

# 1 Final publishable summary

## 1.1 Executive summary

SPIDER PLUS was a research and development project co-funded by the European Union in the scope of the Seventh Framework Programme (12/2012 – 5/2015). The project aimed at developing a passenger and freight mobility vision for 2050 encompassing seamless transportation where electrified rail plays a central role. Within the “White Paper on Transport” the European Commission stated sustainable mobility as the overall target for the prospective transport policy. That means a massive shift of traffic from road to rail. In the long-term, a rail market share of about 50% is the set goal for both long distance passenger service and freight transport over 300 km.

During the project, the interdisciplinary team was supported by a network of expertise. The results are oriented on four guiding principles that will put electrified rail at the centre of sustainable mobility:

- Industrialisation of production
- Offer driven business models
- Seamless and convenient services
- Co-modality and sustainability

Based on the as-is situation and internal/external drivers of change the vision components have been elaborated. Main technological tools and solutions have been identified and assessed in terms of impact and costs. The SPIDER PLUS Roadmap is the final part of the project and paves the way to the desired future. It describes the required infrastructure development as well as business models and funding schemes. The integration of national systems into European grid and the co-modality implementation in user friendly mobility environment outline the future network and access points for rail passenger and rail freight services. Within the Roadmap, special emphasis for controlling purpose was given to the intermediate step in 2030 to indicate the interim goal which is needed to reach a European society overwhelmingly served by electrified rail in 2050.

All SPIDER PLUS recommendations are summarised in the interactive Solutions Guide Book which contains the 5 action fields:

- Rolling Stock
- Technology
- Investments
- Governance
- Market Uptake

The Guide Book itself focused on the content and the involved actors. The Decision Support Tool as second part has been implemented as a dynamic and interactive Roadmap which also takes temporal aspects into account. Essential actions and steps have been joined in a common project management software environment. Finally, this tool provides information about required steps, temporal sequences and dependencies between various actions.

Decision makers in politics, industry and business are the main target group for the use of the Decision Support Tool, which allows the creation of scenarios that show even far reaching effects of possible delays. Moreover it illustrates the processes that can be done in parallel and the ones that have to be done in sequence. The indicated time slots of the various steps to be done are the framework for the fulfilment of the SPIDER PLUS vision until 2050.

The key message of SPIDER PLUS is that the vision of a European society overwhelmingly served by electrified rail until 2050 is achievable if all stakeholders act targeted, jointly and in the present time.