

The road ahead: Physical and digital infrastructure([link](#))

Enablers

- Harmonized and formal descriptions of HAD use cases and PDI according applications
- Developing EU standards for digital infrastructure description is very important, considering the investment required.
- Investigation of digital infrastructure capabilities and digital representation of infrastructure (static/dynamic)
- Simulations and assessment of PDI supported automation effects on traffic efficiency and safety, and its effects on new traffic management concepts
- Definition/Specification of smart road elements (landmarks, radio beacons, augmented GNSS satellites etc.), and harmonization of data specifications for each map layer (static, semi static, semi dynamic, dynamic).
- Maintenance: Development of (automated) PDI-quality on road network in terms of maintenance of road infrastructure (regarding ISAD levels)



Challenges

- Agreement of all relevant Stakeholders on use cases, applications and therefore requirements (e.g. quality, coverage, ...) towards PDI
- Uncertainty on impact of applications
- Uncertainty on future technical developments (e.g. some elements of a digital infrastructure may not be needed anymore in 10 years due to improvements of vehicle sensors and algorithms => what are the elements which will be needed for sure?)
- Uncertainty on quality provided by PDI elements (will depend on information quality, coverage, costs of implementation, etc.)
- Uncertainty on the impact of PDI elements and therefore on the usefulness of investments (=> impact can in most cases be only estimated for applications but not for the PDI elements itself)

Objective

- PDI facilitates a safer and more efficient transport system by
 - Supporting automated and connected vehicles
- Enabling new services
- Enabling new way of traffic management

Vehicle technology

New services

Blocking challenge

- Missing agreement on applications and requirements
- Uncertainty on impact

Vehicle technology

Impact assessment

Impact assessment

Vehicle technology

