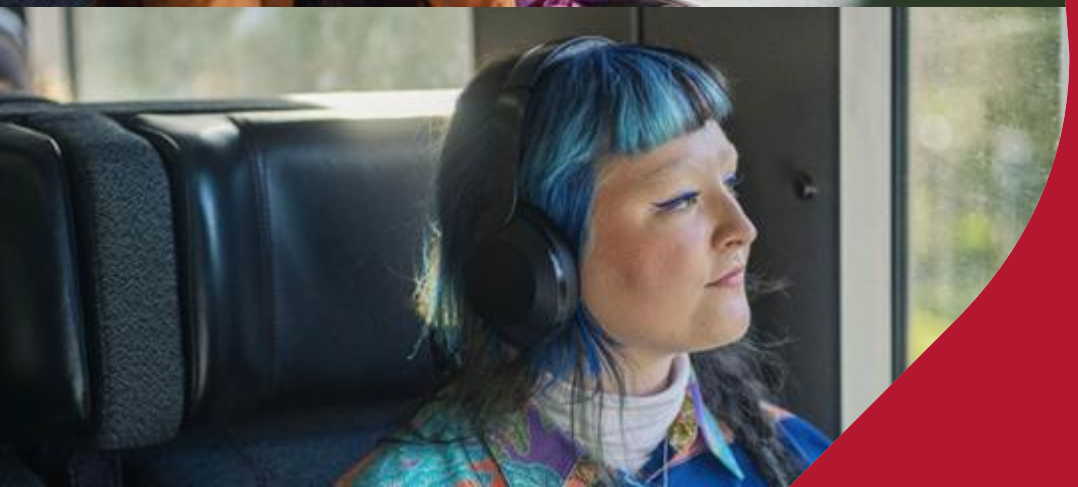


DSB’s future driverless S-bane Trainset – a status.

Stream: Railways and Urban Development

10:55. 12. MAY 2026

Agenda

1. Introduction to the Future S-Bane
2. The new Driverless S-trains
3. Next steps

Introduction til the Future S-Bane

Current performance of the S-Bane is very high

Backbone of public transport in greater CPH

- 170 km of tracks
- 86 stations with 203[1] platforms
- 135 trainsets[2]

High customer satisfaction

- 110 million yearly passengers[3] / approx. 300K daily passengers
- 10 pct. of passengers bring a bike - for free
- High customer satisfaction[4]

Excellent benchmarking results[5]

- Lowest cost per train km compared to other suburban railways
- One of the most punctual suburban railways in the world

Notes: 1) 203 platforms according to Banedanmark 2022 statement 2) net 104 8-car trainsets and 31 4-car trainsets 3) Average 2017-2019 (pre COVID) 4) 7,6 on a 0-10 scale in 2025 5) International Suburban Rail Benchmarking Group (2018)

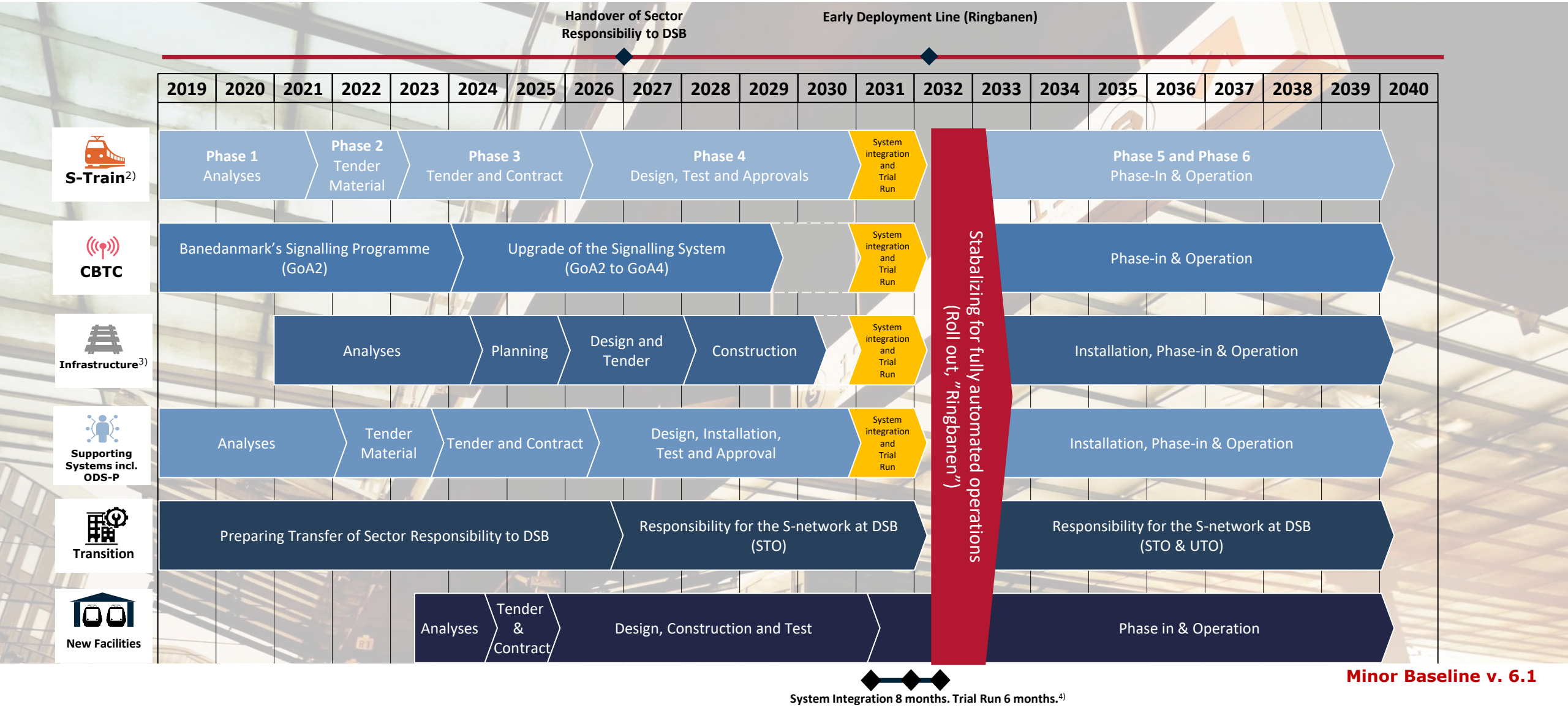
The need for more capacity at the S-Bane is increasing

Growing S-network

- Capacity limits[1] in peak hours already reached with the current fleet
- Full driverless (GoA4)[2] is a precondition for a significant expansion of the S-train traffic
- Roll out of the new CBTC (GoA2) was the first, vital step towards full driverless operation
- CBTC GoA4 will enable:
  - driverless operation,
  - enhanced frequency at the networks branches,
  - quicker turn back at stations and elsewhere.
  - Visible and accessible stewards at the network at all times.
- Replacement of the Old S-train fleet which is End of Life

Note: 1) DSB generally operates with a maximum of 120% occupancy during peak hours (peak: 07:00-09:00 & 15:00-18:00); 2) GoA4: Grade of Automation, level 4. 3) Political agreement 2021: ”Danmark fremad - infrastrukturplan 2035” 4) Re. the development of a comprehensive railway plan for Greater Copenhagen, including the Coastal Line, Express Tunnel, Elsinore, and double S-trains, set for political discussion in early 2026.

Roll-out starts on Early Deployment Line in 2032[1)]



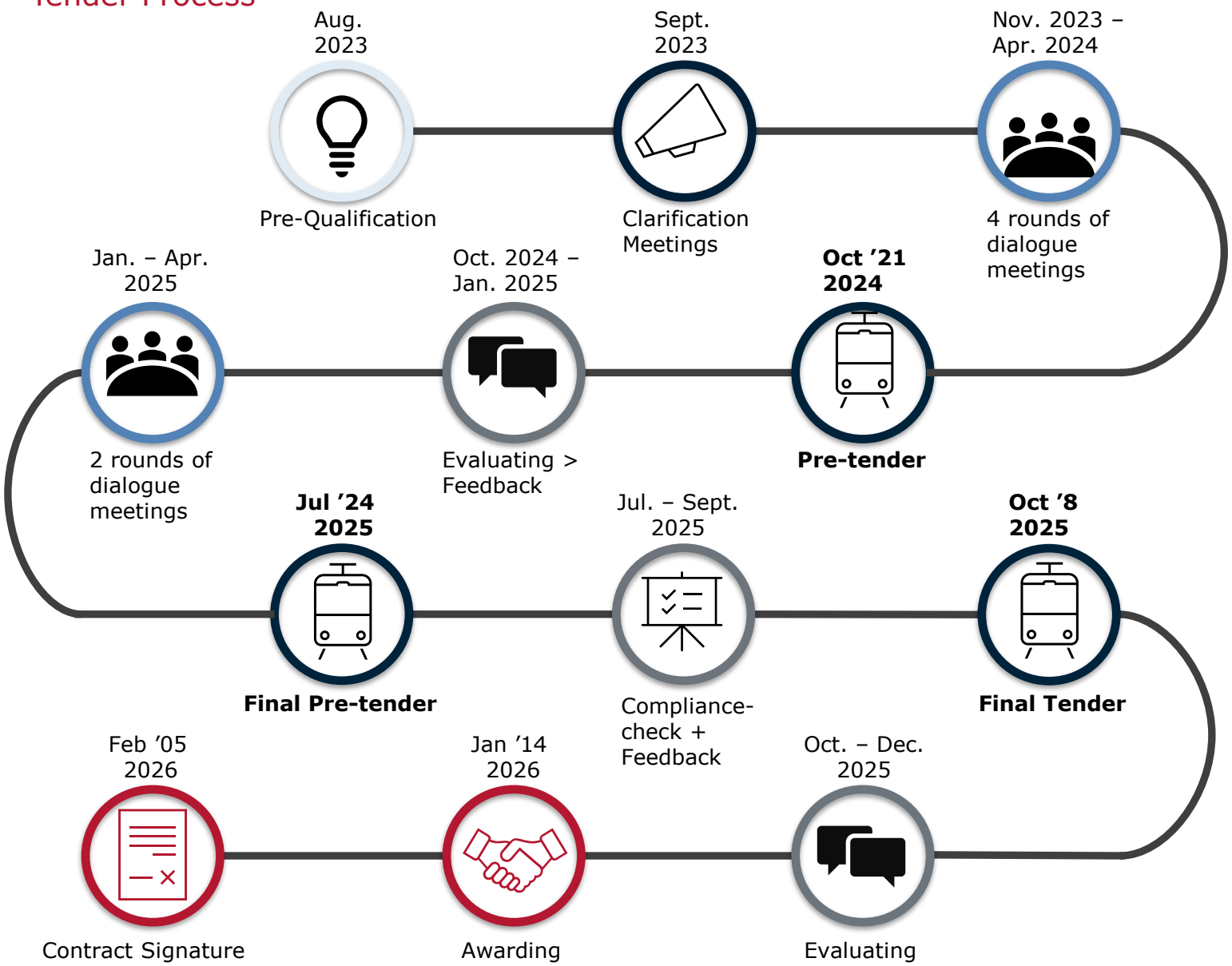
Minor Baseline v. 6.1

1) FS Programme Plan v 6.1 (Minor Baseline), approved by SRO on 21/03/2025.2) January 2030: Delivery of the first trainsets (1-5 units) for test running. January 2031: Delivery of the first trainsets (1-5 units) for testing the fully automated system. March 2040: Delivery of the final trainsets. 3) Infrastructure projects include Fencing, Platform Edge, Guideways, Platform Nudging, and Power Supply Upgrade. 4) January 2031: Ready for system integration testing. September 2031: Ready for test tunning of the fully automated system. March 2032: Roll-Out on Early Deployment Line (F-Line). 5) Stabilisation of fully automated operations on the Early Deployment Line (F-Line) from March 2032 to March 2033.

Extensive tendering process for 2,5 years

- Competitive dialogue

Tender Process



Facts
The tendering process was initiated in 2023 when DSB submitted the first version of the tender material and subsequent prequalification of the three bidders:

- **Alstom**
- **CAF**
- **Consortium Siemens–Stadler**

The process
Since then, DSB has worked purposefully to improve and clarify the tender material in close dialogue with the three bidders, who throughout the entire process have contributed valuable input. DSB has implemented these inputs in ongoing updates of the tender material.

External quality assurance
During the tendering process and prior to contract award, DSB has undergone external quality assurance, which confirms that there are no significant objections to concluding the contract with one of the three bidders, and that the tender and contract strategy is appropriate, risk-minimizing and without undue market distortion.

The Future S-trains

Final design may differ from the tender proposal rendrings

Facts about the new driverless S-trains

FACTS

Maximum speed:	120 km/h
Acceleration:	1,2 m/s^2
Train configuration:	Single Deck
Train length:	56.0 m
External width:	3,55 m
Number of cars:	4
Doors per side:	6
Seats (incl. tip-up seats)	156*
Leaning Supports:	12
Bicycle spaces:	16
Wheelchair spaces:	2
Level boarding for wheelchair users (PRM door)[1]	

CUSTOMER EXPERIENCE

- Zoning into multiple areas provides a high degree of flexibility for passengers depending on travel needs and journey length, including the option to work during longer journeys
- An efficient and user-friendly bicycle concept, including dedicated bicycle holders to simplify boarding and use
- An environmentally friendly HVAC system and effective ventilation ensure a comfortable onboard climate, while an open interior design enhances passenger safety and provides clear lines of sight to passenger information displays
- Wheelchair spaces and PRM spaces are integrated within the general passenger areas
- Dedicated doors with level boarding from platforms at the standard height of 92 cm ensure easy and independent access for passengers with reduced mobility, including wheelchair users

DSB DESIGN PROPOSAL[2] – OVERVIEW

* Includes 36 tip-up seats, of which 16 are located in bicycle areas

Notes: 1) From platforms with a standard height of 92 cm. 2) DSB Design Vision – final design may differ from the illustration

Light strips at each door indicate the door status and are visible from both the platform and inside the train.

Five out of six doors feature fixed exterior steps, with the vertical distance between the platform and the train interior being similar to that of the 4th generation trains.

Final design may differ from the tender proposal rendrings

One out of six doors provides level access with a retractable gap filler for easy wheelchair access. The gap filler extends fully to close the gap between the train and the platform.

The vertical distance between the platform and train interior meets TSI PRM requirements. Adjustments will be made to incompatible platforms to ensure alignment with the retractable gap filler.

Final design may differ from the tender proposal rendrings

The wide car body features "fenders" to reduce horizontal gaps along the train, significantly more than in the 4th generation.

At the front ends, fenders extend to minimize gaps between coupled trains (considering movement in curves). Platform interventions are being explored to guide passengers away from the resulting gap.

Final design may differ from the tender proposal rendrings

Wide passenger aisles :

- ca. 1000 mm between passenger seat
- ca. 1100 mm at floor level in gangways
- ca. 900 mm between entrance dividers

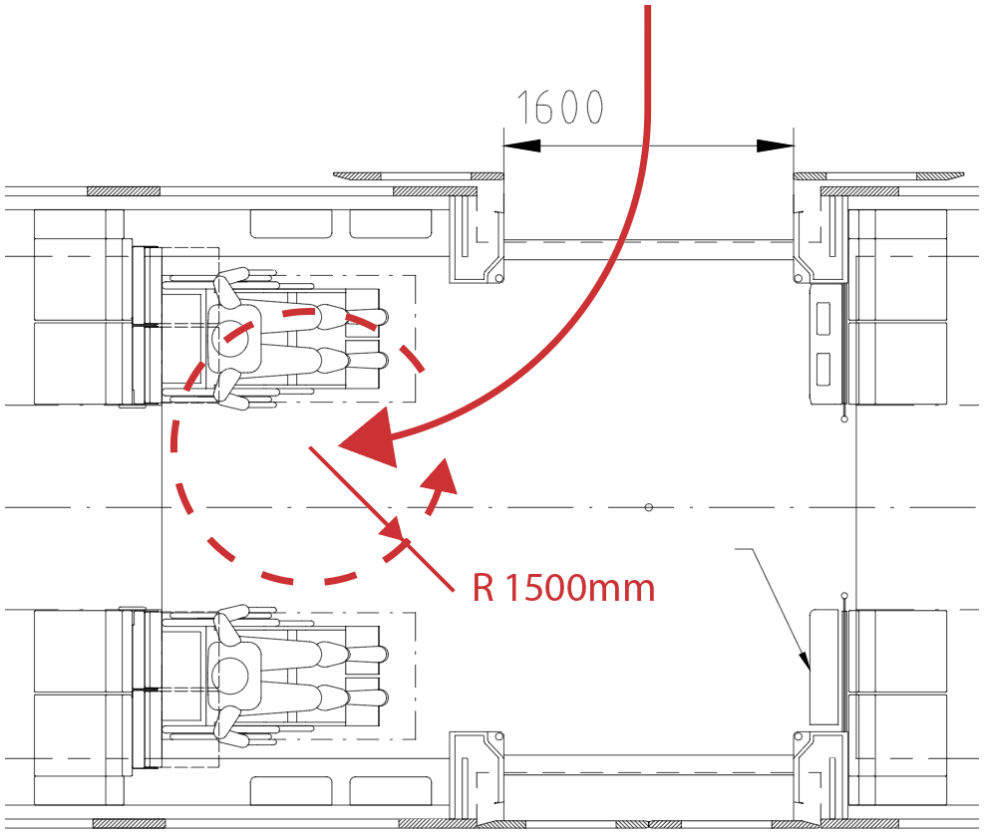
Final design may differ from the tender proposal rendrings

Handrails with generous lengths and clearances throughout the train.

Option to include raised symbols/characters, or braille on pictograms, handrails, switches, and buttons.

Passenger Call Points at each entrance for emergency support, with sound transmission to hearing devices.

Final design may differ from the tender proposal rendrings



Two wheelchair spaces, located away from bicycles, accommodate electric wheelchairs and micro-crossers. Each space includes a vertical handrail, a Passenger Call Point, and two folding seats for assistants.

Ramps with a gentler incline than TSI PRM standards provide access to the rest of the train.

Final design may differ from the tender proposal rendrings

Additional Features

- ✓ Intelligent interior lighting adjusting intensity levels based on the presence of natural light inside the train, ensuring comfortable and sufficient lighting.
- ✓ Additional passenger information displays above each door, providing extra navigation information, e.g., connecting public transport options.
- ✓ Additional noise sensors adapting the volume of audio messages.
- ✓ Additional HVAC system ensuring better climate comfort in warm weather.
- ✓ Additional fire detection system enhancing safety.
- ✓ Illuminated, color-coded line identification on the front ends of the train, ensuring recognition of the train's line identity upon its arrival at the platform.

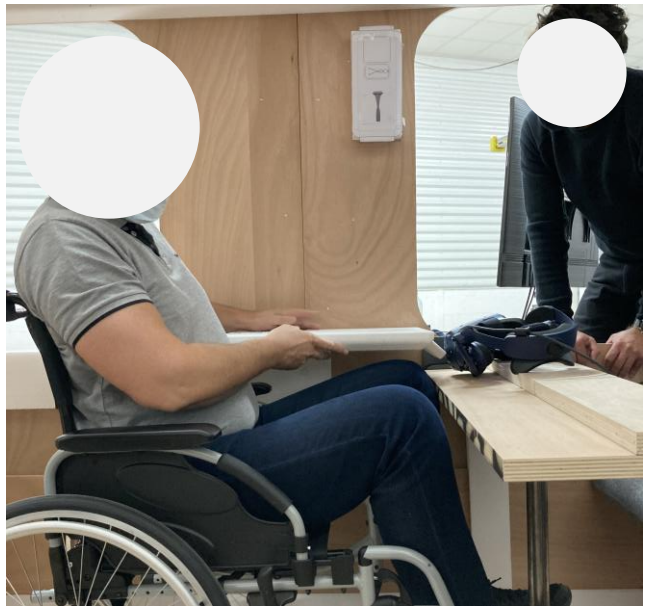
Final design may differ from the tender proposal rendrings

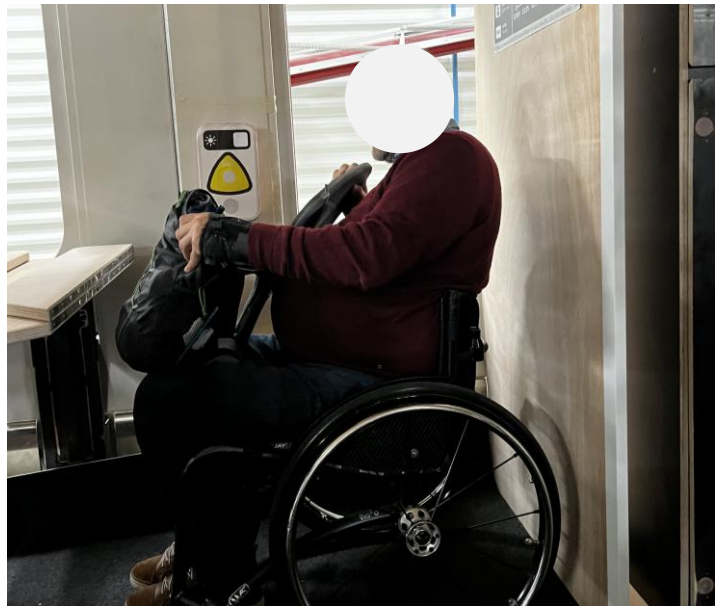
Next steps

Current Schedule: Important milestones Rolling Stock

Contract signature	February 5th 2026
Verification of Contract	May 2026
Preliminary Design	Q1 2027
Basic Design	Medio 2027
Final Design (Design Freeze)	Q1 2028
Substantial Completion 5 trainsets	Q1 2031
Preliminay Take Over (PTO)	First half of 2032

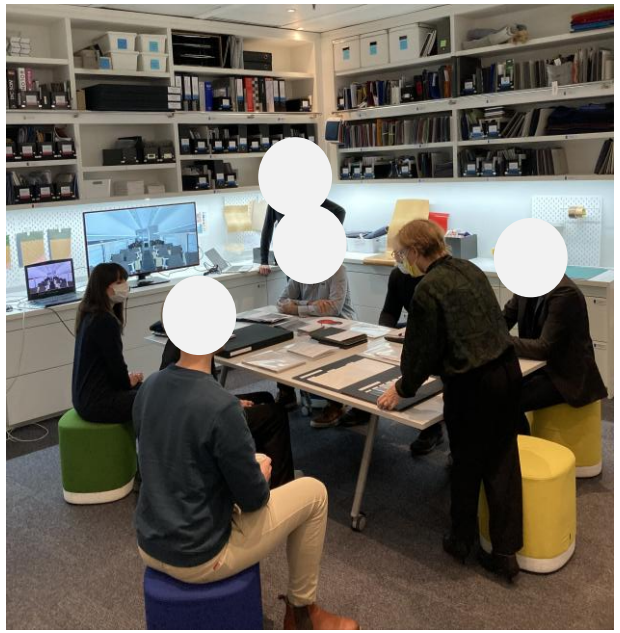
Design work in Mock-ups incl user tests

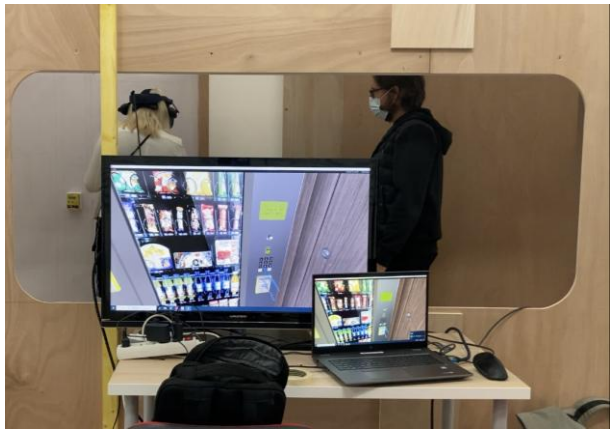


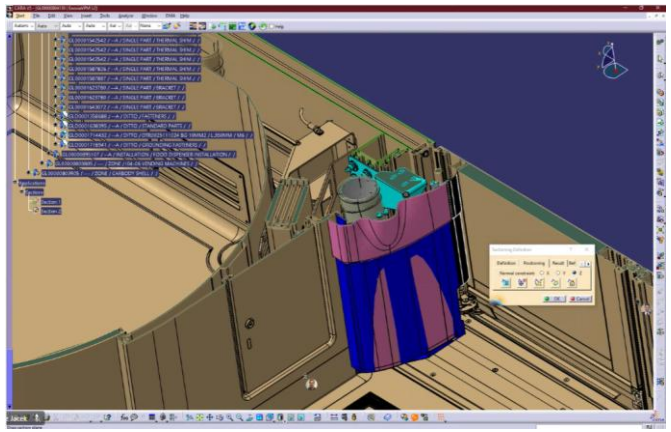


Other tools and tests

Virtual reality, 3D models, Interior material samples








DSB