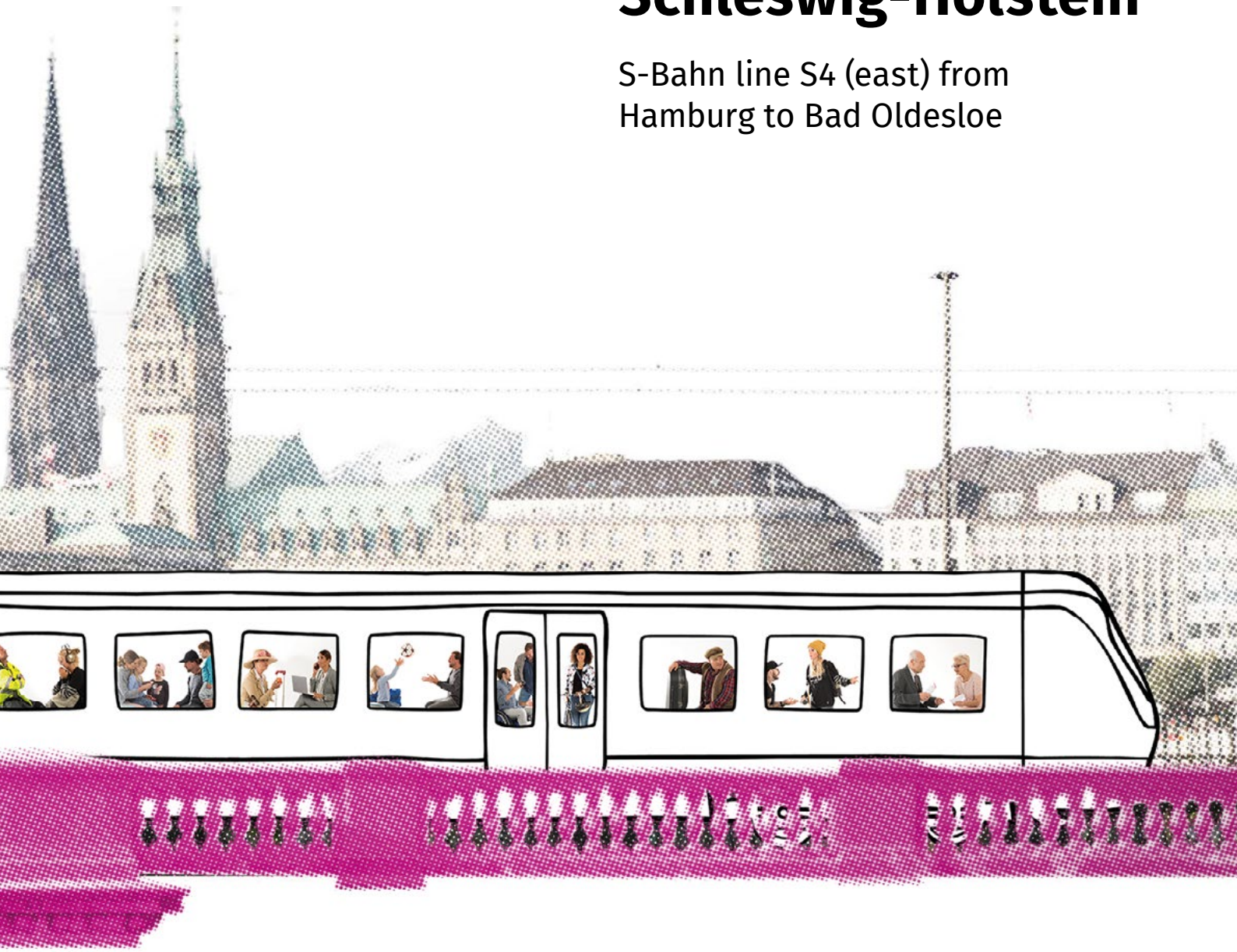
S 4 lets go!

More direct, easier and more punctual in Hamburg.

A stronger connection between Hamburg and Schleswig-Holstein

S-Bahn line S4 (east) from
Hamburg to Bad Oldesloe



DB Hamburg SH Schleswig-Holstein Der echte Norden

Kofinanziert von der Europäischen Union

Project Communication

You can find up-to-date information about the project on our website **www.s-bahn-4.de**. Watch the new line taking shape on our live webcam at the construction site. Find out about the latest news and developments in our free newsletter S4 NAH DRAN. Our project diary brings you reports from the project team and updates on the progress and special features of this major project.

Dear readers,

the metropolitan region of Hamburg is moving closer together. The increasing number of passengers between Hamburg and Bad Oldesloe and the heavily loaded trains show this development. Our project supports and promotes this by building the infrastructure for the mobility transition and thus for the future. Up to 250,000 people will benefit from this in the entire area of the S4.

The S4 creates solutions - with climate-friendly mobility, a direct connection to Hamburg's city centre, a condensed timetable and five new stations. People should be able to commute between Hamburg and Schleswig-Holstein quickly and in a climate-friendly manner.

In addition to the extensive information about the project on our website (www.s-bahn-4.de), we would like to give you an overview of further topics and details with this brochure. In addition, the project team is always available to answer your questions at **s4@deutschebahn.com**.

I hope you enjoy reading this brochure.

Ihre Amina Karam

Amina Karam
General Project Director

A stronger connection between Hamburg and Schleswig-Holstein

The rail line between Hamburg and Bad Oldesloe is one of the busiest commuter routes serving northern Germany‘s biggest city. The S-Bahn (suburban rail) line S4 will enable more direct connections and a smoother, more reliable service for people travelling in either direction.

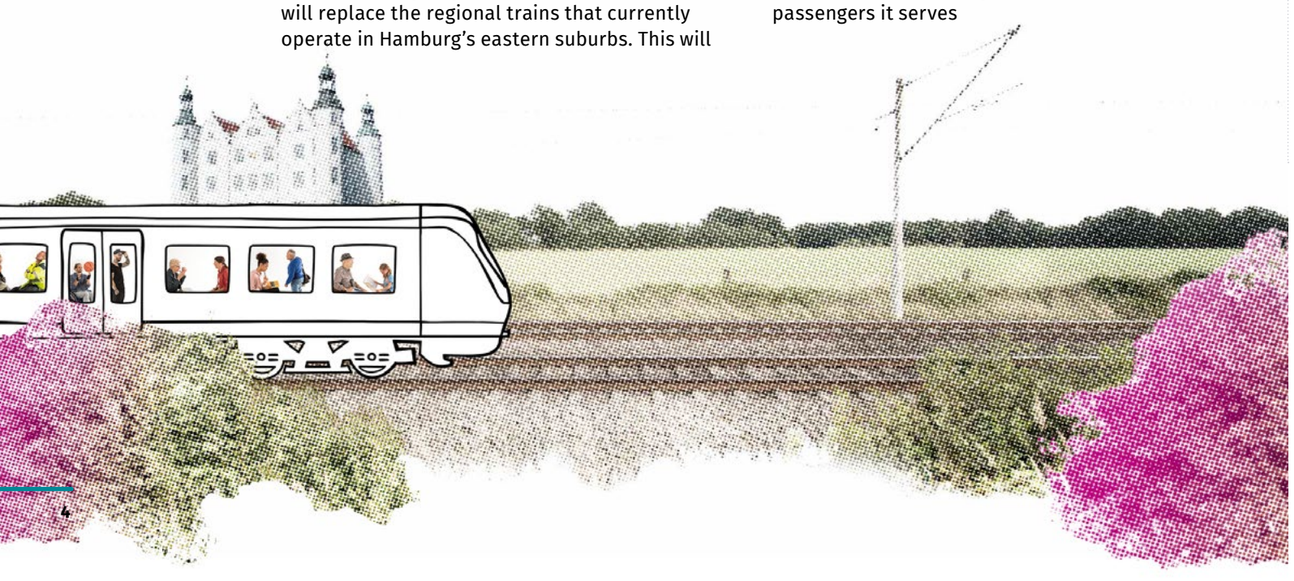
Background

Efficient local transport between Hamburg and Schleswig-Holstein is of central importance to many people living and working in the metropolitan region. This can be seen from the steadily growing number of passengers between Hamburg and its northeastern hinterland: between the year 2000 and 2010 alone, regional transport between Hamburg, Ahrensburg and Bad Oldesloe saw passenger figures increase by 50%. Since then, passenger numbers have expanded even further by around 20% on average.

According to forecasts, this trend is set to continue. Hamburg’s Wandsbek district, in particular, is experiencing sustained growth, both in terms of population and the number of companies based there. Ahrensburg, Bargteheide and Bad Oldesloe in Schleswig-Holstein’s Stormarn district are witnessing a similar development. Building the S4 will enable the railway to keep meeting the needs of the people who use this route. At the same time, the new S-Bahn line will free up capacity for long-distance and freight traffic. Running largely on its own tracks, the S4 will replace the regional trains that currently operate in Hamburg’s eastern suburbs. This will help tackle current bottlenecks and further improve links to the local transport network serving the wider region. Up to 250,000 people live in the S4’s catchment area, and they all stand to benefit from the new service.

The situation today

- Passenger numbers on the existing route are growing, and current rail services are virtually at full capacity
- The line’s catchment area in the Wandsbek district of eastern Hamburg is not optimally served at present
- Today’s mixed rail operations mean that slow regional trains and fast long-distance and freight services use the same tracks, which increases the risk of delays and cancellations
- Travellers coming from Bad Oldesloe have to change at Hamburg’s main station to get to most destinations in the city
- Hamburg’s main station is struggling to cope with the number of long-distance trains and passengers it serves



The new S4 | Overview

Project summary: Track expansion and Stations

Line upgrade to create the S4

The construction of separate tracks for the S4 forms the core of the improvement project. Extending from Hasselbrook in Hamburg to Ahrensburg-Gartenholz, the new S-Bahn line will total 20 kilometres in length:

- Two additional tracks covering approximately 17 kilometres from Hasselbrook to Ahrensburg
- One additional track covering approximately 3 kilometres from Ahrensburg to Ahrensburg-Gartenholz

Around one-third of the route will be in Schleswig-Holstein, while the remainder will be within the state of Hamburg. The tracks for the S4 will generally run parallel to the existing rail line, mostly on the northwestern side of the current tracks.

We are also building around 45 kilometres of noise barriers along the route, including a central partition. We are rebuilding 32 railway overpasses and six road and pedestrian overpasses to accommodate the additional tracks. A large number of level crossings will either be removed or replaced by new road and rail overpasses.

Overhead lines or DC third rail will supply power all along the route, which will also be equipped with the very latest in control-command and signalling systems.

Stations

We are building four brand new stations in Hamburg, while Schleswig-Holstein will see the construction of one additional stop. Seven stations in Hamburg and the Stormarn district are being upgraded for S-Bahn services.

Real benefits for passengers, residents and infrastructure

New stations put trains in easy reach

The following existing stations will be part of the new S4 line: Altona, Königstrasse, Reeperbahn, Landungsbrücken, Stadthausbrücke, Jungfernstieg, Hamburg Main Station, Berliner Tor, Landwehr, Hasselbrook, Tonndorf, Rahlstedt, Ahrensburg, Ahrensburg-Gartenholz, Bargteheide, Kupfermühle and Bad Oldesloe.

The new stations will be Wandsbek Rathaus, Bovestrasse, Holstenhofweg and Pulverhof in Hamburg and Ahrensburg-West in Schleswig-Holstein. Wandsbek station will be demolished. Constructing the new stations will reduce the distances people living in the line’s catchment area need to travel to catch a train, which is one of the project’s major benefits.

Despite the additional stops, the journey time between Bad Oldesloe and Hamburg will increase only slightly. This is because S-Bahn services require less time than regional trains for boarding and alighting, and they can also accelerate faster. Total journey times will therefore be shorter for most passengers.

In addition to the new stops, we will modify the stations in Tonndorf, Ahrensburg, Kupfermühle and Bad Oldesloe, where platforms will be increased in height, while new platforms will be installed at Rahlstedt, Ahrensburg-Gartenholz and Bargteheide. This work is necessary for the future S-Bahn services.

S 4 runs more often

Punctual, fast and convenient

Separating suburban rail services from regional, long-distance and freight trains means that the S4 can operate at regular intervals, making services more reliable. At peak times, a train will run from Altona to Ahrensburg every ten minutes, with a service to Bargteheide every 20 minutes and one per hour to Bad Oldesloe. During the off-peak, a 20-minute frequency is planned between Altona and Ahrensburg-Gartenholz, with hourly trains to Bargteheide and Bad Oldesloe.

Today's regional trains on the RB81 line have up to 550 seats. S4 services will take the form of two vehicles with three carriages each, providing seating for 380 passengers, and there will be the option of running long trains with 570 seats. At first glance, the increase in seat numbers is not as significant as might be expected: 2,200 seats on regional trains compared with 2,280 S-Bahn seats per hour and direction during peak times. However, the S4 will run more frequently: every ten minutes, in contrast to the current RB81 timetable of one train every 30 minutes with two additional trains to supplement the service. In addition, the number of services between Bargteheide and Hamburg will be increased by 50% during rush hour.

S 4 means more direct journeys

Easier connections and less changing trains

People with destinations in the centre of Hamburg will no longer have to change at the city's main station, as the S4 will call at Jungfernstieg, Stadthausbrücke and Landungsbrücken.

The station at Hasselbrook is also served by the S1 line, so passengers will be able to change for trains to Hamburg Airport from the same platform.

S 4 frees up congestion

Easing infrastructure pressure

Replacing regional trains with an S-Bahn connection will provide Hamburg's main station with an urgently needed boost in capacity. The S4 will use the current S-Bahn tracks between Altona and Hasselbrook, thereby freeing up platforms at Hamburg Main Station that can then be allocated to long-distance trains. Between Ahrensburg-Gartenholz and Hamburg, commuters will switch to the S4, substantially cutting traffic on the existing tracks and so benefitting freight and long-distance connections.

Improving road transport

Eliminating some level crossings and replacing others with overpasses and tunnels means that drivers and pedestrians will spend less time stuck at closed barriers. In this way, the new S-Bahn line will also bring noticeable improvements in road transport.

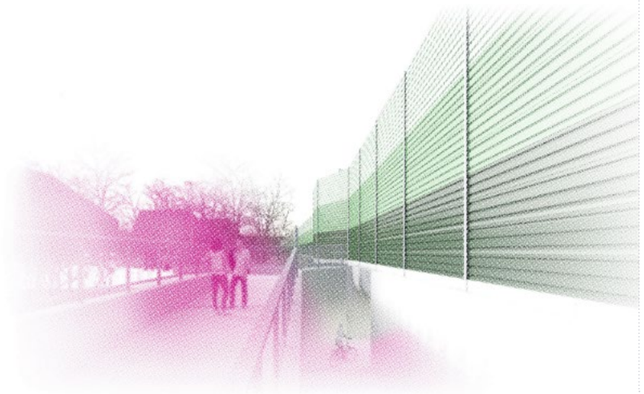
Stations will be easier to reach thanks to a wider range of mobility options, including bus routes, carsharing and new bike-and-ride facilities, encouraging people to switch from cars to trains.

Noise abatement for nearby homes

The plans for the new line include a host of active and passive noise abatement measures to shield people living nearby from the noise produced by trains. These measures will have a total price tag of at least EUR 95 million, almost two-thirds of which is earmarked for Hamburg and the remainder for Schleswig-Holstein. Some 45 kilometres of noise barriers including a central partition will be installed along the tracks, minimising noise-related disturbance in nearby residential areas.

Use of dual electrification

The S4's trains will run on two sources of electricity: between Altona and Bovestrasse, a third rail will supply 1,200 volts of DC power. From Bovestrasse, a changeover system running for several hundred metres will enable the trains to switch to overhead lines carrying 15 kV/16.7 Hz for the rest of the journey to Bad Oldesloe. This dual system means that the existing overhead line can be put to further good use.



Planning process and project partners

Based on the findings of a feasibility study, the state parliaments of Hamburg and Schleswig-Holstein jointly announced their decision to construct the extension for the S4 suburban rail (S-Bahn) line in January 2008. In 2009, the Federal Ministry for Transport and Digital Infrastructure published a report on Hamburg as a transport hub, which showed that the city's main railway station would suffer from future capacity bottlenecks. In response to this, the plans for the S4 line were prepared and put forward as a detailed proposal.

The S4 line connects the federal states of Hamburg and Schleswig-Holstein, so institutions in both states are responsible for the planning activities. In Hamburg, responsibility lies with the Ministry of Transport and Mobility Transition (BVM). Its governmental partner in Schleswig-Holstein is the Ministry of Economic Affairs, Transport, Employment, Technology and Tourism. In 2014, Deutsche Bahn's DB Netz AG division was entrusted with implementing the project. In this capacity, it is responsible for engineering services and project management.

The building permit applications have been planned for all three planning approval sections and submitted to the Federal Railway Authority. Construction began in May 2021 and the full line is scheduled to open in 2029.

Financing & costs

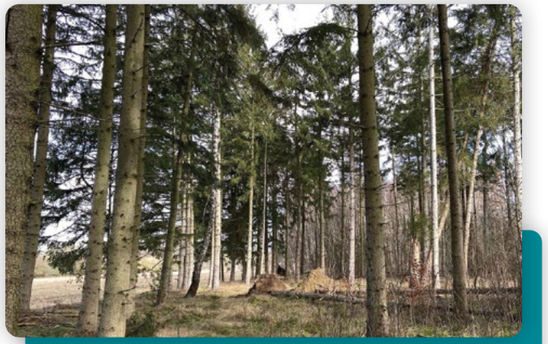
The funding for the S4 has been secured. The total costs (including all risks) for the S4 (east) amount to approximately EUR 1.847 billion. Under the financing agreement reached in November 2019, the German Federal Government will cover the sum of EUR 1.557 billion, amounting to 84% of this total. Of the approximately EUR 290 million provided by the state governments, 70% will be provided by the state of Hamburg and 30% by the state of Schleswig-Holstein. Deutsche Bahn is contributing EUR 20 million to the project. Given the importance of the Hamburg–Lübeck route for the pan-European transport infrastructure, the federal states are also seeking co-financing from European Union (EU) funds.

Environmental protection

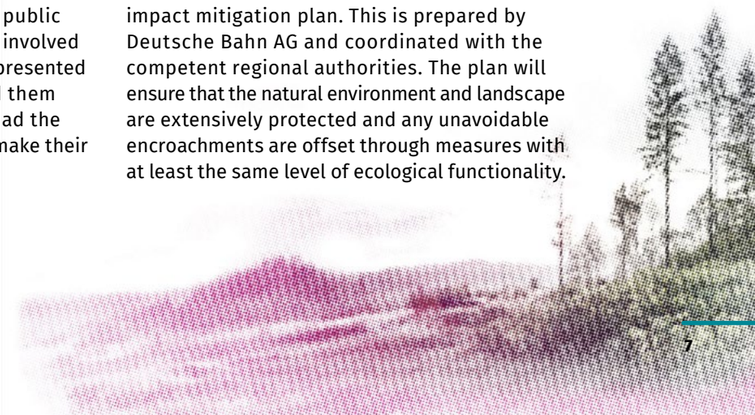
The planning stage for the preliminary design included a comprehensive environmental assessment, the results of which are incorporated into further planning activities. Compiled by independent assessors, an environmental impact statement (EIS) formed part of the planning for building permit application.

Scoping represented a major stage in the EIS process. This entailed meetings with public authorities and environmental groups involved in the process. At these meetings, we presented the planned measures and discussed them together with the participants, who had the opportunity to provide feedback and make their own contributions to the process.

The EIS also forms the basis for the environmental impact mitigation plan. This is prepared by Deutsche Bahn AG and coordinated with the competent regional authorities. The plan will ensure that the natural environment and landscape are extensively protected and any unavoidable encroachments are offset through measures with at least the same level of ecological functionality.



Protected good climate / air: During the construction work, great importance is to protect the air and climate. A compensatory measure is, for example, the reforestation of a piece of forest in Hamburg-Lemsahl, Mellingstedt.



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