

# MERIDIAN

Steering Committee Meeting in Ghent  
15<sup>th</sup> and 16<sup>th</sup> of March 2023

# WP3 C-ITS

## Task T3.02 DE\_AB –

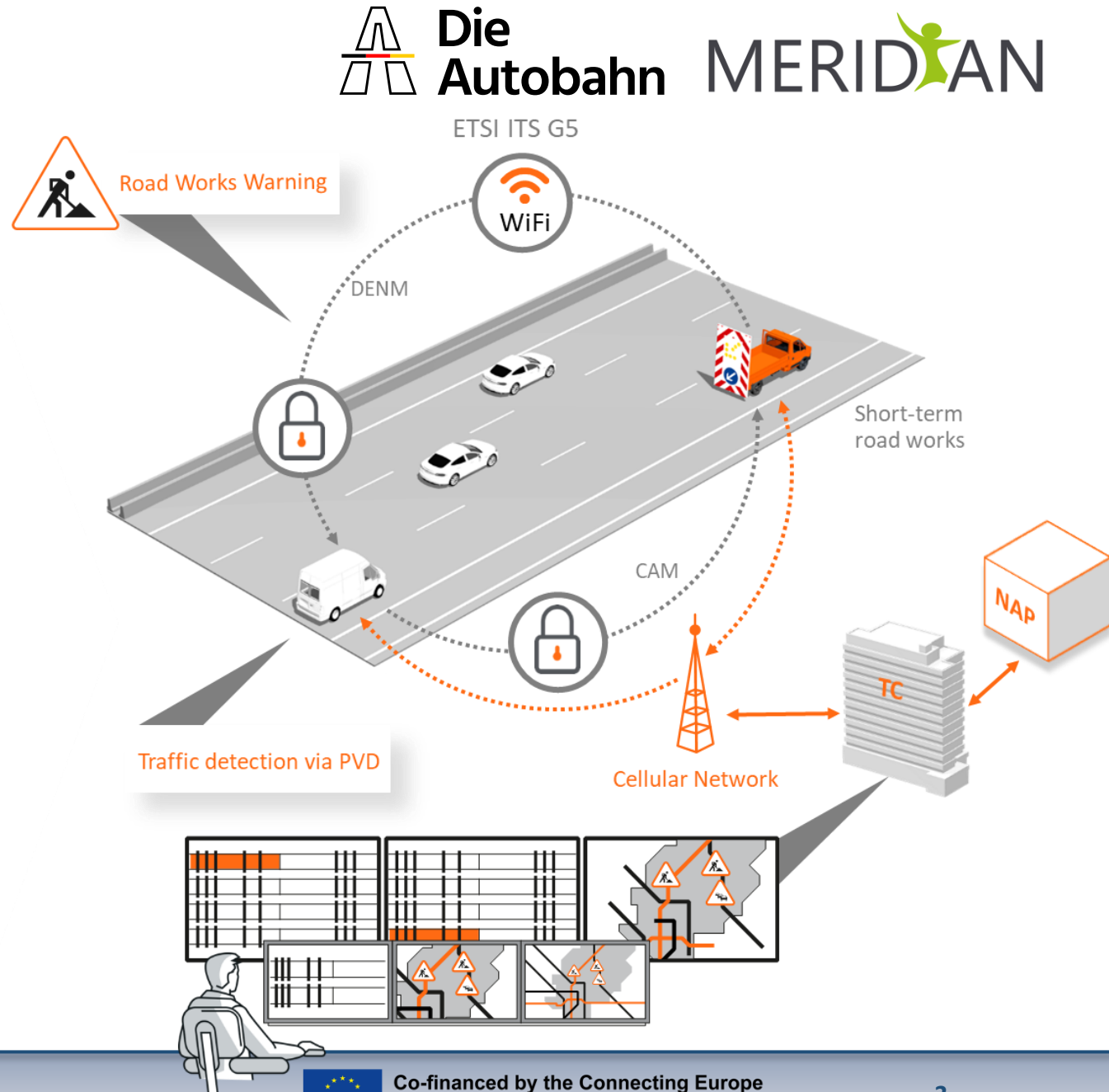
# Phase II: C-ITS Road works warning roll-out

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Die Autobahn GmbH des Bundes

# RWW – at a glance

First step towards connectivity between infrastructure and cars

- Mobile safety trailers at short-term roadworks are equipped with a combined application and communication unit for vehicle-infrastructure communication, so called ITS Roadside units, via ETSI ITS G5.
- Vehicles approaching short-term roadworks are warned or informed directly by information via in-vehicle display systems.
- The exact position of the safety trailer is also transmitted to the traffic centre (TC) via an integrated GPS unit, in order to be able to react more quickly in the event of traffic jams, for example.
- Hybrid communication approach: Information is also made available to third parties/other service providers via Cellular Communication and the national access point (NAP).
- Vehicles send their status to our IRS for better possibilities in traffic management.



# RWW – Why using it?

- If a vehicle is approaching a daily roadworks site, the driver is informed of this **even before the roadworks site comes into view.**
- This enables road users to drive **more safely and with greater foresight**, as they are informed in good time and in real time about the current traffic situation and **possible dangerous situations.**
- By warning road users at RWW on motorways at an early stage, **the risk of accidents**, including the associated personal injury and material damage, is **significantly reduced.**
- Traffic control centres receive **precise information on the traffic situation** directly from the vehicles.
- As a result, the traffic flow on the motorways can be **controlled even more efficiently and quickly.** This ensures **better utilisation** of the motorway network with **less congestion and falling CO2 emissions.**





# C-ITS Event 28.10.2023

[C-ITS Imagefilm | Autobahn GmbH – YouTube](#)

[Autobahn GmbH - C-ITS Event Video – YouTube](#)

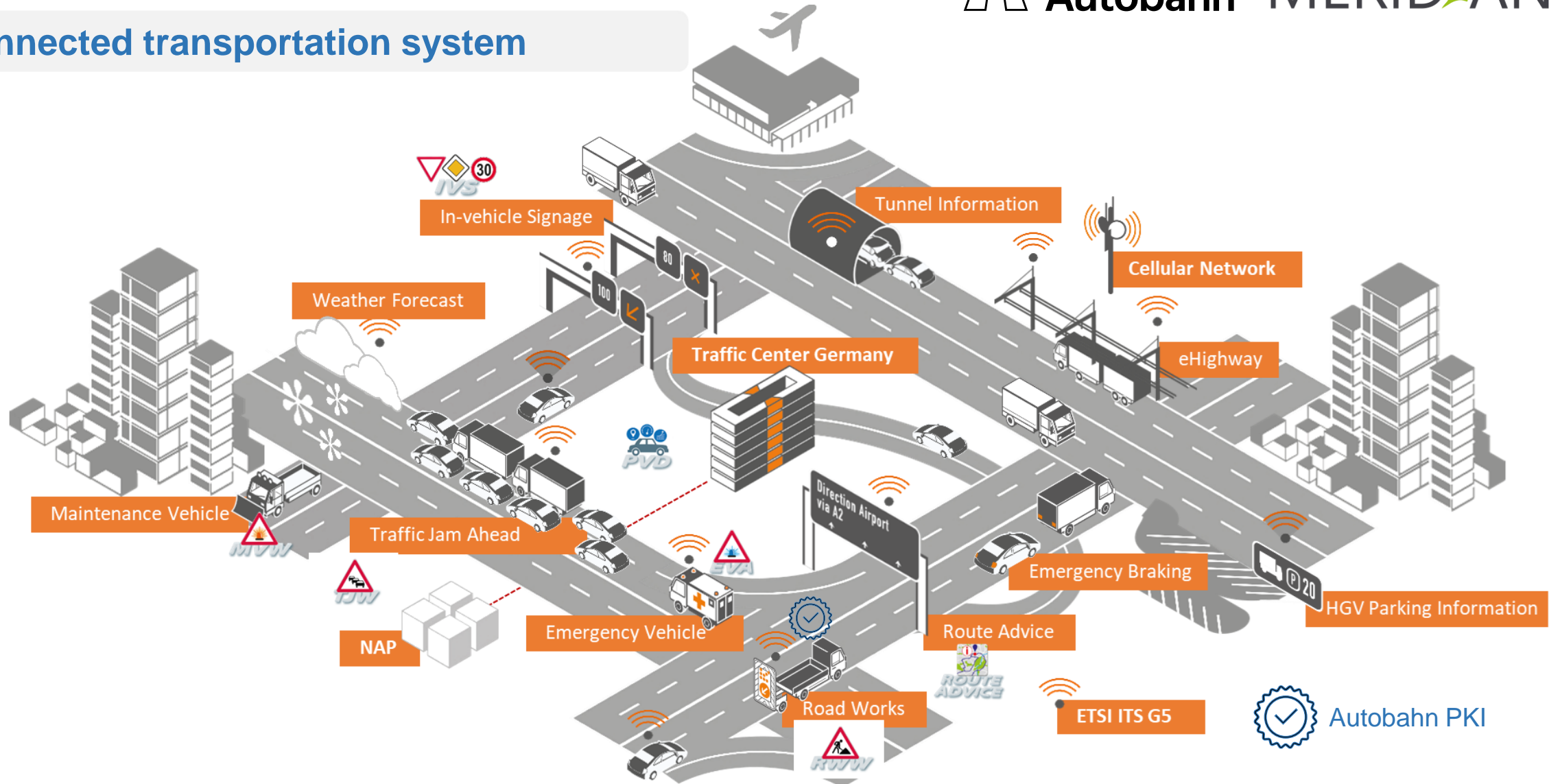
[Künftig noch mehr Sicherheit an Tagesbaustellen | Aktuelles | Die Autobahn GmbH des Bundes](#)

[Neues Warnsystem auf Autobahnen - ZDFheute](#)



# Vision of C-ITS

## A connected transportation system



# Traffic Management Strategy

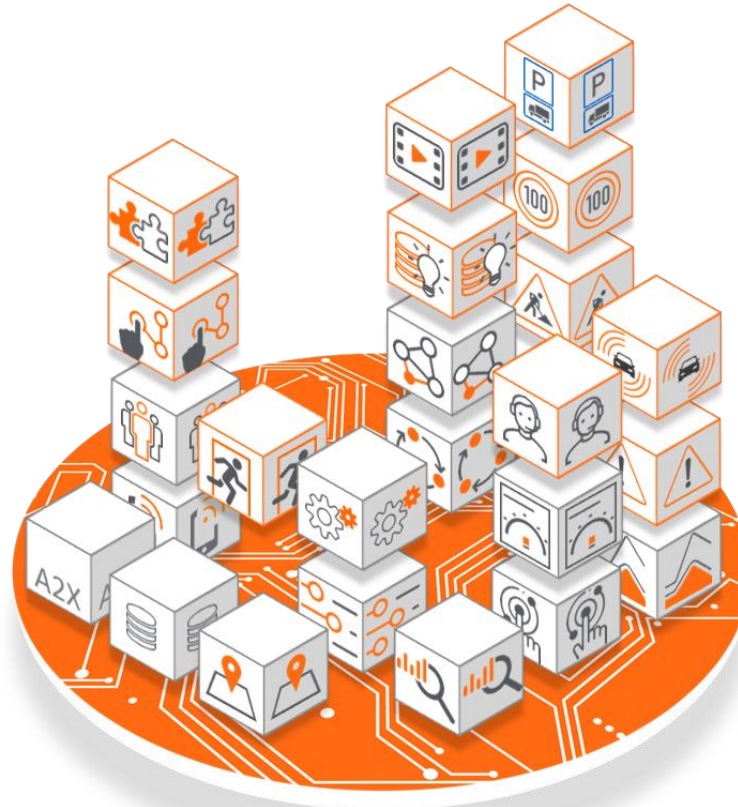
System platform with a wide range of applications

Basic Applications in future

Restructured subcentres  
Tunnel Management interface  
Interface Operational Service

current Basic Applications

Geoservice  
Offline database  
User management  
A2X  
Telematics platform



Specialised Applications in future

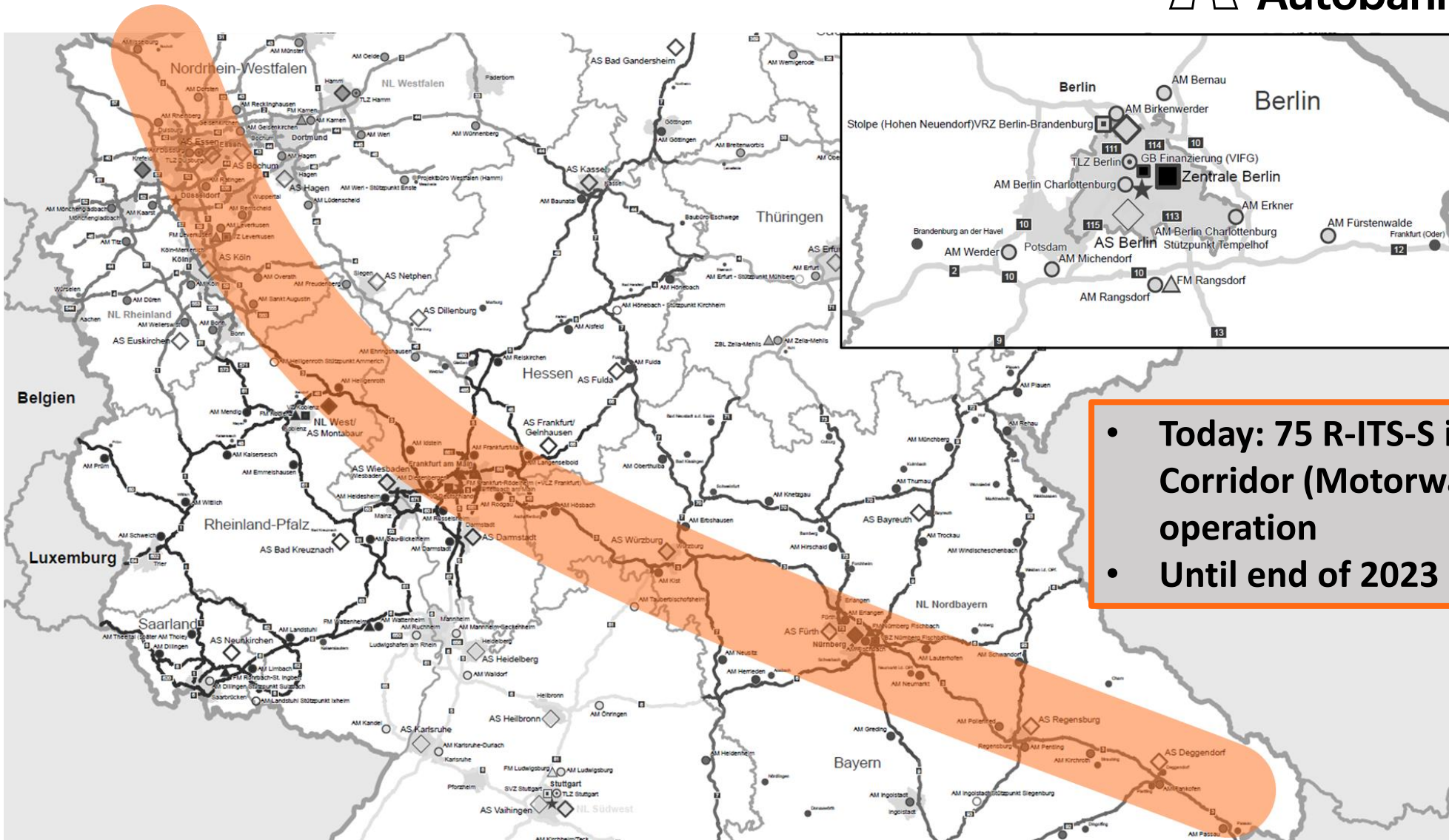
Knowledge database  
Site management  
Event management  
Incident management  
OperatorView  
Truck Parking Management  
Video Management

current Specialised Applications

Workflow Management  
Operations Management  
Corridor Management  
**Cooperative Systems**  
Traffic Situation Analysis  
Dynamic network control Application  
Time variation curve workstation  
Traffic Situation Germany/Dashboard



# RWW – Roll-out



- Today: 75 R-ITS-S installed on C-ITS Corridor (Motorway A3) in regular operation
- Until end of 2023 nationwide



# Change of ecosystem traffic

What will the future bring?

Virtualisation of roadside infrastructure



Bring dynamic data from the road directly into cars



We need to think about...

New stakeholders Interoperability

IT Security Adaption of operational as well as standardisation and harmonisation processes and data.

Data privacy

Legal basis

New services require new approaches!

What is still to come?



New message types



Functional safety



HD Maps



Car as a sensor

...

For exchanging highly dynamic information between infrastructure and vehicles

# Guidelines for future activities

- Individual ITS actions should generate benefits in themselves
- Establishment of suitable interfaces on all organisational and technical levels should be taken into account right from the conception phase
- Consistent implementation is the indispensable prerequisite for the later integration of subsystems in a greater comprehensive intelligent transportation system

**Talk!**

Understand the needs of different stakeholders and bring them together.

We need to

- Define data and processes for exchanging highly dynamic information between infrastructure and vehicles
- Talk about functional safety
- Actively coordinate actions with regard to the overarching ITS strategies and standardisation as well as harmonisation processes



Cooperation



Development



Testing



Evaluation



Implementation