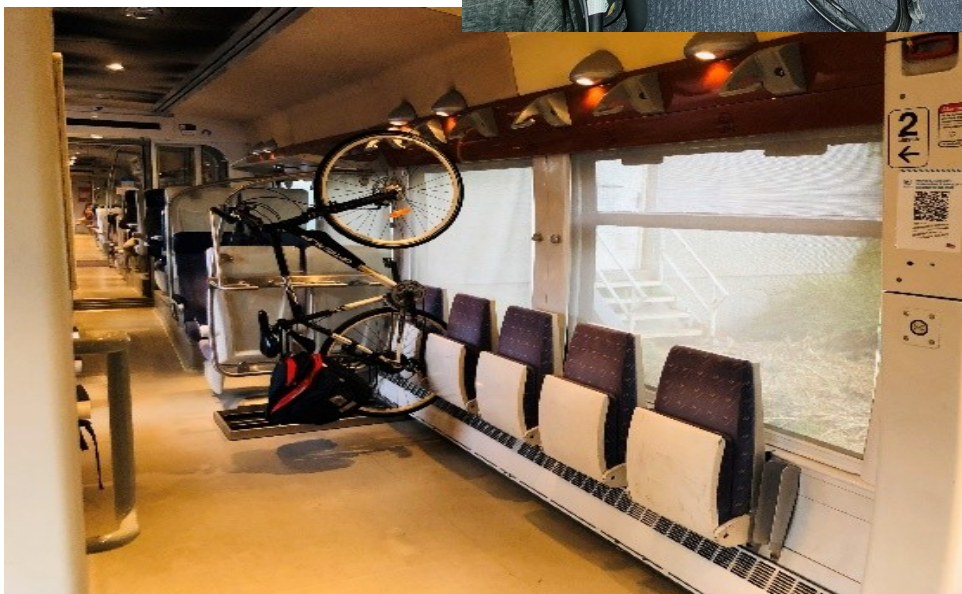
Der vil også være behov for at systemet kan installeres i eksisterende tog.

Et første skridt kunne være at søge om 20-50 mio. kr. fra cykelpuljen og sammen med DSB bede DTU om at udvikle en prototype med inspiration fra de viste eksempler fra Parkis og Bicyclejack. Med en prototype i 'hånden' vil man kunne henvende sig både til EU-Kommissionen og europæiske togproducenter.

En henvendelse til EU og togproducenter bør naturligvis være på fælles baggrund fra det europæiske forbund ECF, og de tyske, hollandske, franske og østrigske forbund, som vi har været i kontakt med. Der vil derfor være behov for at afstemme med disse.

Supplerende billedkollage.

Dette afsnit rummer flere eksempler på cykelmedtagning fra udlandet, som ikke er med i ovenstående afsnit eller mail-korrespondancen. De er ikke systematiserede.





Rapporter og kommunikation med europæiske cyklistforbund.

Vi har skrevet til følgende europæiske forbund: ECF, det østrigske, franske, tyske og hollandske forbund. Kopi af de væsentligste dele af mailkorrespondancen nedenfor.

Vi har fået 2 rapporter fra henholdsvis ECF (Cyclists love trains) og det hollandske Fietsersbond (Hvordan kan man tage flere cykler med toget?).

Korrespondancen med forbundene gengivet i kopi nedenfor:

Vi har skrevet følgende til alle forbund:

I contact you as a member of a small work group under the Danish Cyclists' Federation investigating the issue of bringing your bike with public transport, especially the train. The perspective is to enhance both cycling and public transport by combining the two.

In Denmark we have very good experience bringing bicycles with S-trains in Copenhagen and rather poor experience bringing them with regional and intercity trains in the rest of the country. From travel experience we know that vertical placement is used in a number of countries, thus allowing for more bikes without taking up more space.

So we have 3 questions for you: what are the possibilities in your country, what are your experiences, especially with vertical placement, if any, and what is your general view on this issue ?

I also write to a selected number of member organizations and ask for their experience and point of view.

Svar Holland:

Dear John,

In the Netherlands we do not have any experience with vertical placing of bicycles in trains. However, we are suggesting it in a report that will be published the coming weeks. It is a way to realise more capacity in the existing stock.

The railway company says it is not customer friendly and will not be used by many cyclists. They refuse to give any further look at our proposals.

We think most people would use these places, but of course the proof of the pudding is in the eating.

Vriendelijke groet,

Wim Bot

medewerker nationale en internationale beleidsbeïnvloeding/policy officer national and international public affairs

Svar ECF (Fabian Küster):

Hello John,

Thanks for reaching out.

We've done a comparative overview of the bike-friendliness of European railway companies two years ago but unfortunately the quality of bicycle racks inside rolling stock was not one of the criteria we could include.

[Report: Cyclists love trains – An analysis of the bicycle friendliness of European railway operators | ECF](#)

But having cycled myself in Denmark last year I have to say I also found the quality of the accessibility to the IC trains quite sub-optimal, in particular the high ramps when boarding. And limited space inside, but it was okay since I was the only cyclist.

From a personal point of view I would say there must not only be vertical overhead hooks – this is perhaps okay for young, tall, strong persons but everyone who does not tick the box will struggle to lift up the bicycle, certainly when it's an e-bike. So I would say there should be always also horizontal racks

This overhead hooks from a British HST are not good quality:



On the contrary, this is from Deutsche Bahn ICE-4, good mix of horizontal as well as vertical bike racks: ICE 4, Deutsche Bahn



Not sure if this is of much if any help.

Best regards

Fabian

From: intranet@ecf.com <intranet@ecf.com> **On Behalf Of** ECF Contact form via ECF Intranet

Sent: Friday, 3 March 2023 10:31

To: Office ECF <office@ecf.com>

Subject: Form submission from: Contact

Svar fra Østrig:

Hi John! Interesting project, do you have more informations?

Short answers:

1) what are the possibilities in Austria?

regional trains: most trains (City Jet, Wiesel, etc) offer good options for placing bikes on trains, numbers are varying in regions (best: Vorarlberg) - bicycles are placed horizontally, leaning to the

wall, possible to push them into the train without steps, and no reservation needed

intercity trains: at ÖBB that's Rail Jets high speed trains, limited space of 5 per train, hanging, narrow space to enter, climbing up 3 steps, reservation obligatory / at Westbahn it's a little easier because horizontal

2) what are your experiences, especially with vertical placement?

vertical saves space, but is hard to handle with normal bicycles and nearly impossible with ebikes - biggest problem is narrow space to manoeuvre and the weight of bikes. not suitable for inclusivity

3) and what is your general view on this issue?

we need more bicycle spaces in bike touring season and better accessibility

special topic folding bikes: free up to a certain size when folded

Best regards, Alec Hager

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Mag. Alec Hager
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<http://radkompetenz.at/>

Svar Frankrig:

Dear John,

Thank you for your email. It is interesting because we are also working on these subjects in the French federation.

In France, bicycles can be carried on most of the trains but the conditions are not always the same.

For instance, in our regional trains, bringing bicycles is authorized and there are some places dedicated to that (even if they are not numerous). It is free and you do not have to make a reservation, except in summer when some regions set up a reservation system and sometimes, increase the bike carrying capacity by putting tarpaulins on the seats (as on the picture).



In some

Intercity and High-Speed Trains, if you want to bring your bicycle, you have to make a reservation and it is

not free. If the service is not offered, or if you do not want to pay, you can carry your bicycle for free if you disassemble it and put it in a cover

If there are some bicycle spaces, in most cases, it will be a vertical placement, because as you said, it allows for more bikes to be stored and takes up less space. Some cyclists like these since there is no risk of bikes' falling and it is easy to get on and off the train. The matter is that this solution is not adapted to all users (especially bicycle tourists who travel with their saddlebags) and profiles (it can be heavy to carry your bike).



Figure 1: Vertical placement

A new French rail company “Railcoop” did a study among cyclists in order to know which solution was the most adapted and appreciated. In the table below, you have the grades attributed to each type of hook. As you can see, vertical placement is not the more plebiscited for the reasons we evoked.

Table 1 : Railcoop, Working group Train + Bike, Recommendations for the design of Bordeaux-Lyon train sets

Hook type	Average grade	Standard deviation
Herringbone parking	4,0/5	0,1
Side to side	3,6/5	0,1
Vertical placement	3,5/5	0,2

The solution preferred by most cyclists is herringbone parking. Indeed, it allows a large number of bicycles to be accommodated, it is easy to move around with your bicycle on the train, and there is no risk of damaging the bicycle.



Figure 2: Herringbone parking



Figure 3: Side to side

Finally, to answer your last question, we defend the idea of offering a diversity of bicycle parking facilities when it is possible, in order to answer the multiple uses and needs. Nevertheless, we do not advocate for a massification of bringing bicycles in the train. We think that this solution is important above all for bicycle-tourists.

The only case where we really stand up for that is when the train is “adaptable”. For instance, there is a [regional train the “Jumbo Bike train”](#) (video) which is close to the EuroVelo 6 and is adaptable. In summer, they take away some seats to install bike spaces instead.

Similarly, a new high-speed train is coming on the market and is also modular. We are currently negotiating with the railway company to have more spaces for bicycles in function of the demand and the seasonality.

I hope these elements will help you. Since we are also investigating the intermodality and multimodality subject, we were wondering if you would be available for an exchange on these subjects in our respective countries. For our part, we are wondering about the incompatibility between bicycle ramps in the stairs and security and accessibility guidelines (Falling risk for kids, person with reduced mobility and the partially sighted). How is this subject dealt with in Denmark ? Let us know if you would have any availability by the end of March.

Best regards,

Marine and Claire-Marine

Claire-Marine

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AUZET

Svar Tyskland:

Dear John

in Germany, a difference exists between local and regional trains (including S-Bahnen / S-trains) and long distance trains. Long distance trains are EuroCity, Intercity and InterCityExpress – EC, IC and ICE.

All local and regional trains take bikes on board, but without dedicated spaces für individual bikes. Rather, you will find a coach where you can lean your bike against the side of the coach or against folding seats that are not occupied by passengers. This seems to allow more bikes in the coach than individual spaces, especially for groups of cyclists who are willing to arrange themselves.

All IC and the newer generations of ICE have dedicated spaces for individual bicycles because you need to book an individual space for your journey. Usually, there are 4 spaces for horizontal placement (with hooks mounted low – the front wheel is just above the ground) and 4 hooks for vertical placement. This system has existed for more than 30 years. Older passengers with e-bikes find it difficult to lift their heavy bicycles and place the front wheel in the hook. Unfortunately, you can select horizontal placement only when you buy your bike ticket personally in the train station. This is not generally known, and you will have to ask for it. So you might find on your journey that the horizontal space next to your hanging e-bike ist occupied by a light road bike.

The next generation of ICE, the ICE-L (L stand s for low floor) will have 8 vertical bike spaces with hooks:
<https://www.talgo.com/de/ice-l>

Deutsche Bahn has had a look at vertical systems that assist lifting by means of a gas spring (like Bicyclejack, among others). Especially the ICE-L would offer the space that is needed to use them but DB decided against using them. Probably because they fear accidents when the lever arm is released and is not loaded with a bicycle.

We have heard of the experience with Copenhagen S-trains. For commuters, ADFC prefers the Dutch system with secure bicycle parking at the stations. Bicycles on board are for tourists and for those commuters who need their bike at the end of their journey (and cannot use another personal bike or a bike from a sharing system). The number of commuters that fill the trains even without their bikes is too high during peak hours.

Best regards

Roland Huhn

Legal Officer

Allgemeiner Deutscher Fahrrad-Club e.V. (ADFC)

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