

Towards a better international timetable in Europe

Photo Vidar Nordli-Mathiesen



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NETZE

ProRail

INFRABEL
Right On Track



**SPRÁVA
ŽELEZNIC**



OST
Ostschweizer
Fachhochschule

EuroLink “Raison d’être”



Challenges:

Green deal, climate debate, short haul flights, ...

→ Need for a green solution for high CO₂-emitting transport modes



Suboptimal use of rail infrastructure and capacity

Planning of international trains within fixed national timetables vs Tabula Rasa and redesign of the European transportplan with a macro to micro philosophy



Suboptimal travel times

Plea to make rail great again by improving travel times and making international train travel more attractive and competitive with the flight market

Example: Eurostar London – Amsterdam



Air-Rail substitution

>50 daily return flights
Amsterdam-London



Suboptimal use of infra



Suboptimal travel times from Amsterdam to London:

2019	4h40
2020 (direct)	4h10
Optimal (direct)	3h40

From national timetables first and
international second



To international timetable first



Our motives for a better international passenger rail network in Europe



Sustainable growth

International rail transport enables sustainable growth as an alternative to air and road traffic.



Better connectivity

Rail can accommodate growing demand and the need for connectivity within Europe.



Optimized use of infrastructure

Alignment of national networks and full use of existing and planned infrastructure.

Our design philosophy

Higher Frequencies



- More cross-border connections
- Systematic slots with potential for growth



Shorter Travel Times



- More attractive slots
- Needless run time margin to be avoided



Direct Connections



- Much more direct connections throughout Europe
- Not just link two countries but three or even more



Optimized Transfers



- Attractive transfers (in addition to direct trains)
- Pan-European integral clock face timetable

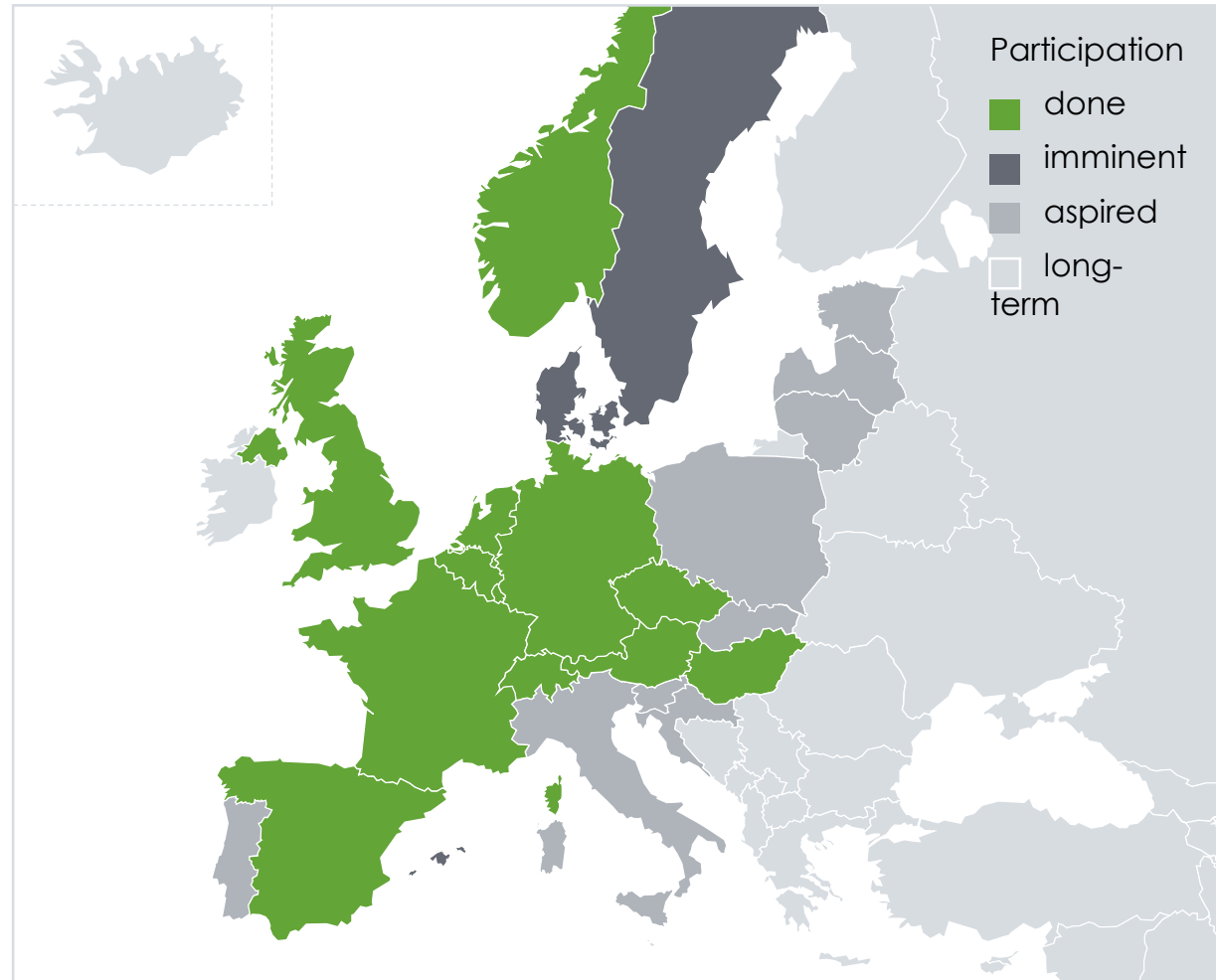


More and better quality travel options for more people

Since 2020 EuroLink offers a platform for network planning experts of a growing number of rail infrastructure managers.

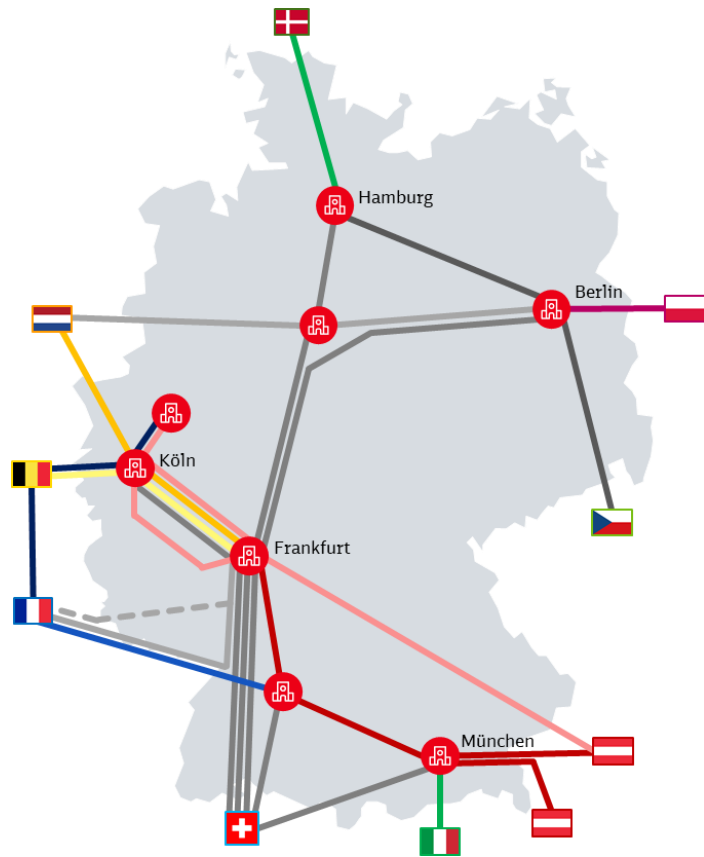
- **Bottom-up initiative** of InfraBel, ProRail and DB Netz, with support of the Ostschweizer Fachhochschule.
- As experts in logistics and infrastructure, we help to improve international transport for sustainable growth and better connectivity.
- Our **team is growing**: more and more IMs are contributing to EuroLink.
- Our team sees opportunities for better international rail transport **by designing logically from macro- to microscopic starting from a Tabula Rasa**
- EuroLink supports initiatives like TEE 2.0 & TTR. With joined forces we can make rail great again!

Let's modal shift together!

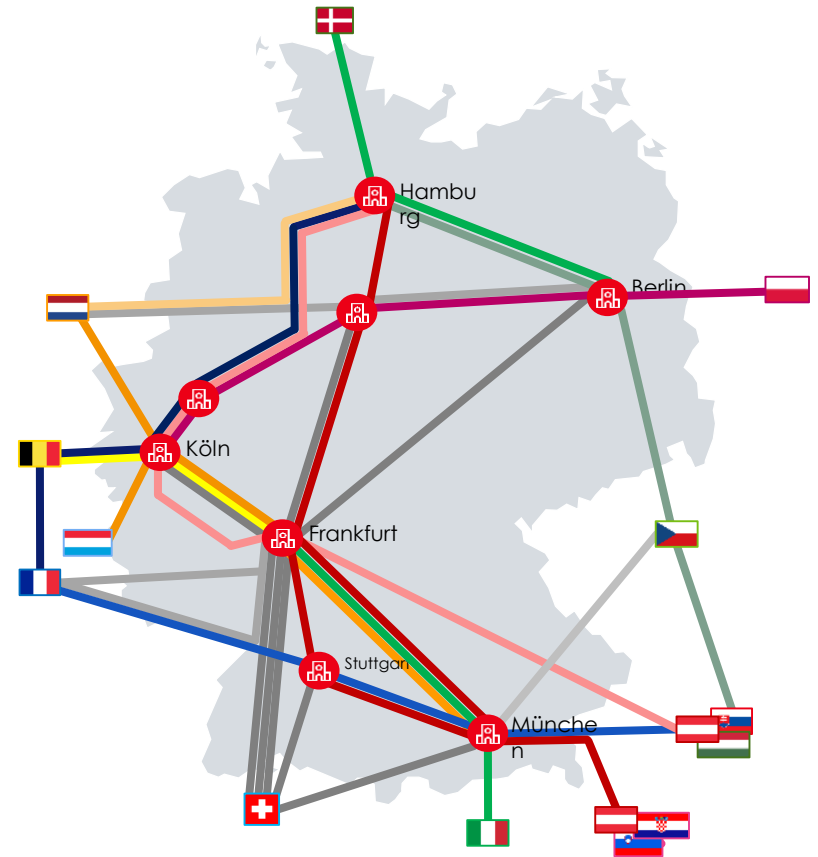


**Example: International trains often end right after the border crossing.
In EuroLink trains are extended across the country.**

Status quo

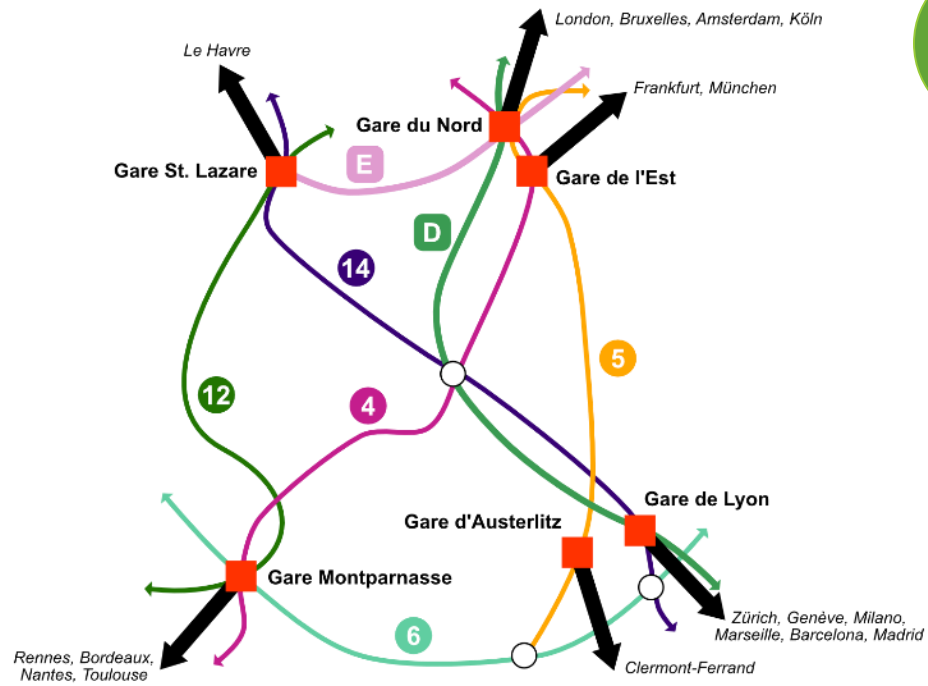


EuroLink

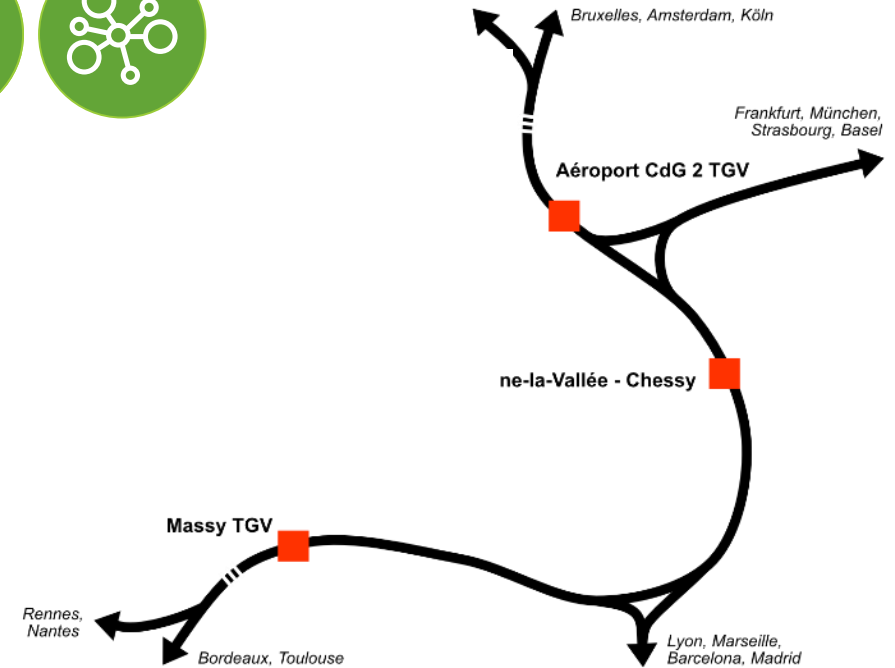


Example: Use of new hubs for long distance travel around Paris

Status quo

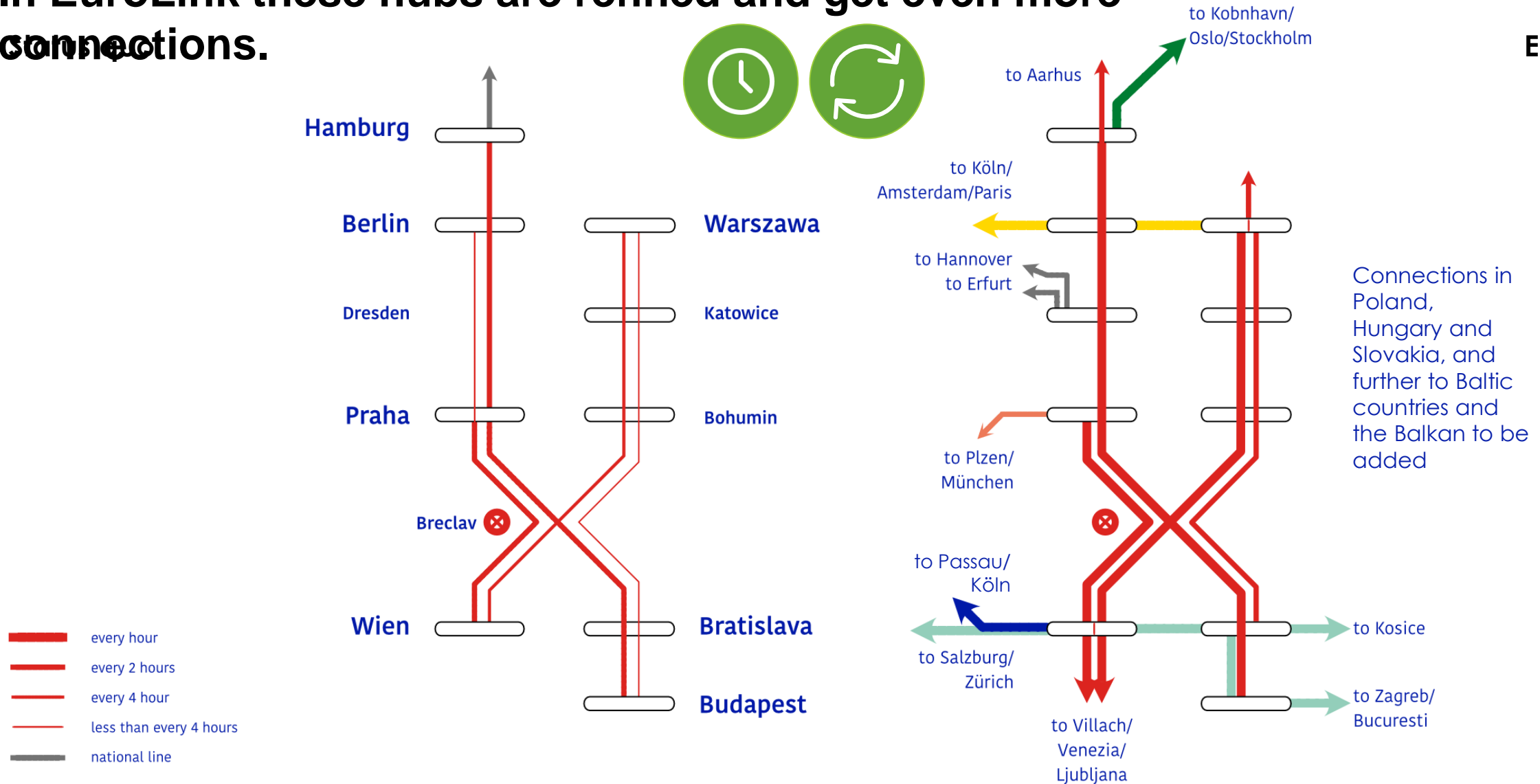


EuroLink

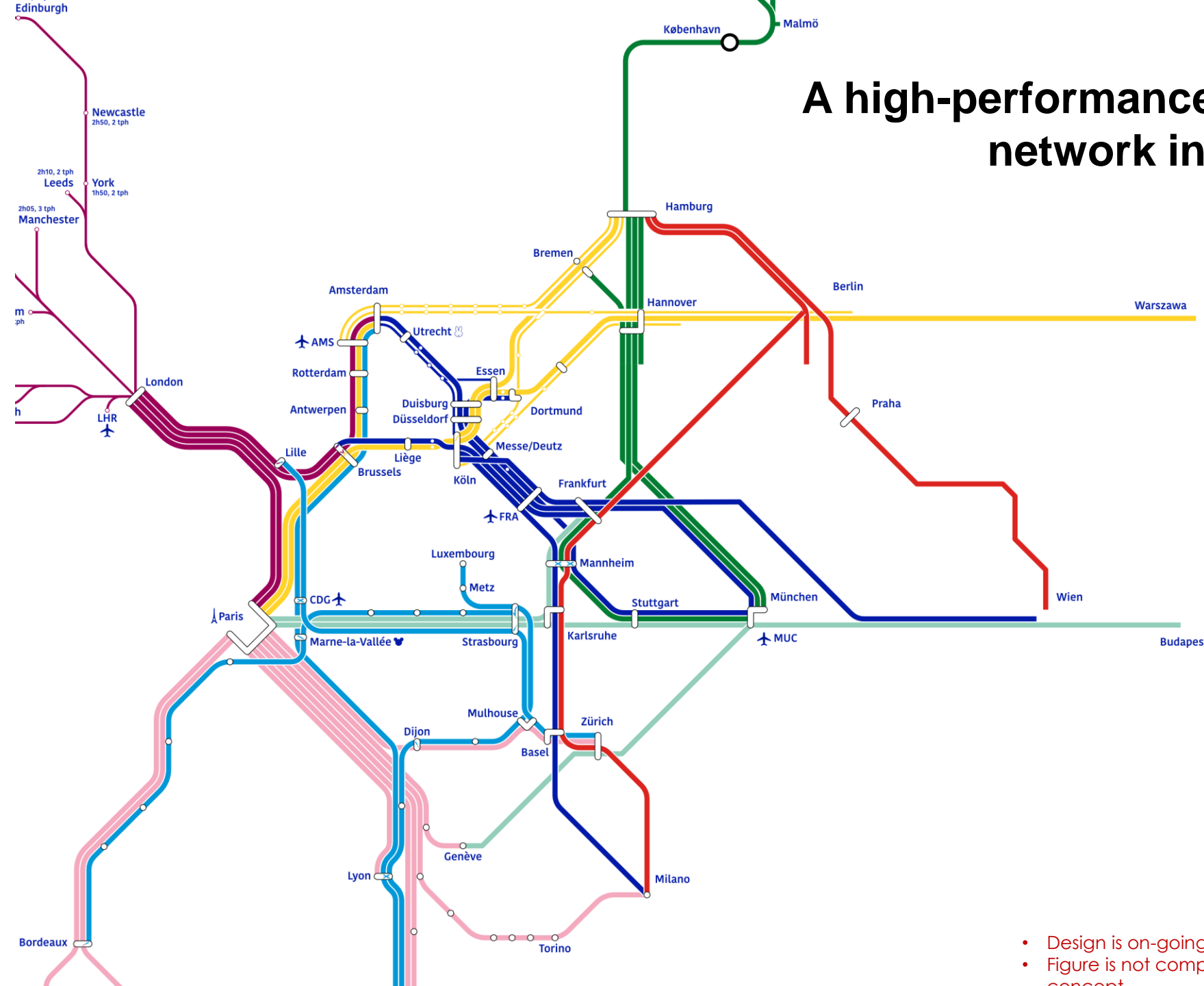


Example: There are already well-designed hubs for international relations.

In EuroLink these hubs are refined and get even more connections.



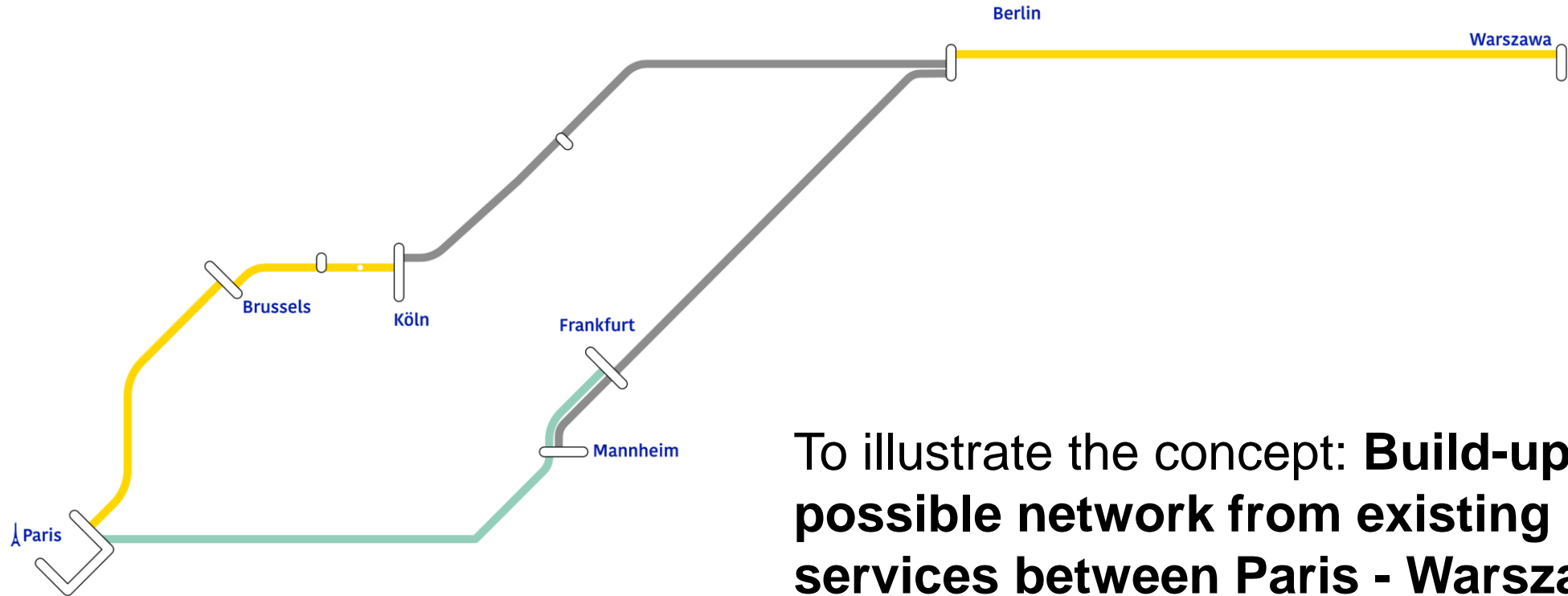
A high-performance international passenger network in 2030 could look like this



- Timetable structure
- International passenger services (fit with freight and national traffic to be studied in detail)
- Existing and planned infra

- **High frequency** between major cities
- **Interconnected corridors**
- **New and improved hubs** for quality transfer and alternating services
- National feeders
- Well serviced airports

- Design is on-going
- Figure is not comprehensive and purely intended as an illustration of the concept



To illustrate the concept: **Build-up of a possible network from existing services between Paris - Warszawa**

- Current situation: partially aligned international and national services:

Paris to	Today
Köln	3h26
Berlin	8h20, 1 change
Warszawa	15h09, 3 changes

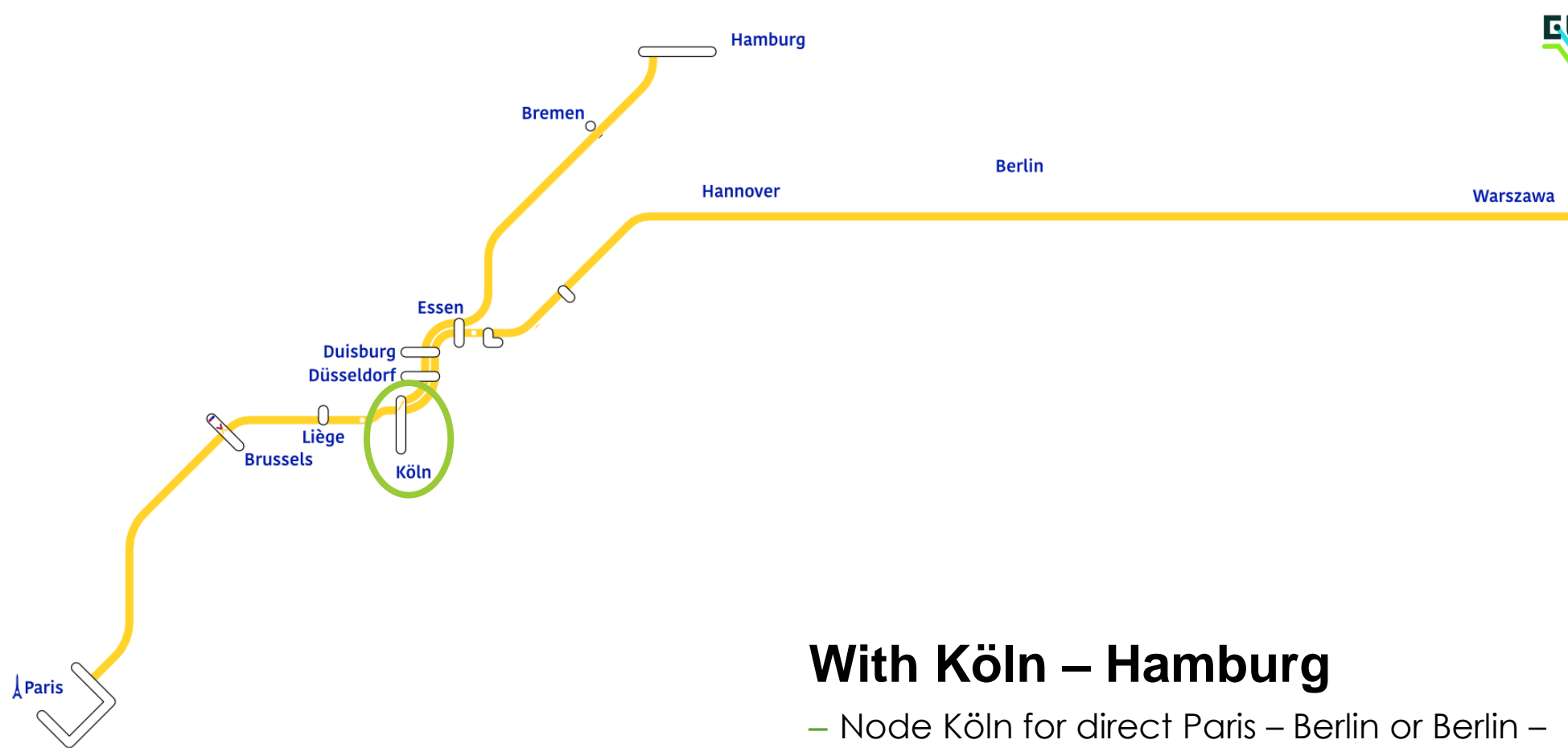
*Current travel times are based on public information for April/May and may be influenced by COVID.



In Eurolink we align slots to create long-distance opportunities

Paris to	Eurolink	Today
Köln	3h19	3h26
Berlin	8h05	8h20, 1 change
Warszawa	13h44	15h09, 3 changes

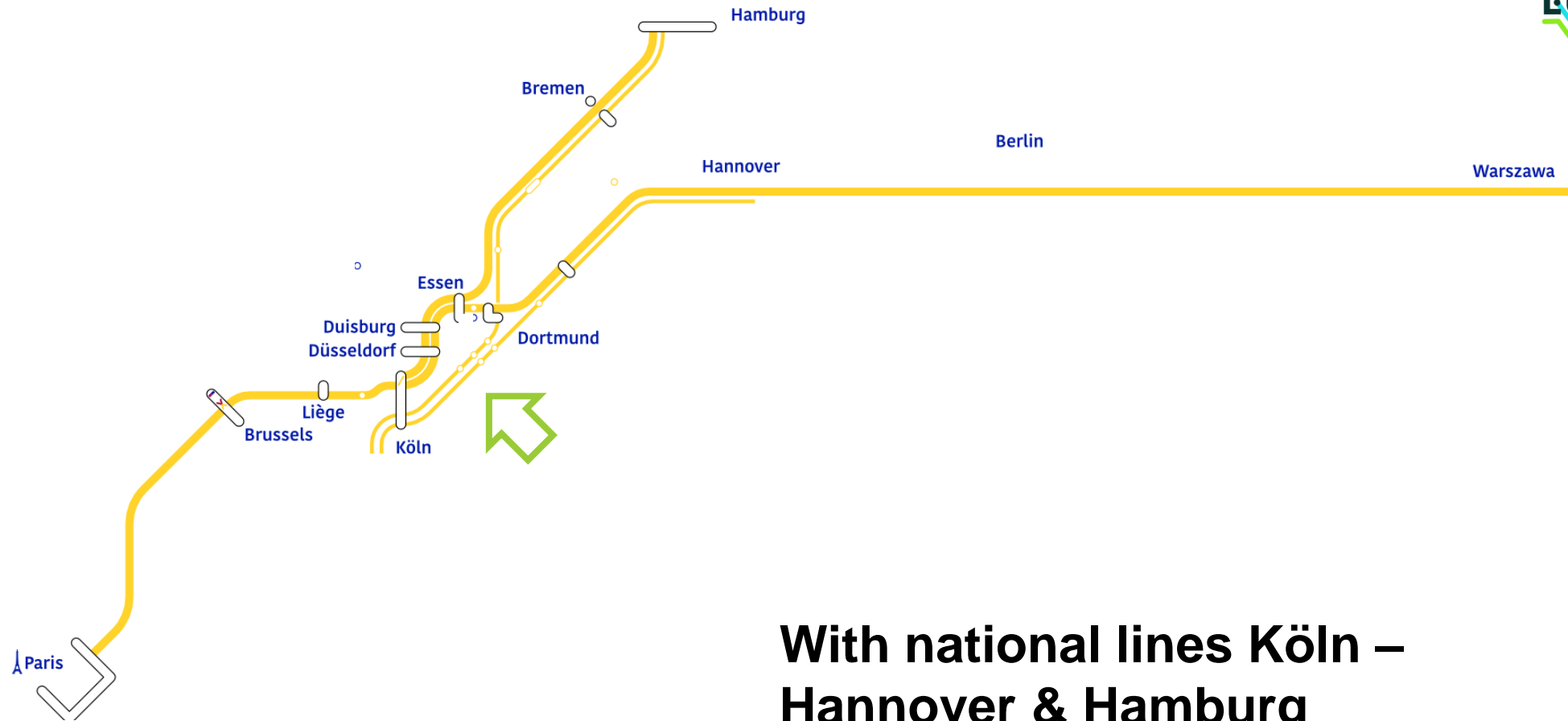
*Eurolink travel times on this and following slides are indicative and subject to change



With Köln – Hamburg

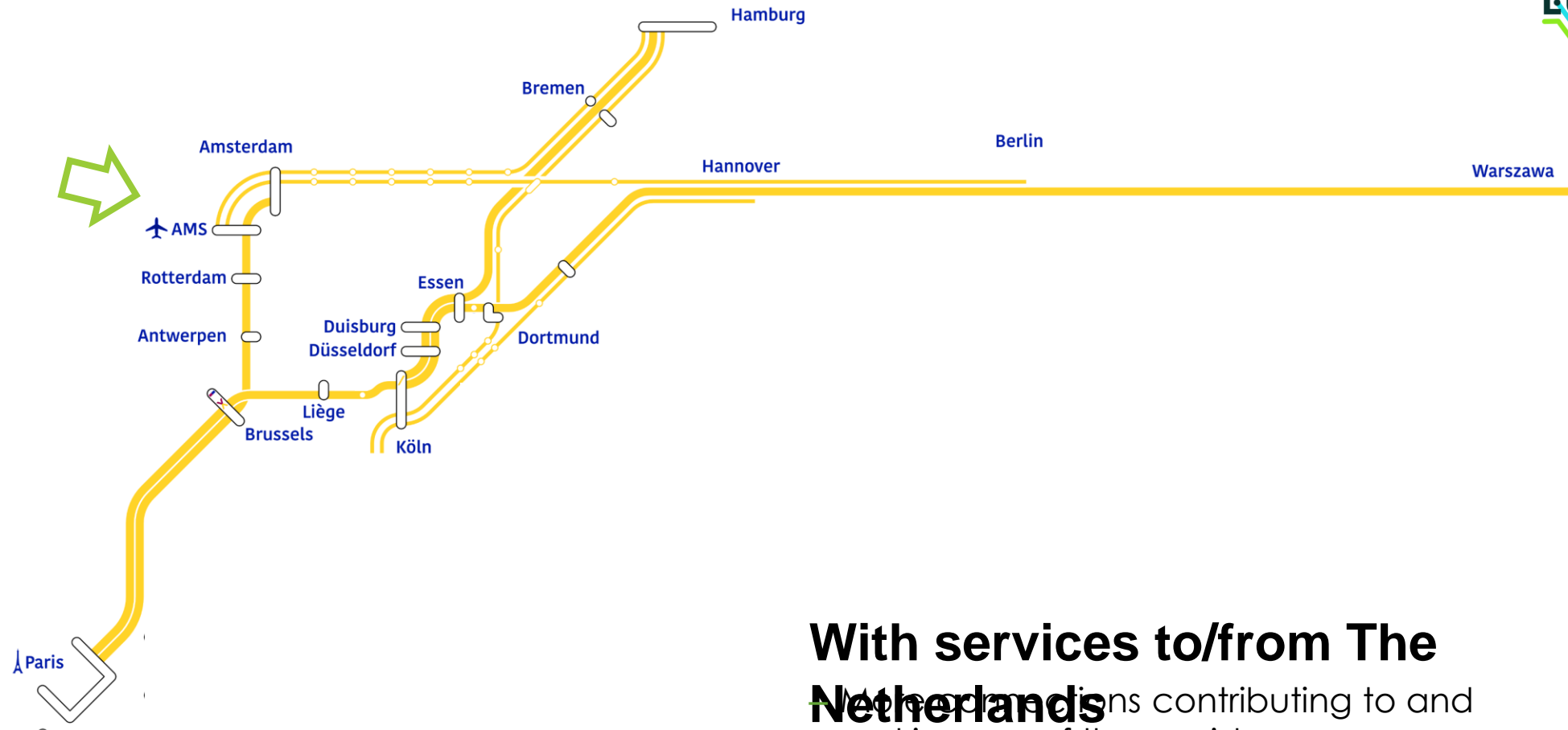
– Node Köln for direct Paris – Berlin or Berlin – Hamburg

Paris to	Eurolink	Today
Hamburg	7h00, direct	8h04, 2 changes



With national lines Köln – Hannover & Hamburg

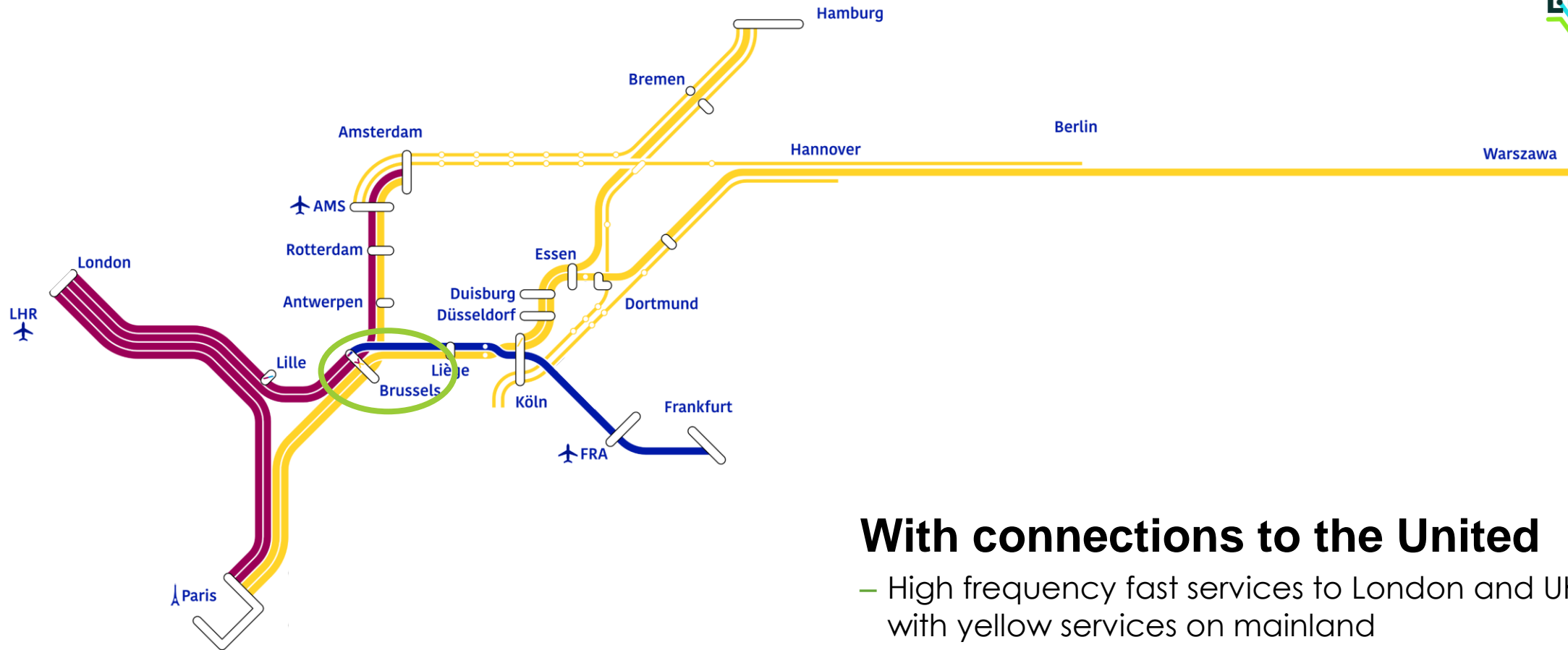
— Feeder and outflow of international network



With services to/from The Netherlands

More connections contributing to and making use of the corridor

Amsterdam to	Eurolink	Today
Hamburg	4h48	5h05, 1 change

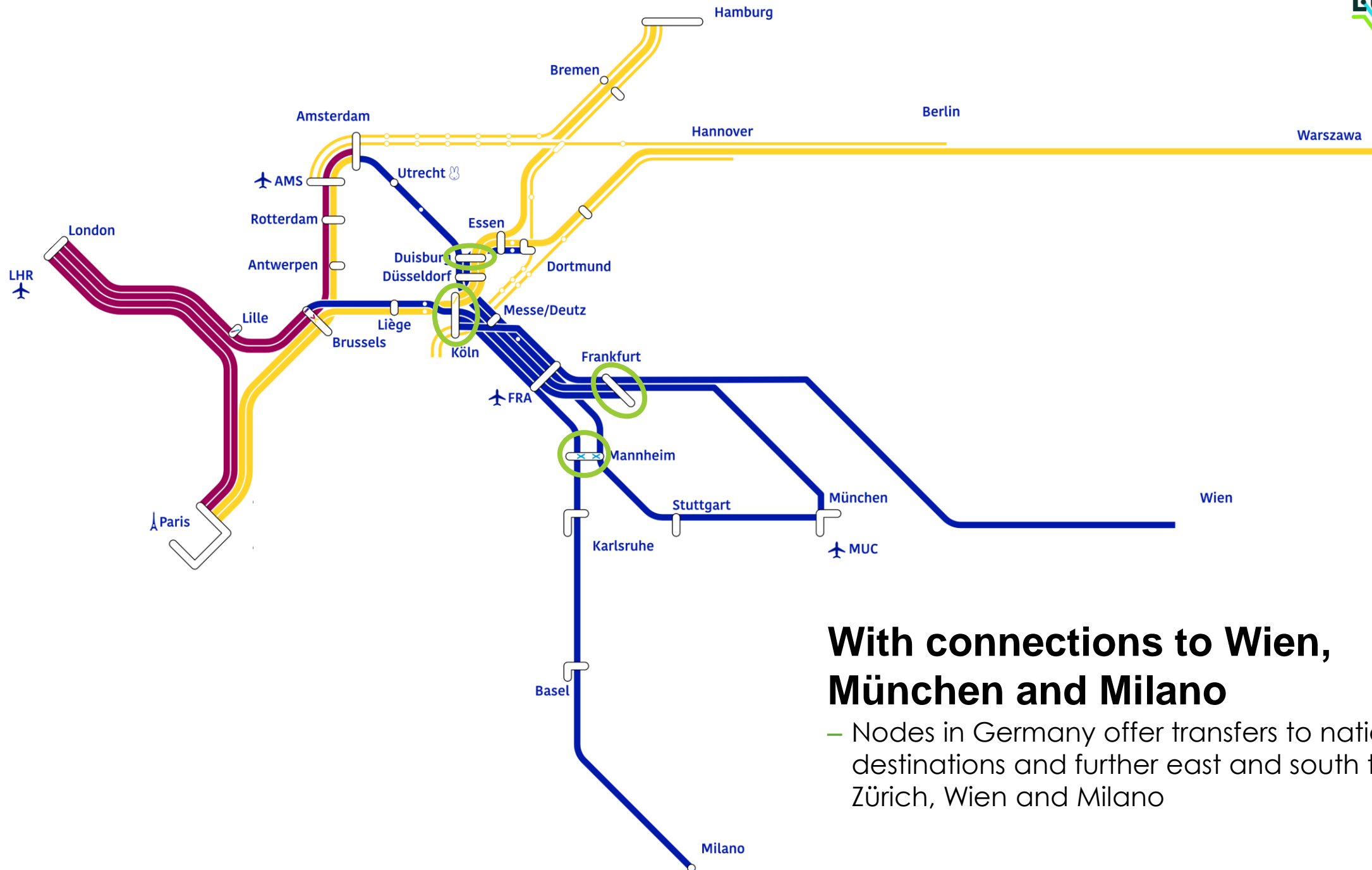


With connections to the United

- High frequency fast services to London and UK fit in with yellow services on mainland
- Hub Brussel for connection London – Köln, Frankfurt

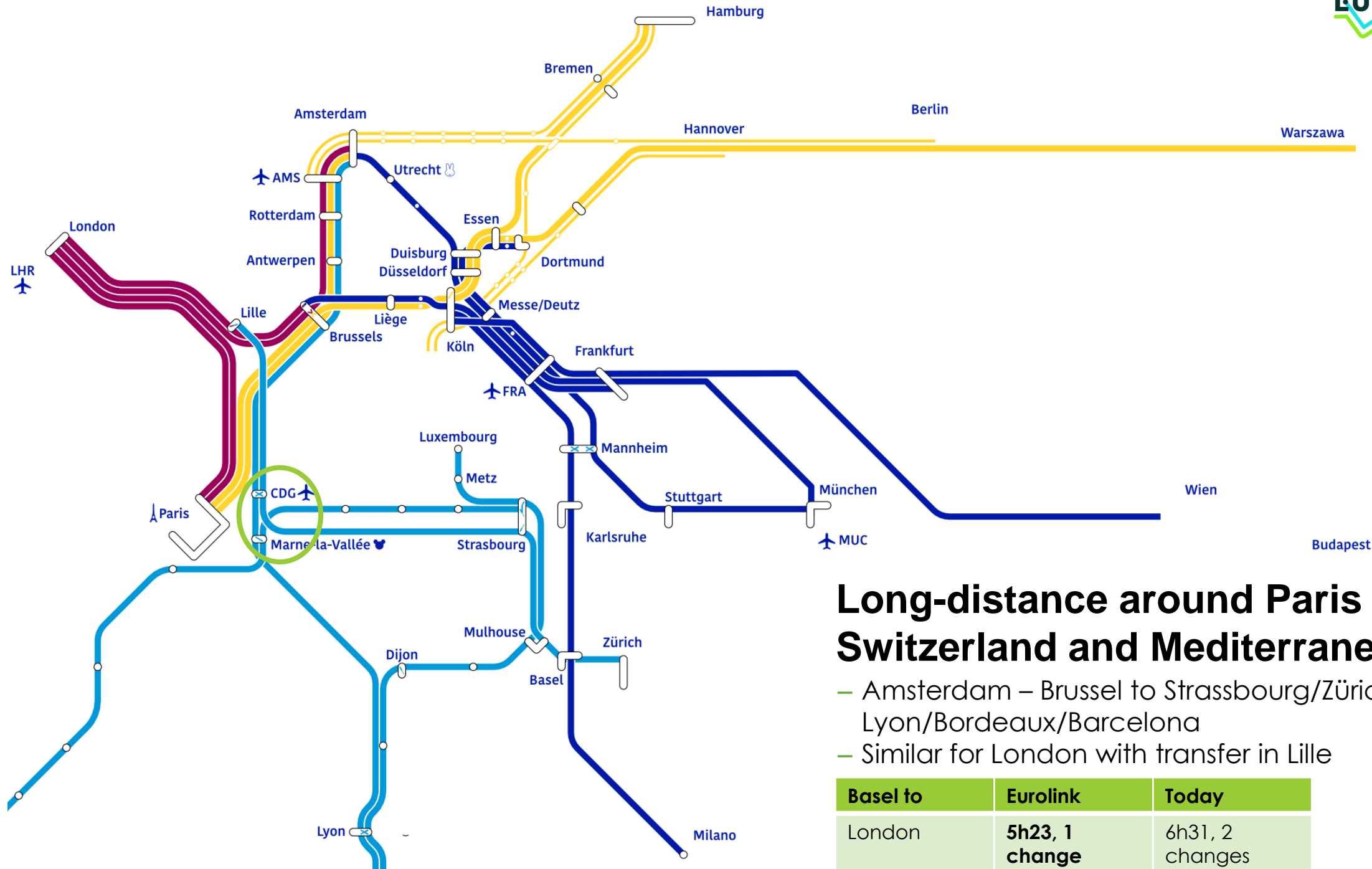
London to	Eurolink	Today
Paris	2h24	2h36
Brussel	1h54/2h00	2h00
Amsterdam	3h44	4h10*
Köln	4h24, 1 change	6h17, 1 change
* Frankfurt	5h32, 1 change	6h04, 1 change

Excl. 12 stop Lille



With connections to Wien, München and Milano

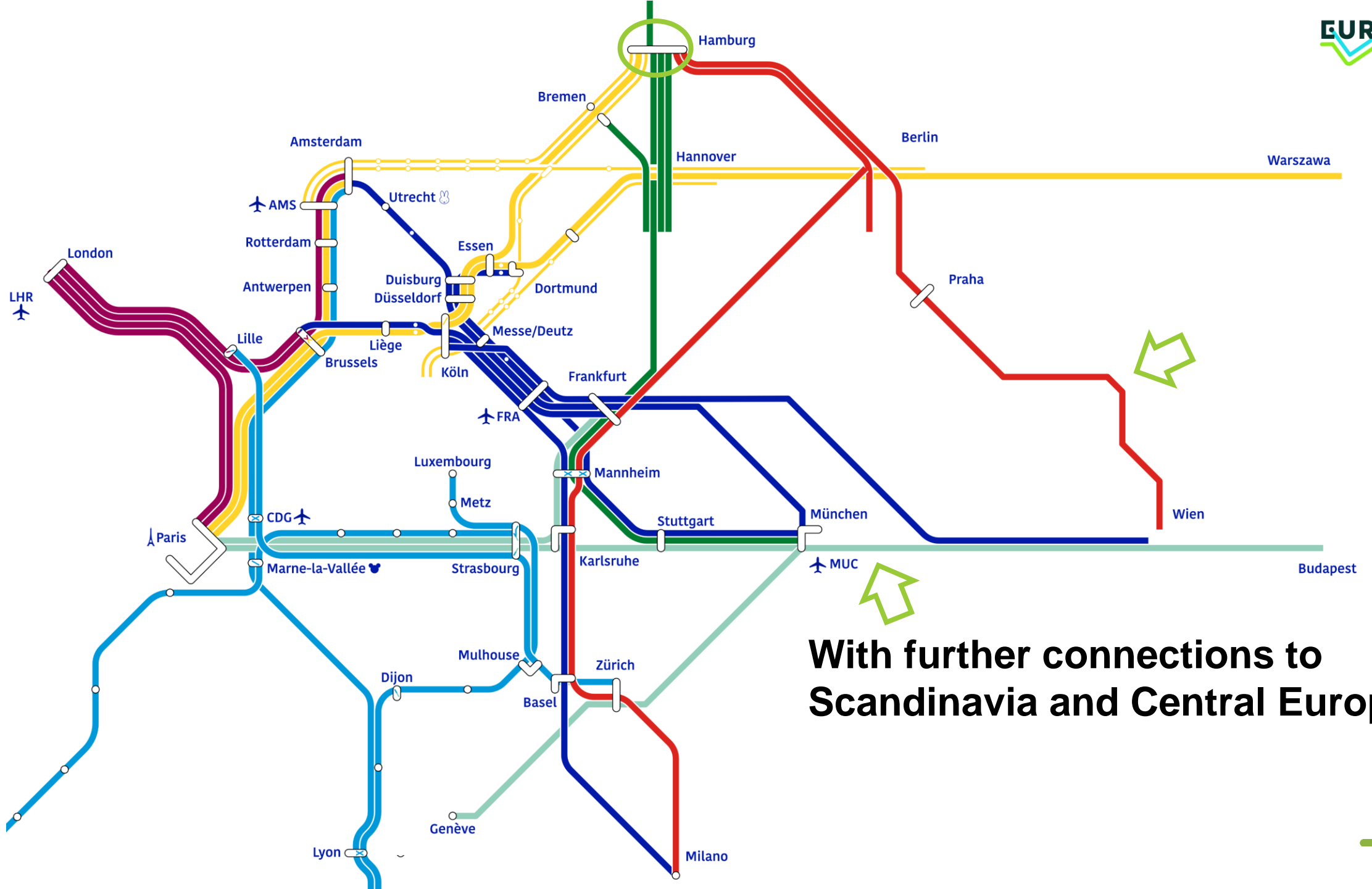
- Nodes in Germany offer transfers to national destinations and further east and south to Zürich, Wien and Milano



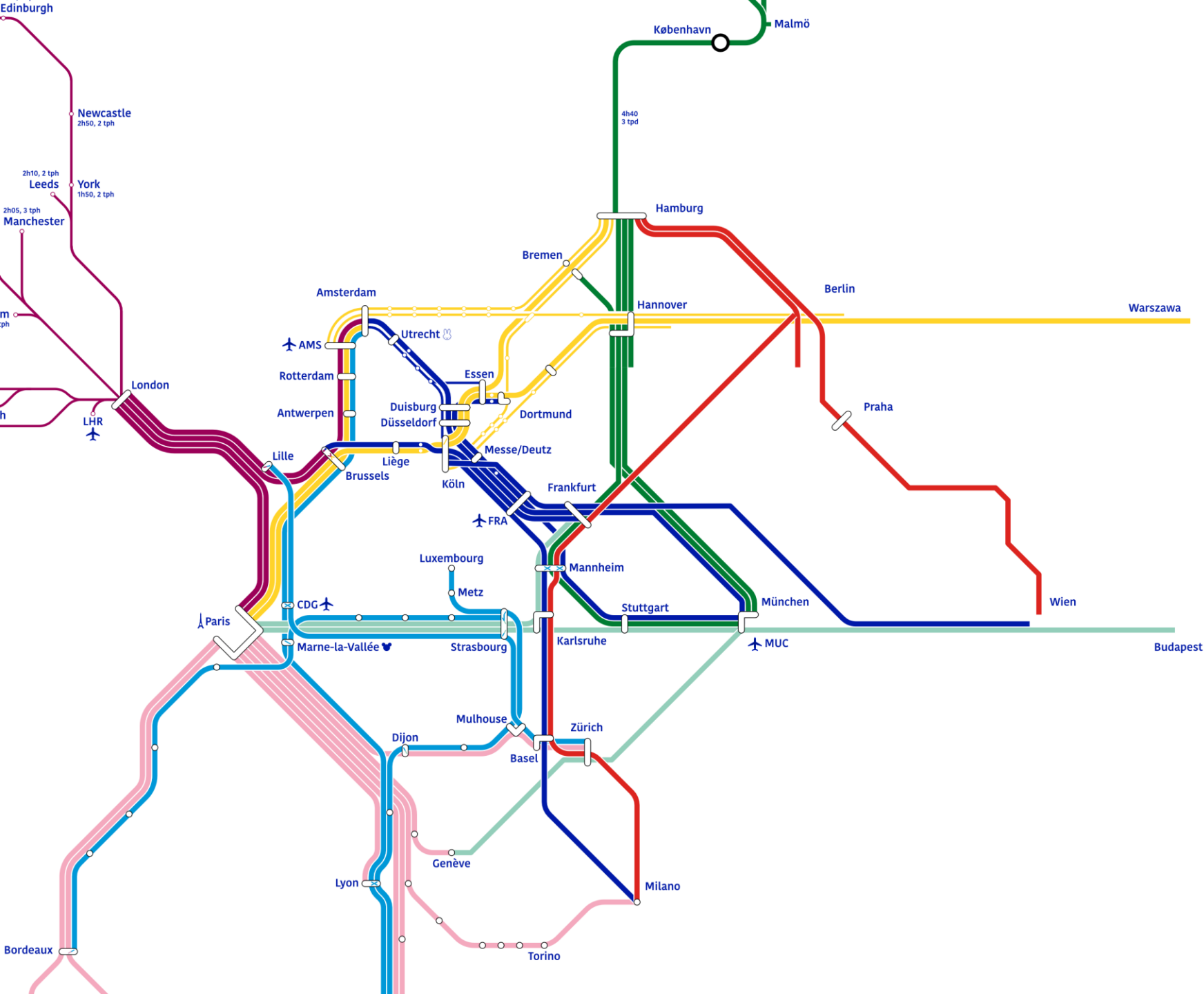
Long-distance around Paris to Switzerland and Mediterranean

- Amsterdam – Brussel to Strassbourg/Zürich or Lyon/Bordeaux/Barcelona
- Similar for London with transfer in Lille

Basel to	Eurolink	Today
London	5h23, 1 change	6h31, 2 changes



**With further connections to
Scandinavia and Central Europe**



Timetable design is on-going

- Adding new parts of Europe to the design
- Optimizing the 'core-area'
- Adding other types of rail traffic

By iteration we will learn more about the best possible network.

Today

**First timetable
concept for a high-
performance
international
passenger network**

1

Market Potential and Modal Shift

2

**Compatibility with National and
Freight traffic**

3

**Governments, Railway operators
and Stakeholders**

Next steps

- **Improved timetables**
- **5-10-20 years into future**
- **Opportunities, bottlenecks & choices (in logistics and infrastructure)**
- **Climate effect**

EuroLink forms a promising basis for further development

- EuroLink shows a **possible high-performance international network around 2030**, every hour. For short-, medium and long-distance international travel.
- Further step-by-step development of the international network for instance in **pilots and TimeTable Redesign**.
- New and better scenarios 5-10-20 years into the future.
- As partners in EuroLink we form a **network of experts** and can help in the interaction between operators, governmental parties and other stakeholders.

We'd be very interested in your thoughts and suggestions!

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