

From hydrail to „Net25“

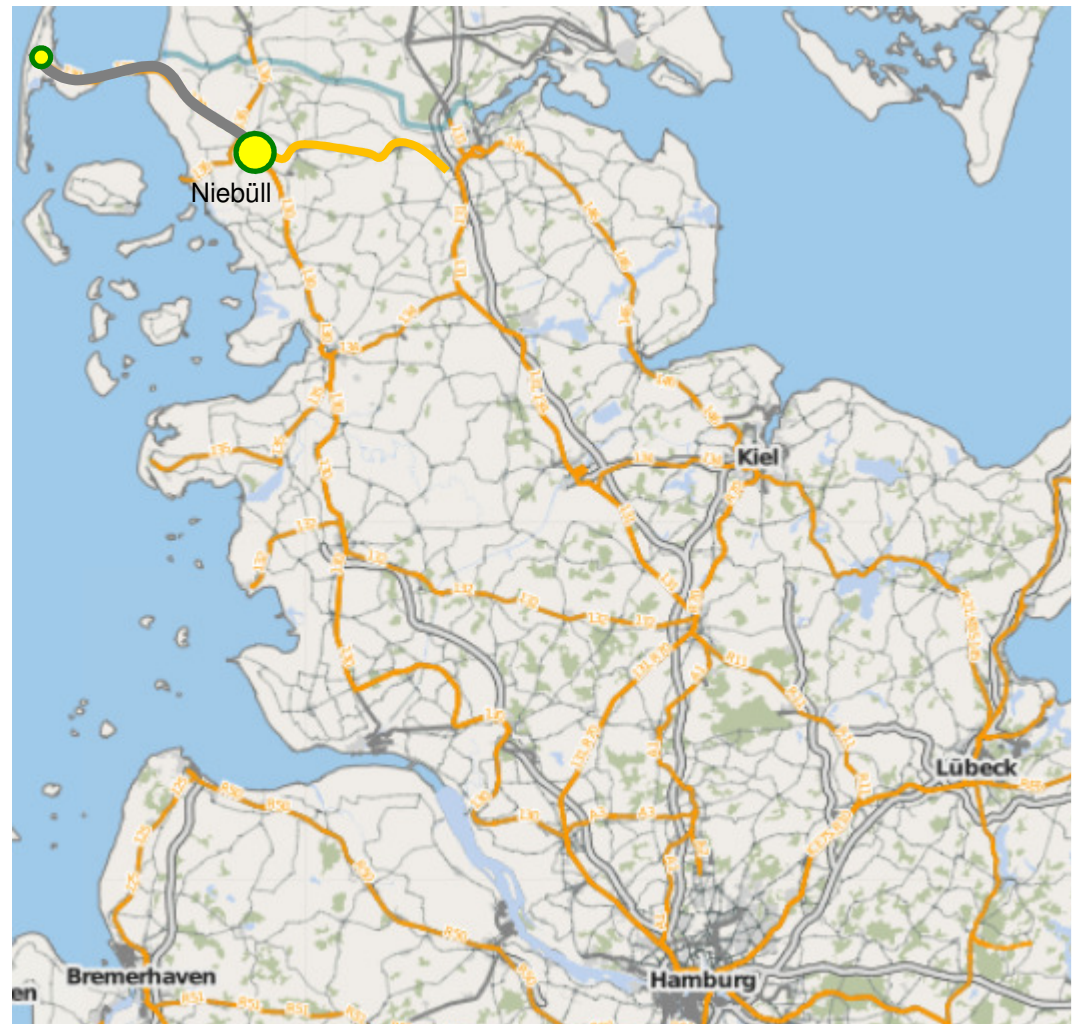
Dr. Holger Busche

Geophysicist

hydrail publication in 1998

Now working in parliament
of Schleswig-Holstein as a
Scientific Contributor for
Energy & (rail) traffic

Grüne Landtagsfraktion Schleswig-Holstein



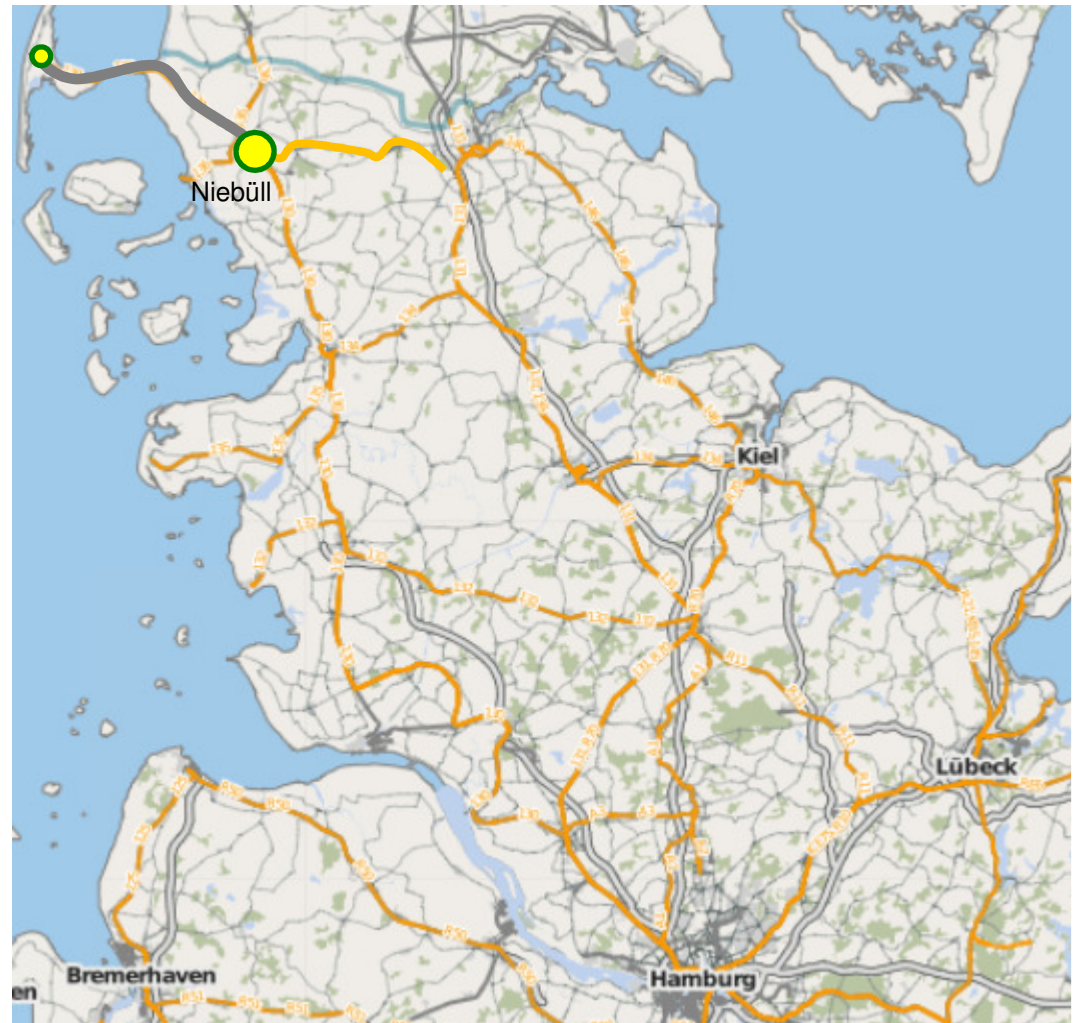
From hydrail to „Net25“

Change in IHC: From
Birmingham to Mooresville

From
Technical details/feasibility
for Specialists

To
Engineering, Energy, Politics

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From hydrail to „Net25“

Schleswig-Holstein

3 Main lines: North-South

Flensburg – Hamburg

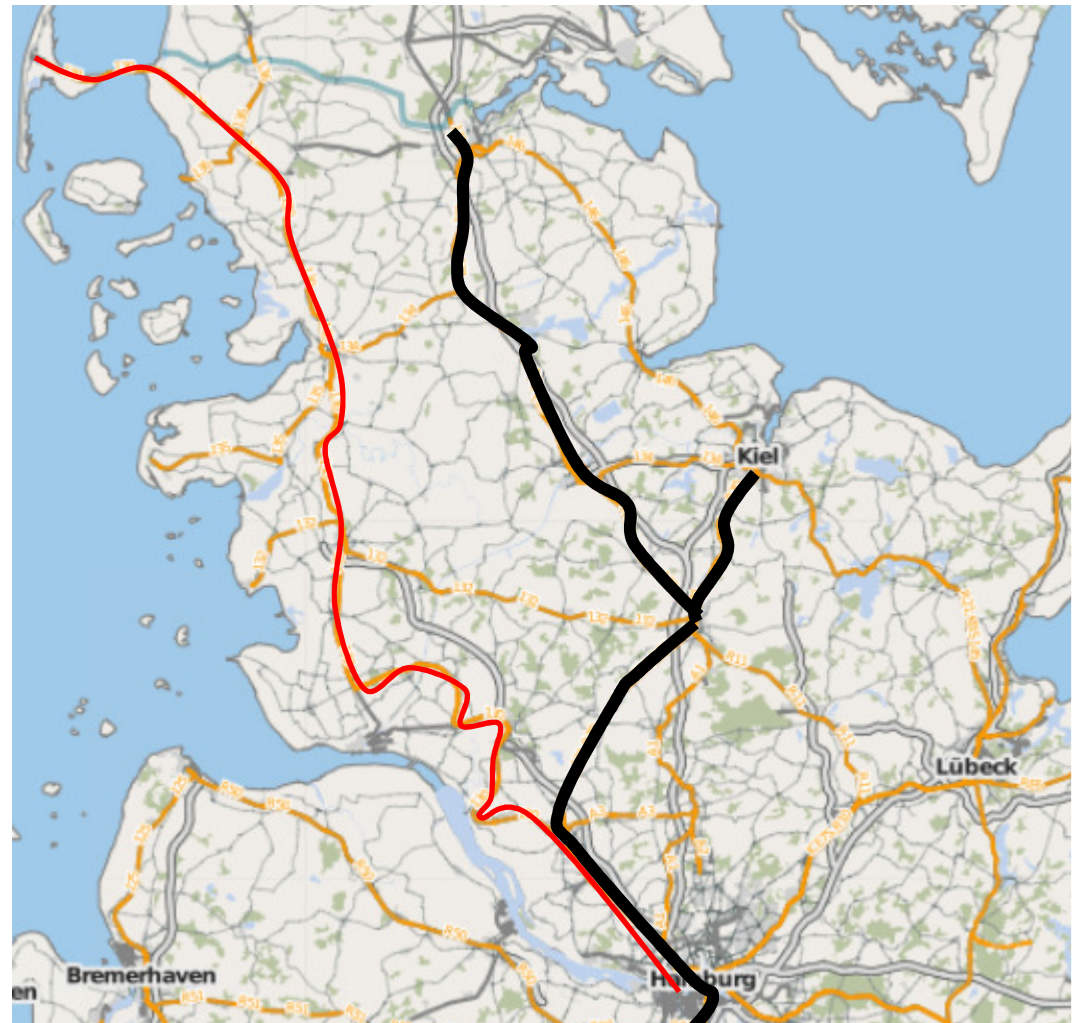
Kiel – Hamburg

Sylt – Hamburg (Diesel)

Large trains

All other: EMU/DMU

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Hydrail vs Caternary System

Investment Mio.€ * %/a

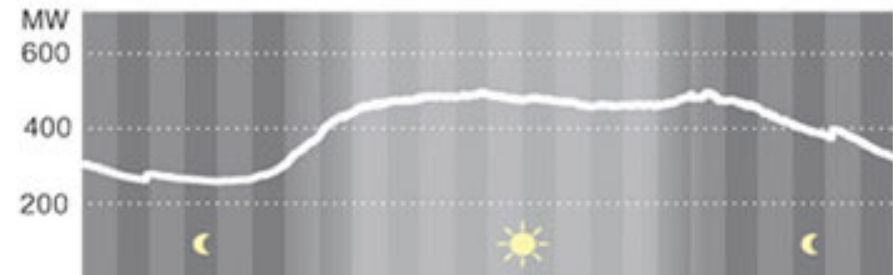
vs.

vs.

Energy Costs $\Delta\text{GWh} * \Delta\text{€}/\text{kWh}$

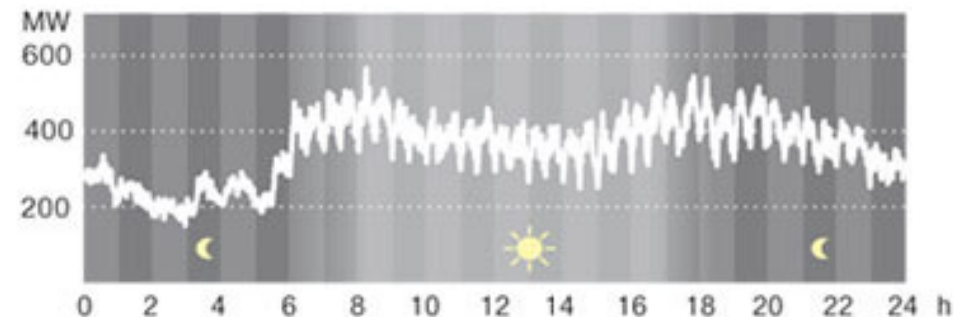
Energy ~ trains/a ~ mass

Measure: ~10 Mio.t/a



Electricity Demand of Zurich

Electricity Demand of SBB

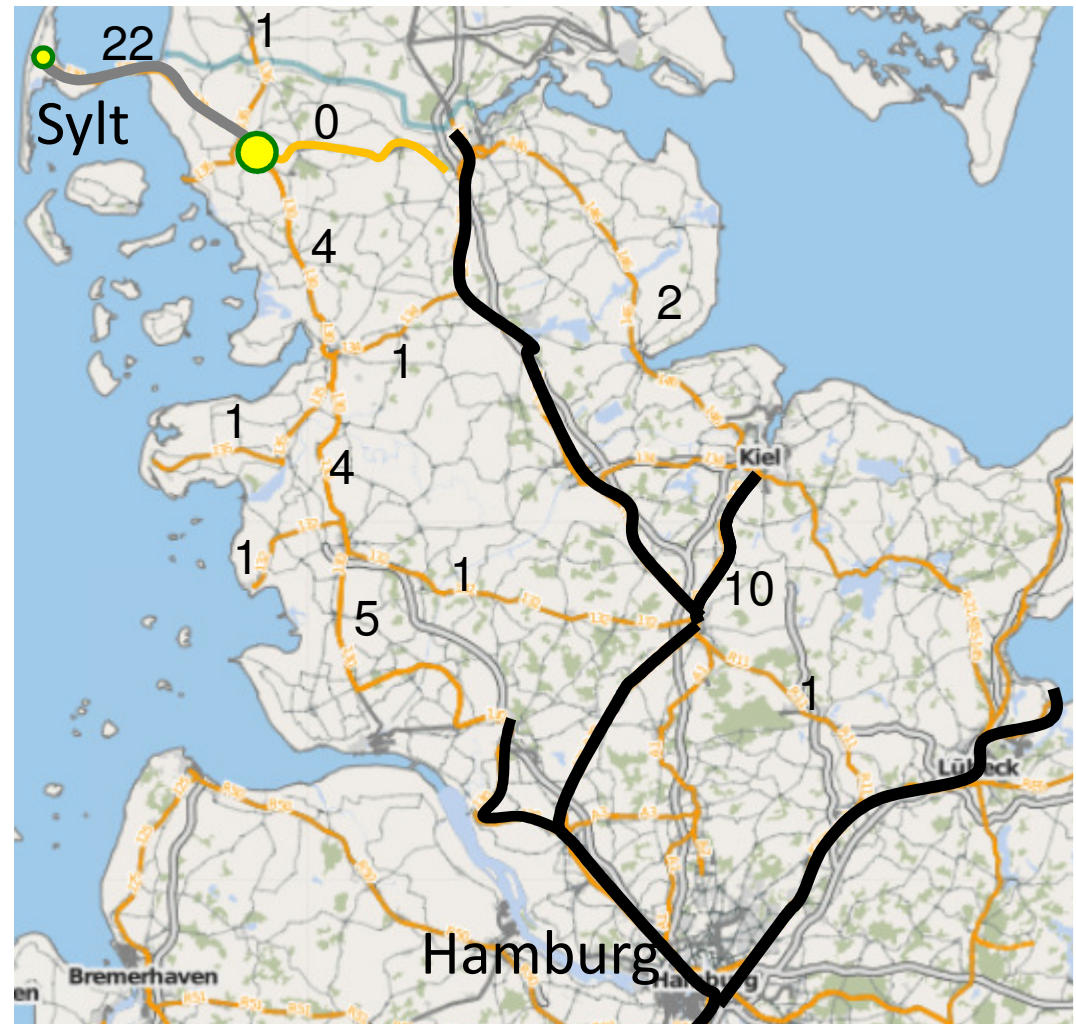


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Schleswig-Holstein
Electrified tracks: 30%

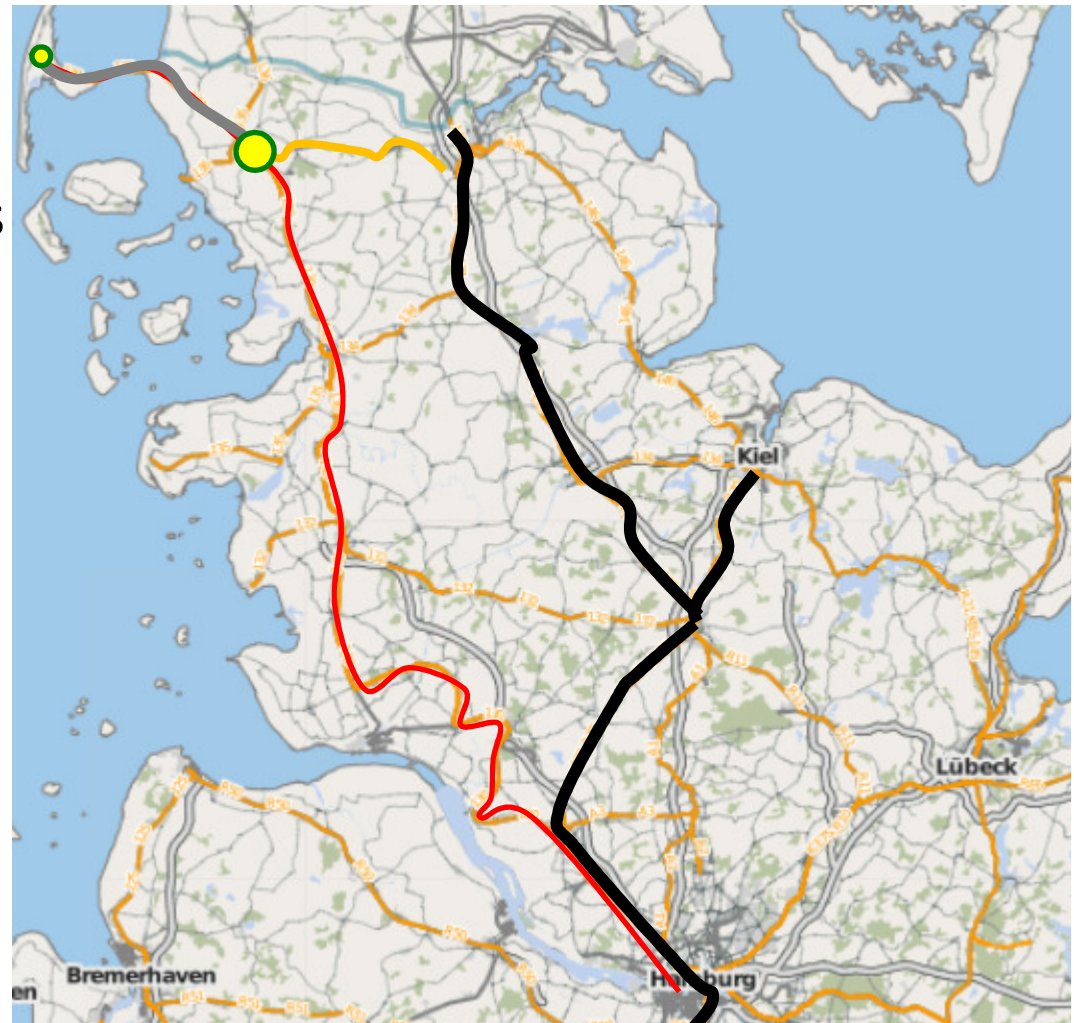
Hamburg 1.8 Mio. people
in the south attracts traffic

Tourist areas at west coast
especially the island of Sylt



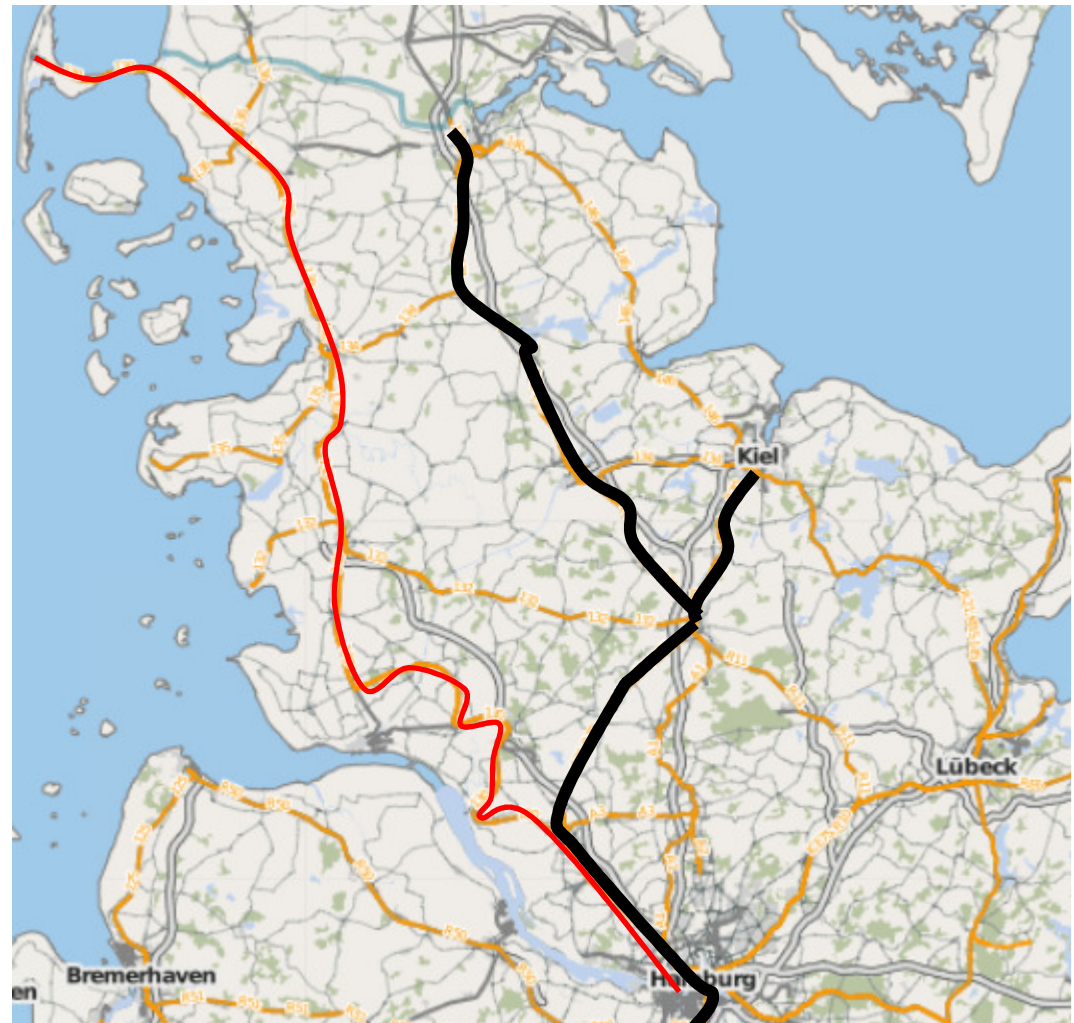
From hydrail to „Net25“

- Main line observations (a):
- + North wants express trains
but has too few pax
 - + The closer to Hamburg
the more crowded
 - + Exception:
Dense traffic to Sylt



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- Main line observations (b):
- + Trains are operated by „on size fits all“ principle
 - > too slow in the south
 - > too small in the south
 - > too heavy in the north
 - > high operative costs
10+ Mio.€/a tax monex



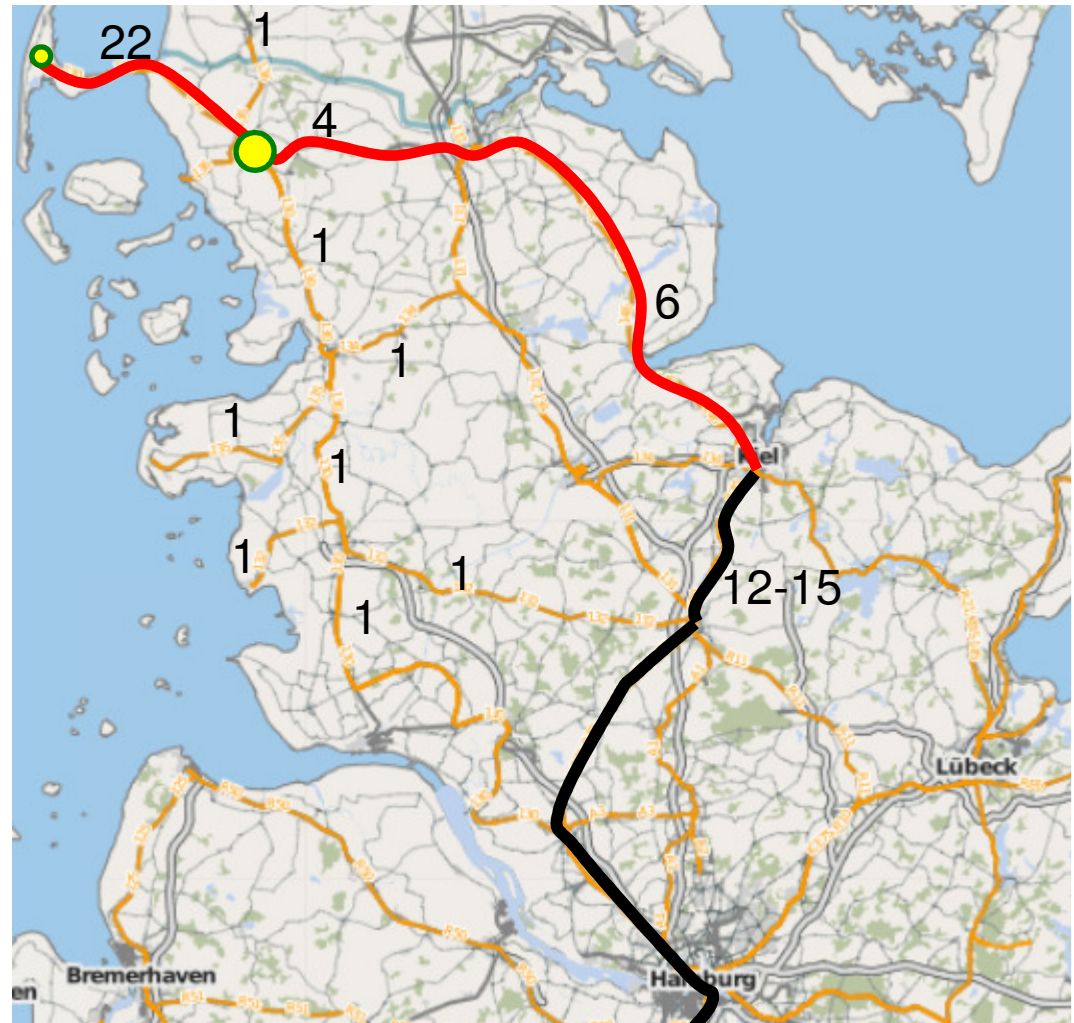
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Shifting traffic from Sylt to eastern lines where there is a higher amount of traffic

Join regional traffic lines

Operate regional express line beside local traffic

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Main line conclusions:

- + Collect people in the North
- + Operate beside local trains in the near of Hamburg
- + Use catenary system for these large trains
- + shorter, easier & cheaper than along Western Line

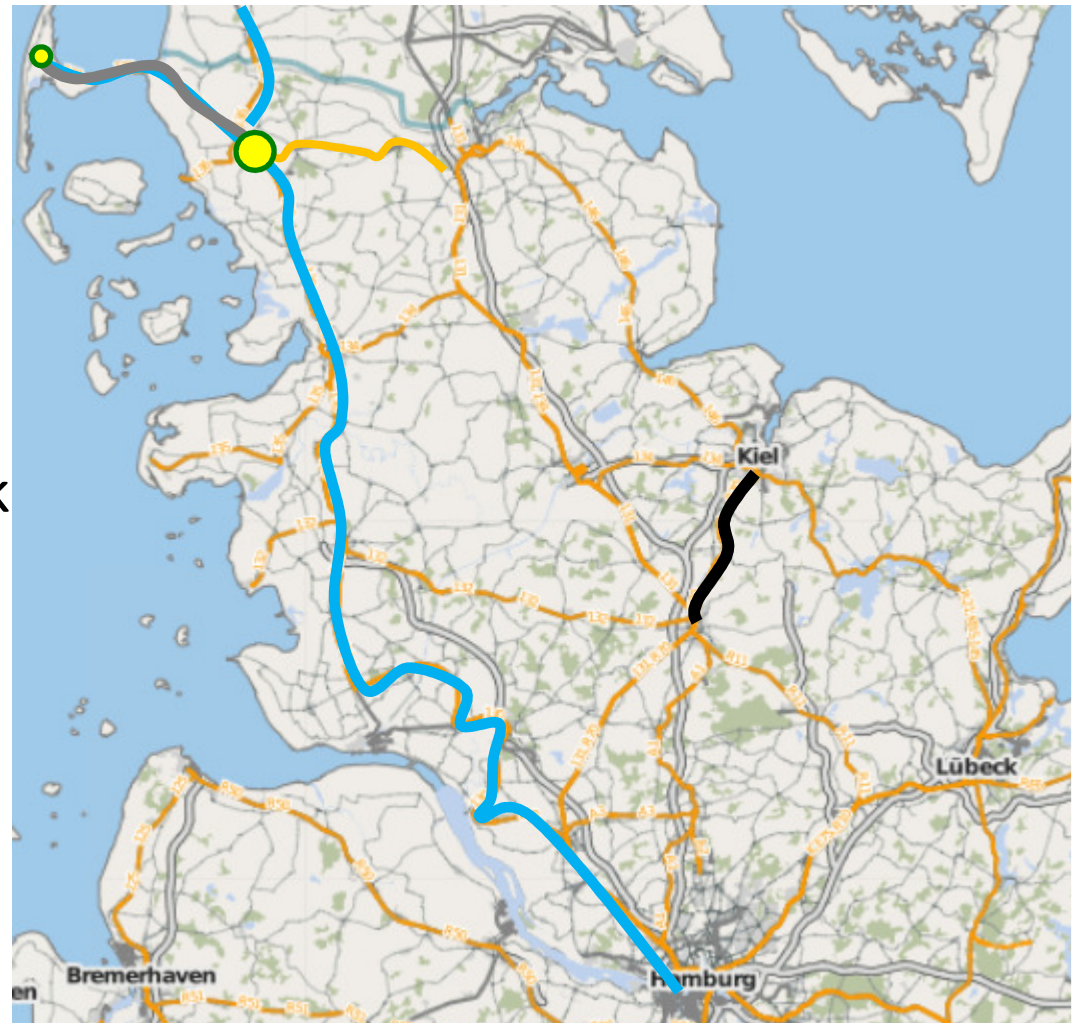


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- Main line conclusions:
- + Reduce trains to railcars
 - + nonstop service in south
 - + „Not slower just smaller“
 - + same size than in Denmark
 - + International Line
Hamburg – Esbjerg

+ Operate those by hydrail

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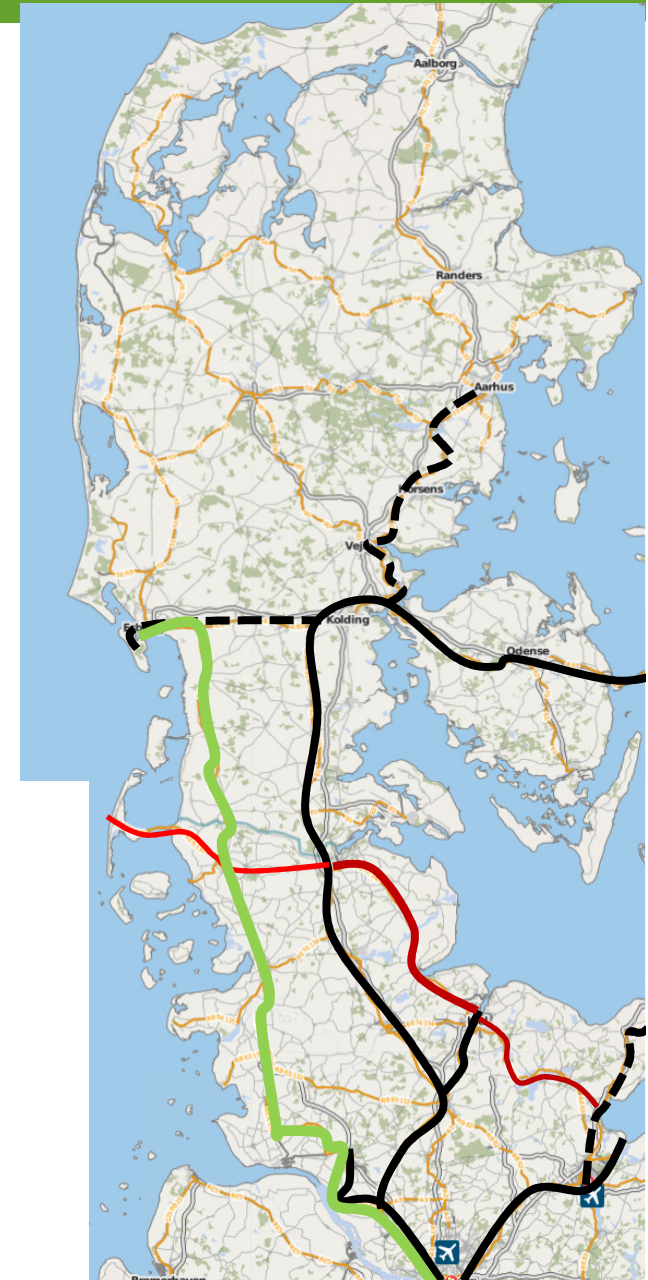


From hydrail to Net25

Conclusions:

1. Don't think about hydrail trains
2. Don't even think about a hydrail line
3. Think about networks
 - + combine rails with electric grid
 - + include all railway lines
 - + consider capacity/limitations
 - + connect people

Then boost it up to „Net25“



Welcome to „Net25“

I am glad about
your attention!

Dr. Holger Busche

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