



Project S4 Hamburg – Ahrensburg

as a part of the Scan-Med Corridor



Von der Europäischen Union kofinanziert

Transeuropäisches Verkehrsnetz (TEN-V)



Hamburg

Scandinavian – Mediterranean Corridor, section: København - Hamburg via Fehmarn



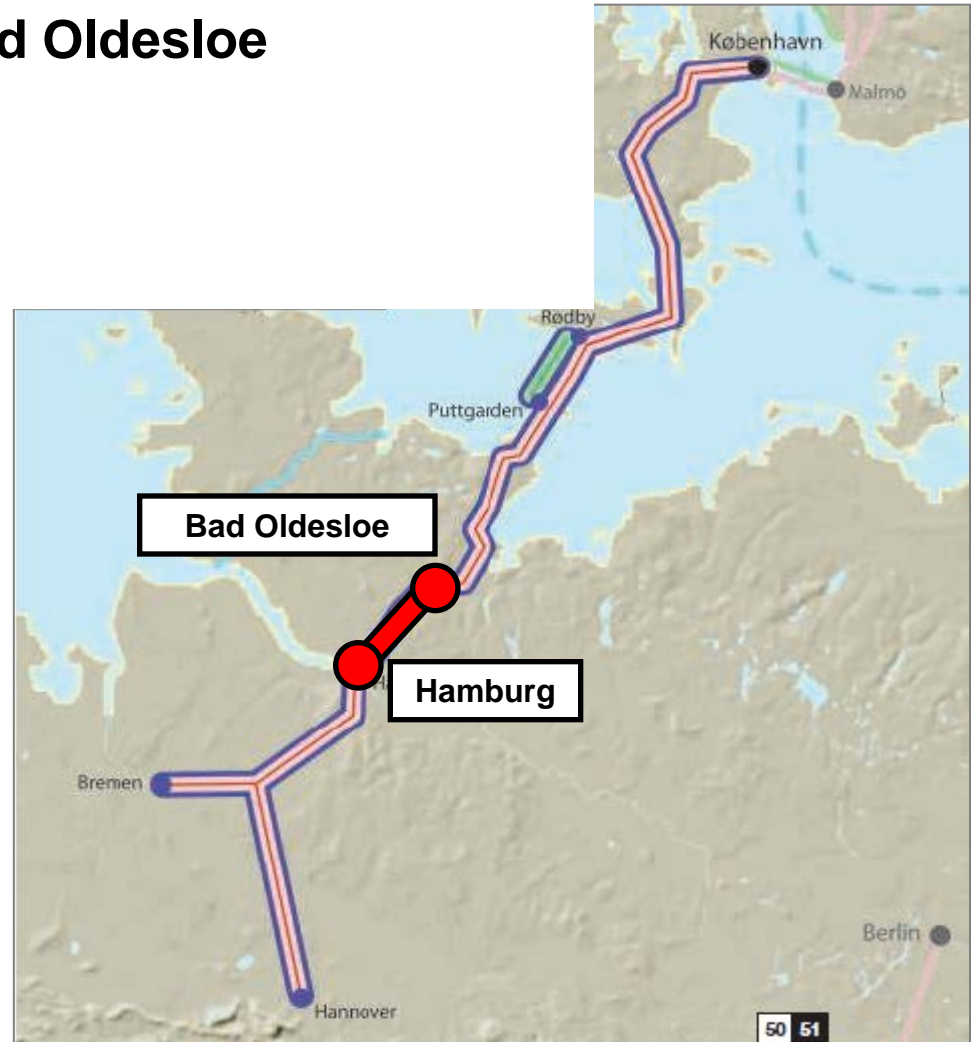
- Key component in the main north- south route
- Connects Central Europe with the Nordic Countries
- Includes a fixed crossing (19km) of the Fehmarn Belt and
- Improvements to the connected rail and road network

S4 Hamburg – Ahrensburg – Bad Oldesloe

The Bottleneck

Railway line Hamburg – Bad Oldesloe is part of the Scandinavian – Mediterranean Corridor

- Problem no. 1: More local trains are required (demand is constantly rising), but the capacity has reached it's limits on the current tracks
- Problem no. 2: Mixed service of local, fast regional, long-distance and freight trains leads to interaction and causes many delays
- Problem no. 3: Capacity overload of Hamburg Hbf (Central Station)



Objectives

- Eliminating the bottleneck on the railway line Luebeck - Hamburg
- Capacity release of Hamburg Hbf

by creating a new double/ single track between Hasselbrook and Ahrensburg-Gartenholz next to the existing railway line for S-Bahn line S 4

Scheme

Construction of a new railway line

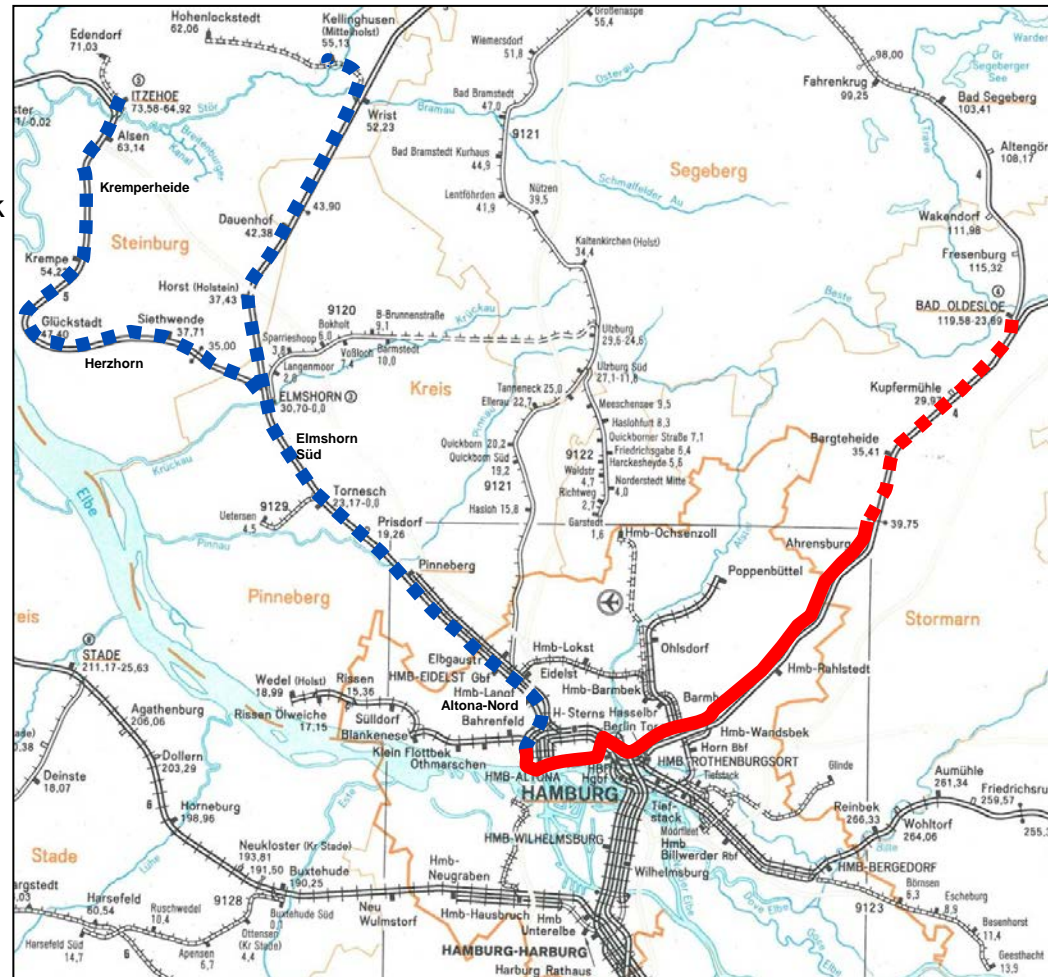
- with two tracks between Hasselbrook and Ahrensburg
- with one track between Ahrensburg and Gartenholz
- junction at Gartenholz for merging into the existing line to Bad Oldesloe
- flying junction at Hasselbrook for merging into the existing S-Bahn line
- 4 new stations in Hamburg, 1 new station in Holstein

Characteristics

| | |
|-----------------------|-----------|
| Opening: | 2024-2027 |
| Length of line: | 36 km |
| thereof construction: | 20 km |
| thereof upgrading: | 16 km |

Projection

50% passenger growth



S4 Hamburg – Ahrensburg – Bad Oldesloe

The proposed solution



- Hamburg – Ahrensburg: Separated tracks for S-Bahn and long-distance railway
- Ahrensburg – Bad Oldesloe: S4 uses long-distance railway (60 min interval)
- Bad Oldesloe – Lübeck: Enough capacity on current tracks

S4 Hamburg – Ahrensburg

The benefits

- S4 gives way to the long-distance traffic by using a dedicated track
- S4 will release capacity within the Hamburg main station
- S4 will protect people living along the railway tracks from noise by barrier walls
- S4 is tackling the increasing local traffic
 - With higher capacity (shorter intervals and more seats)
 - With better quality (larger coverage/ more stations and higher reliability/ less conflicts)
- Cost-Benefit:
 - Long distance: > 60 %
 - Local transport: < 40 %



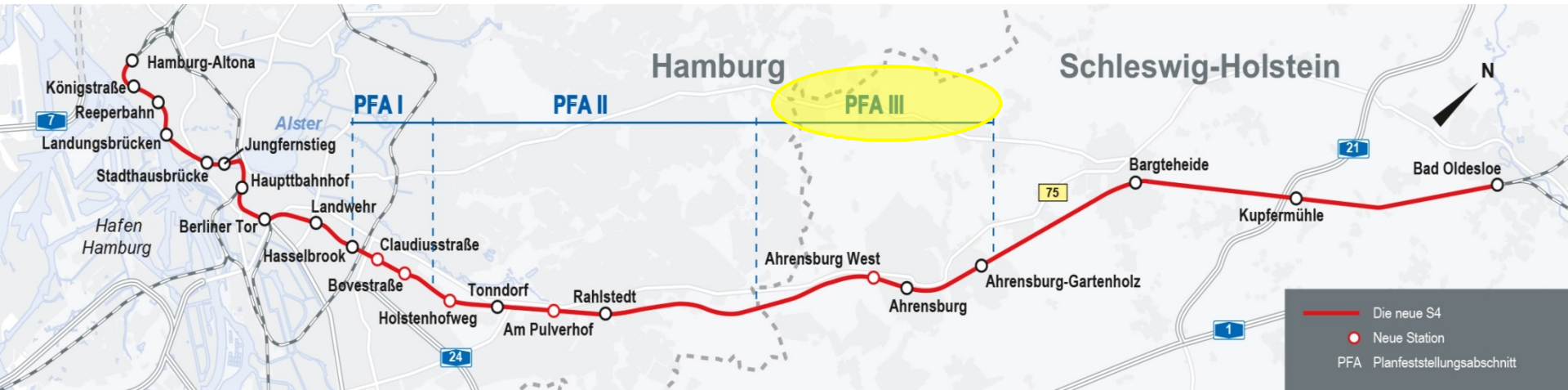
Activity 1: Final design planning section II (PFA II):

(Luetkensallee – Landesgr. HH / S-H) Length: 9,568 km

- Planning double – track urban railway parallel to the existing conventional railway line 1120
- Planning the partial adjustment of the existing track 1120
- New planning and modifications of 14 railway overcrossings
- New planning and modifications 4 road overcrossings
- Planning of new stations "Holstenhofweg" and "Am Pulverhof"
- Planning the modification of the existing stations "Tonndorf" and "Rahlstedt"
- Planning of a new signal box (solid state interlocking) "Rahlstedt"
- Planning of approx. 20.3 km noise barriers

Current status planning section II (PFA II):

- Erstellung Planfeststellungsunterlage
- Die Basislagepläne sind in Endbearbeitung. Diese enthalten: Trasse, Randentwicklung, Lärmschutz, an die VEP angepasste konstruktive Bauwerke, Straßenplanung
- Entwässerungskonzept befindet sich in Abstimmung
- Schall- und erschütterungstechnische Gutachten befindet sich in Abstimmung
- Bestandserfassung für Landschaftspflegerische Begleitplanung weitestgehend abgeschlossen
- Nacherkundung Baugrund (2. Bohrkampagne)



Activity 2: Final design planning section III (PFA III):

(Landesgrenze HH/S-H –Ahrensburg-Gartenholz)
Length: 8,279 km

- Planning double – track urban railway parallel to the existing conventional railway line 1120
- Partial adjustment of the existing track 1120
- New planning and modifications of 5 railway overcrossings
- New planning and modifications 5 road overcrossings
- Planning of new station "HP Ahrensburg West"
- Planning of approx. 10.4 km noise barriers

Current status planning section III (PFA III):

- Erstellung Planfeststellungsunterlage
- Erstellung Basispläne abgeschlossen
- Schall- und erschütterungstechnische Gutachten befindet sich in Abstimmung
- Bestandsbeschreibung Landschaftspflegerische Begleitplanung abgeschlossen

Activity 3: Cost-benefit analysis for the construction works

Three steps are foreseen:

- Analysis of the benefits for the long distance railway transport (implemented by the Federal Government)
- Analysis of the advantages resulting from traffic load removal at Hamburg main station
- Analysis of the benefits for the urban node rail transport Hamburg

While the two first steps are carried out by the Federal Government and are not part of this Action, the third step is covered by the Action.

Sub-activities:

- Definition of the task (jointly done by the State of Hamburg, NAH.SH, State of Schleswig – Holstein and Federal Government (BMVI))
- Implementation of the CBA
- Alignment of the results with the Federal Government (BMVI)

Stakeholder Anwohner Bürgersprechstunden



Stakeholder Medien „Vor Ort Termine“



Stakeholder Behörden, Gemeinden, Bezirk Informationstermine mit Projektexterten



Stakeholder Öffentlichkeit Informationsmaterial



Stakeholder Betroffene/Interessierte Marktstände/Informations- veranstaltungen



Conclusion

The contribution of the S4 for TEN-T/CEF:

- A bigger attractiveness (shorter travel times, high capacities) leads to a higher usage of mass transit (both local and long-distance) on the Green Corridor and releases stress on the Jutland Corridor
- A modal-shift towards the more sustainable transit is brought forward on all levels (car towards S-Bahn and plane towards ICE)
- The S4 project bears benefits for both operations as it splits them onto dedicated tracks enabling a higher attractiveness