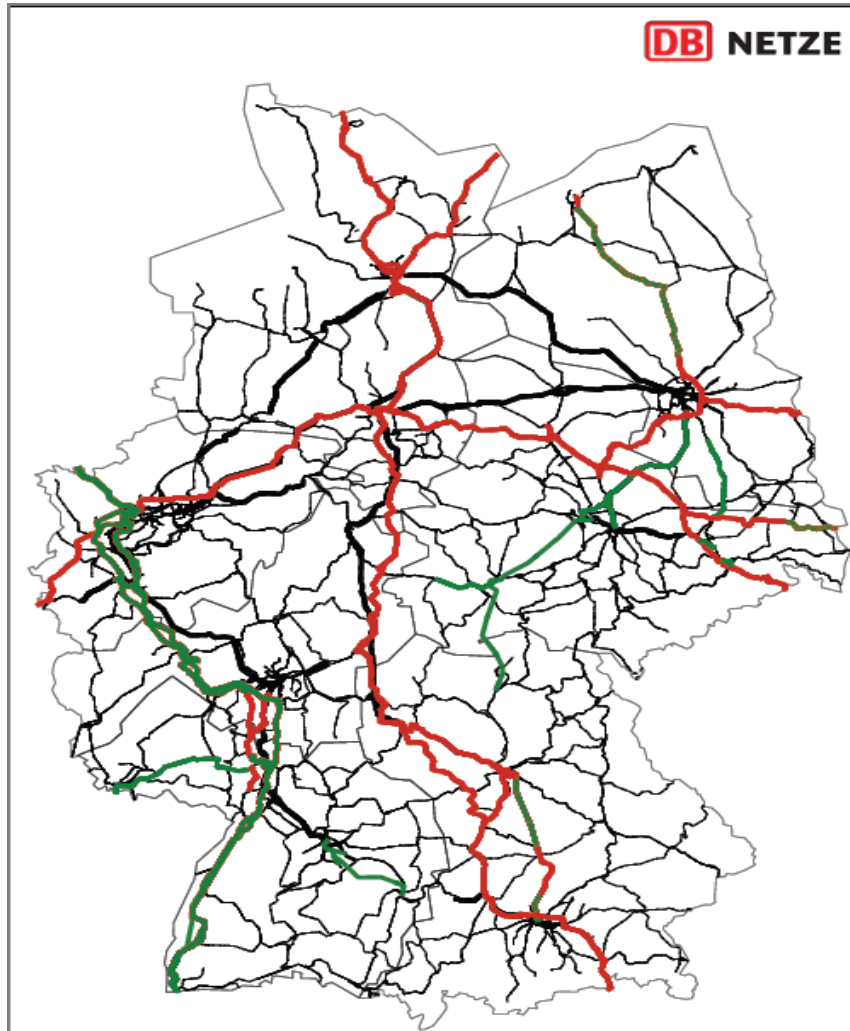




# ETCS Programme Management

## RailTech Europe Conference 2017

The current Projects undertaken by DB Netz AG cover approx. 2,500 km of double Track



### Current situation

- In the coming years approx. 2,500 km of track will be equipped with ETCS through current and planned projects, approx. 1,450 km thereof along ERTMS Corridor A by 2022
- According to current plans the **Class B Train Control System LZB** will be replaced with ETCS Level 2 by 2030 – in total around 2,500 km (financing open).
- **Furthermore**, there is an obligation to equip the **TEN network in Germany** with ETCS by 2050 (16,000 km - financing open).

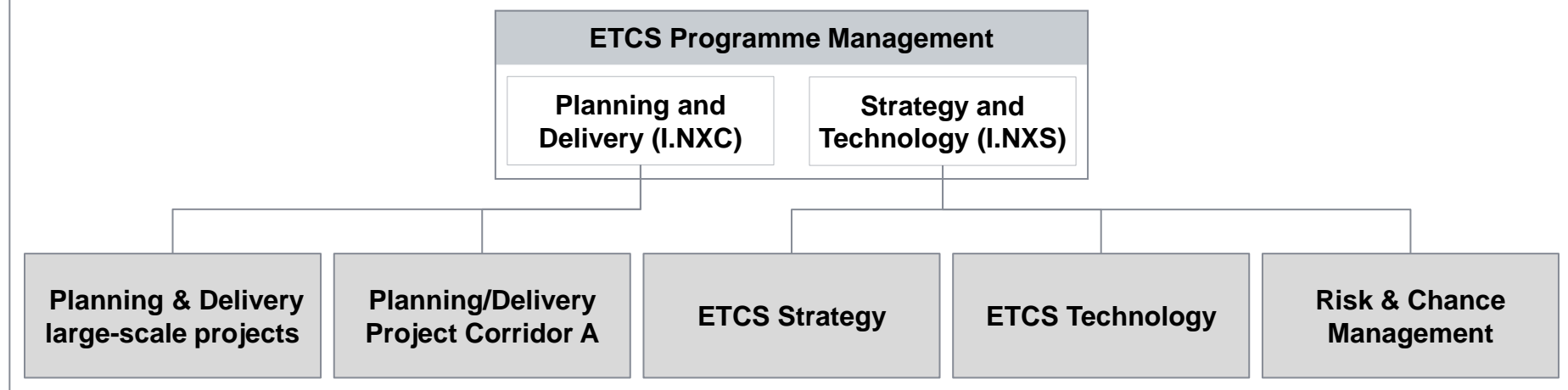
In October 2015 the ETCS Programme took over the leading  role of coordinating the several ETCS related activities inside DB Netz

## Overview ETCS programme management

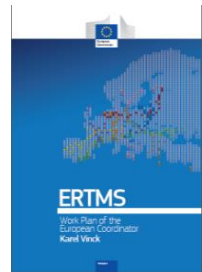
### Tasks

- Development of a medium- and long-term deployment strategy for ETCS in the network of DB Netz AG
- Coordination of all strategic and technological activities related to the ETCS implementation – one central ETCS programme management with the responsibility for
  - planning and delivery
  - strategy and technology
- The ETCS programme management team acts as the central contact point of DB Netz AG concerning all ETCS-related topics internally and externally

### Organizational Structure



# DB Netz AG appreciated the EU's Initiative to agree on a new European Deployment Plan



## Proposal for ERTMS work plan

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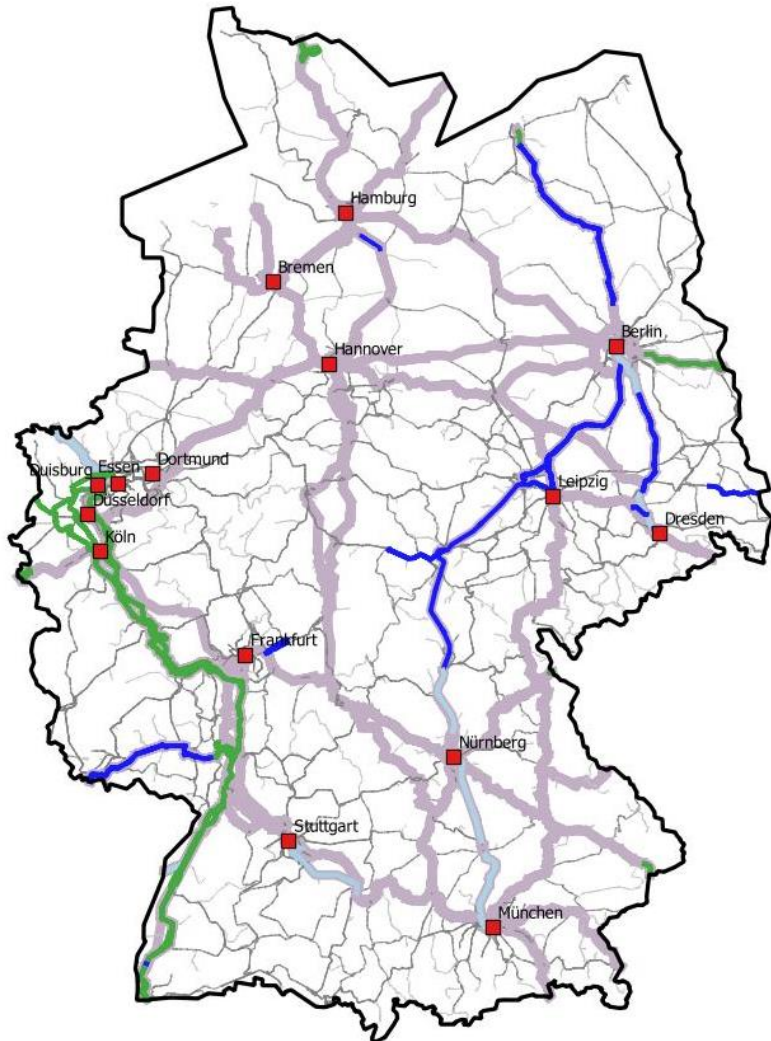
- **Goal:** Realistic & committed deployment plan
- **Principle:** “Users first”
- **Specification:** Focus on **stability**
- **Equipment in Germany:**
  1. Corridor A and cross-border sections
  2. TEN corridors
- **Cost reduction** through ERTMS

## Position of DB Netz AG

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- 📄 The goal of writing a realistic deployment plan is appreciated and fully supported
- 📄 The TOCs' concerns are focused on and are decisive for a new EDP
- 📄 The protection of investments requires stability in Baseline 3
- 📄 Approx. 2,500 km of ETCS equipment in current projects (incl. Corridor A); two-step approach is appreciated and prioritized according to a set of criteria
- 📄 With an increasing number of tracks to be equipped economies of scale shall be generated

# The new EDP was issued by the European Commission in January 2017 – Map shows German ETCS Deployment by 2023



## Scenario 2023

### ■ Map of German notification to European Commission

- Equipping of approx. 2,500 km
- Including 2,050 km on TEN corridors (estimated)

### ■ Funds for the financing of the projects in the federal budget available

- Corridor A is **funded**
- **First step** of cross-border sections is **funded** (planning and design, equipment transitions, ETCS, approx. 240 km)
- **Second step** of cross-border sections is **partially funded** (planning and design ETCS, approx. 800 km)

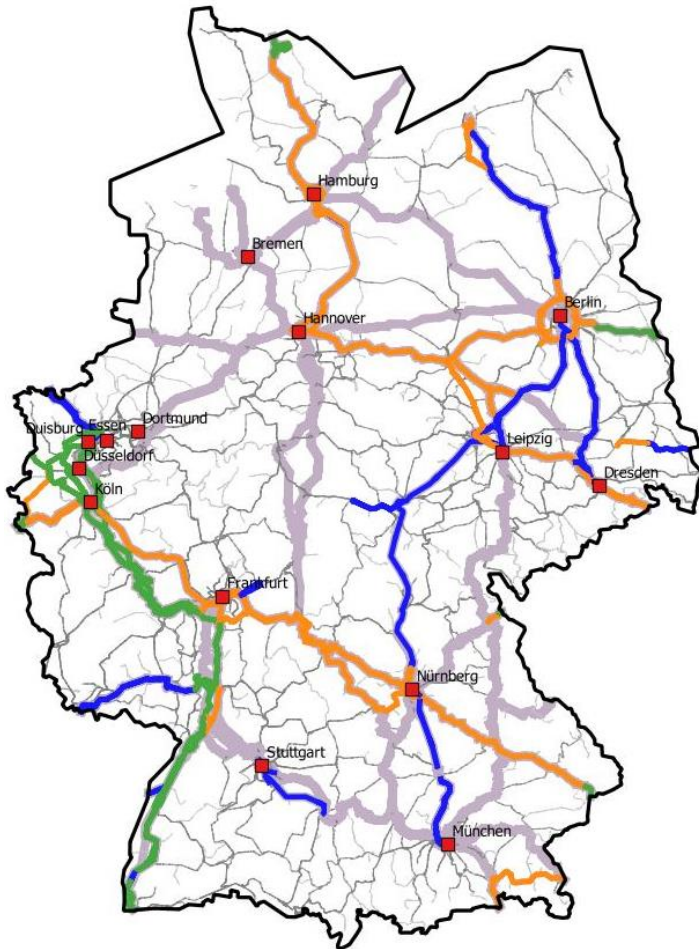
### ■ 2023 review is used for detailing the scenario in 2030

### ■ ETCS in addition to existing Class B systems

- **ETCS L1 LS and ETCS L2**
- **Baseline 3.4.0**

■ TEN core network corridors ■ EDP 1st stage & Corridor A ■ Requirements for plan projects and Rostock-Berlin

# Current Proposal for Scenario in 2030 – in Discussion with Ministry of Transport



Orange Lines proposed by 2030   Green Additional EDP projects  
Purple TEN core network corridors   Blue Ongoing projects

## EDP deployment strategy for 2030

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1. **Facilitating interoperability** – starting with border crossings
2. **Connecting existing ETCS areas**
3. **Creating ETCS links between TEN corridors**

## Next steps

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- Coordination of equipment sequences with **regional divisions** of DB Netz AG
- Clarification of funding with Ministry of Transport

# Rhine-Alpine Corridor is the first TEN Corridor in Germany to be equipped throughout with ETCS



## Existing projects along Corridor Rhine Alpine

- ABS 46/2 Emmerich – Oberhausen
- Project “Corridor A”
- Karlsruhe – Basel
- Basel node

## Key data of project “Corridor A” incl. Basel Node

- **Total length of 1,240 km** (tracks) in Germany to be equipped with ETCS
  - Approx. 840 km with ETCS Level 1 LS
  - Approx. 400 km with ETCS Level 2
- **Baseline 3 MR 1 SRS 3.4.0** (system version 2.0)

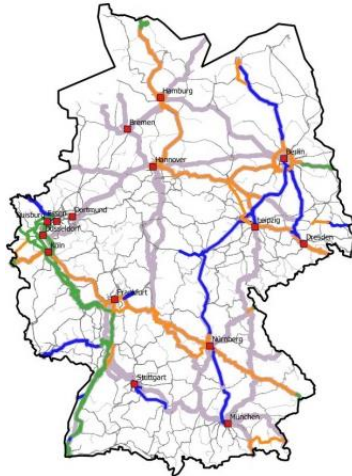
## Status of project “Corridor A”

- Preliminary design is completed
- Detailed design has been started
- Awarding has been started, framework contracts are in preparation

# DB Netz AG's ETCS Team is currently working on three strategic Directions

## 1 Current projects and EDP

European Deployment Plan, National Implementation Plan, Rhine-Alpine Corridor



Agreed with the federal government and reported to the EU

## 2 Rollout across the network

Integrated rollout of ETCS and digital interlockings



Feasibility study by Ministry of Transport starting in 2017

## 3 Automatic train operation

Integrated rail transport solutions



Strategic direction

Status



# Key Success Factors for Rollout have been defined – Ministry of Transport has tendered a Feasibility Study

## Key success factors and work packages



**Rollout strategy**



**Funding**



**Technical target concept**



**Process design**



**Strategy for equipping rolling stock**



**Supplier management**