The European Joint Undertaking for Rail Research SHIFT²RAIL is the public-private research initiative at EU level for system-wide innovation in the rail sector. It was initially launched by UNIFE and its members. 920 million euros have been allocated over six years for SHIFT²RAIL, 450 million euros coming from the EU’s Horizon 2020 framework for research and innovation and the remainder coming from the broader rail sector. Unprecedented in its size and scope, this initiative represents a tripling of funding for rail research from the EU. The overall mission of SHIFT²RAIL is straightforward to make rail transport more attractive to end-users.

When the initiative was prepared, it was widely accepted that the benefits of rail travel to the broader transportation system (lower environmental impact, reduction of congestion) were not fully realised as the level of technology didn’t make the mode attractive enough to end-users.

Identified three targets to achieve this goal: doubling capacity, increasing reliability, and reducing life cycle cost of the European rail system – all of which would make rail more attractive as a mode; hence encouraging a societal “shift to rail”. To achieve these three targets, the technical programme identified five main areas of innovation in which to invest significant resources, in order to develop and test products close to the market in the areas of rolling stock, signalling, infrastructure, IT systems, and rail freight capabilities. Moreover, the research to be carried out will include significant testing that ensures results that can immediately be taken to market and thus directly improve the existing rail system.

Over 130 companies from the rail sector have participated in the preparatory work up to this point, including manufacturers, operators, infrastructure managers, small and medium enterprises (SMEs), research institutions and academia. SHIFT²RAIL has come a long way since it was first conceived in 2010, and was formally adopted by the EU Council of Ministers in June, after having been formally proposed by the Commission in December 2013 and given a positive opinion in the Transport Council and European Parliament in March and April 2014.

For the EU, SHIFT²RAIL will help the sector deliver the modal shift that they have envisioned in their 2011 White Paper on Transport. For the industry, the initiative means the necessary R&D resources and coordination to deliver the rail products that will allow the EU rail supply industry to continue to lead the world market against fierce competition from abroad – where countries are also investing heavily in research. At the end of the day, SHIFT²RAIL will benefit Europe as a whole, as it will make rail travel much better for the end user – thus enabling more effective, reliable, and environmentally friendly transport.