



Das Vierte Eisenbahnpaket und die Innovationsinitiative Shift-2-Rail

ÖVG-Seminar

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Single European Rail Area

Herausforderungen für den Bahnsektor

- **Qualität:**
 - Verbesserung von Zuverlässigkeit und Pünktlichkeit !
- **Kosten:**
 - Verbesserung der Kostenwettbewerbsfähigkeit durch bessere Ressourcenausnutzung und Skaleneffekte
- **Service:**
 - Realisierung neuer Leistungsmerkmale mit Kundennutzen, zur Erschliessung neuer Marktsegmente für die Bahn
- **Politik und Gesellschaft:**
 - Sicherung der gesellschaftlichen und politischen Akzeptanz des Verkehrsträgers Schiene



... und eine **Europäische** Herausforderung für den Bahnsektor:

- Fragmentarisierung der **Bahnmärkte** entlang nationaler Grenzen hinsichtlich gesetzlicher Rahmenbedingungen, Verfahren und Mangel an Interoperabilität

→ ... in einem Europäischen **Verkehrsmarkt** in dem die Kunden grenzüberschreitende Angebote und Lösungen erwarten !

→ **Schaffung eines Einheitlichen Europäischen Eisenbahnraums ist erforderlich !**



The 4th Railway Package

- Completing the Single European Rail Area



The Three Pillars of the Fourth Package

- 1. To open domestic passenger markets*
- 2. To create better structures and governance for infrastructure managers*
- 3. To establish consistent approvals and certification procedures for rail interoperability and safety*



First Pillar

Opening of Domestic Passenger Markets

Domestic Rail Passenger Market Issues

- **Inadequate service quality (punctuality, comfort, cleanliness, etc.)**
- **Limited passenger choice**
- **Inefficient use of public funds (for infrastructure and PSO)**

Due to

- **Low degree of intra-rail competition and lack of competitive pressure for incumbents**
- **Inter-modal competition limited to specific market segments**



Domestic Rail Passenger Market Proposals

Open Access

- **Open access for all EU operators on all domestic passenger markets**
- **Subject to economic equilibrium test to protect public services where necessary**

PSC Award

- **Compulsory competitive tendering for public service contracts of a certain size**
- **Clear cut-off date on existing directly awarded contracts**



Second Pillar

A Better Governance for Infrastructure



A better governance for infrastructure

Efficiency challenge:

- **Infrastructure manager as natural monopolies may lack responsiveness to customers' needs**
- **Insufficient incentives for infrastructure managers to reduce costs and improve services**
- **Lack of cross-border co-operation**

Equal access challenge:

- **Conflict of interest of integrated Ims**
- **Discrimination opportunities**
- **Lack of financial transparency/cross - subsidisation**

Governance Proposals

Efficiency measures:

- **All infrastructure management functions in the same hands**
- **Coordination body for infrastructure managers and users**
- **Establish EU network of IM's for international coordination**

Governance Proposals

Equal access measures:

- **Institutional separation as the general rule to remove conflicts of interest**
- **Possibility to maintain existing integrated structure under strict independence rules**



Third Pillar

Approvals and certification procedures (Technical pillar)

Main problems today

Long and costly procedures & access barriers, caused by:

- ✓ Ineffective functioning of national railway institutions
- ✓ Discrimination against new entrants
- ✓ Patchwork of national regulatory regimes and rules
- ✓ Divergent interpretations of EU legislation by national authorities

Targets

- ✓ to achieve, by 2025, the removal of all unnecessary national rules
- ✓ to achieve, by 2025, a 20% reduction in the time to market for new Railway Undertakings
- ✓ to achieve, by 2025, a 20% reduction in the cost and duration of the authorisation of rolling stock

New powers for ERA

- issuing single safety certificates and vehicle authorisations (with a right to charge the applicants for issuing them)
- strengthened control by ERA over the functioning of NSAs and NoBos (right to audit and inspections)
- strengthened role in the process of removal of unnecessary national rules



Shift-2-Rail

The Innovation Pillar to the 4th Railway Package

**- Promoting the development of
know-how in the rail sector**

Fourth Railway Package

→ Improve **competitiveness** of rail
→ Spend **public money** more efficiently

Remove
administrative and
technical
barriers

Open
domestic rail
passenger
transport to
competition

Better
governance
of rail
infrastructure

Innovation

**Innovation
pillar of the
Single
European
Railway Area**



Horizon 2020 Partnerships – Rationale

- Solve **EU societal challenges** together with industry and strongly commit industry to long-term joint objectives;
- Facilitate **joint vision development** and prioritisation of R&I in line with Europe 2020 objectives and sector needs;
- **Build critical mass**, actively involving a broad set of partners, to ensure the scale and scope of investment required for a step change in the EU rail system;
- Ensure **strong leverage** of EU funds;
- **Mitigate risks** linked to innovation, through improved risk-sharing, IPR protection and closer-to-market activities.

Rail R&I challenges

- **Fragmentation of funding for R&I** due to diversity of national programmes and operating frameworks
- **Lack of a system-wide approach** due to limited or uncoordinated participation of actors from the full rail value chain and complexity of interfaces between rail sub-systems
- **Limited market uptake of innovations** due to strong product customisation, low profitability, capital-intensity of investments, long product lifecycles, and long and costly authorisation procedures
- **Technical know-how in decline** with 30% of sector workforce retiring within next 10 years



Rail R&I – Need for EU intervention

- Focus research efforts on **societal challenges** and align them with the key EU policy objectives of completing the **Single European Railway Area** and supporting the **competitiveness** of the rail sector as a whole
- Improve **market uptake** of innovations by closing the gap in the innovation chain and supporting close-to-market projects that meet **rail sector's needs**
- Ensure **coordination** between all actors in the rail sector and a **system-wide approach** to innovation in rail



Specific objectives

- **Develop, integrate, demonstrate and validate innovative technologies and solutions that contribute to:**
 - ✓ **reduce life-cycle costs** of the railway transport system
 - ✓ **increase capacity** of the railway transport system
 - ✓ **increase reliability and punctuality** of rail services
 - ✓ **a more attractive service profile**, providing users with an integrated end-to-end solution for their transport needs
 - ✓ **remove remaining technical obstacles to interoperability and efficiency**
 - ✓ **reduce negative externalities** such as noise, vibrations, emissions and other environmental impacts



Priority areas

Activities to focus around **five "Innovation Programmes"**:

- I. **New generation of high-quality, reliable rolling stock that substantially reduces the cost of rail services, drastically improves the quality of rail services and facilitates the use of trains throughout various Member States;**
- II. **Advanced traffic management and control systems, beyond signalling, building on current ERTMS, to optimise capacity, reliability and minimise life-cycle cost;**
- III. **New railway infrastructure system that will radically improve capacity and performance and reduce costs related to development, maintenance and renewals;**



Priority areas (cont.)

- IV. Innovative **IT solutions** and services to make railway services more attractive;
- V. Sustainable and attractive **freight solutions**, helping rail to enter into new market segments and become an integrated part of advanced logistic solutions.

→ **Horizontal activity:**

Standardisation and harmonisation !



The role of technical demonstrators

- Close the gap in the innovation chain (from **ideas to market**)
- Support market **uptake and impact** by enabling the testing of innovative solutions under real-world conditions
- Ensure **strong involvement** of all stakeholders thanks to collaborative nature of demonstrators
- Strengthen the **European dimension** with cross-border demonstrators
- **Quantify** the impact of the introduction of each new technology and of different combinations of technologies
- Provide increased **visibility** and generate interest in the rail industry to attract top graduates from across Europe



Key principles

Strong leverage and firm commitment

- **Stable funding framework:**
 - **EU contribution of maximum EUR 450 million from H2020, with possibility of additional funds from other Union instruments, such as the Connecting Europe Facility**
 - **EU contribution conditional to rail industry contribution of at least EUR 470 million**
- **Members of the Joint Undertaking to commit for the full duration of the programme**



Key principle Openness and stakeholder involvement

- **Balanced participation of all relevant actors thanks to a three-tier system:**
 - **Identification of a core group of Founding Members**, including the largest private and public players, to secure substantial industry co-funding (EUR 270 million) from the outset (with access to **up to 40%** of Union contribution)
 - **Selection of Associated Members** in a second stage to open up membership to a broad range of actors (with access to **up to 30%** of Union contribution)
 - **Allocation of at least 30%** of the Union contribution through **fully open calls**



Key principle Openness and stakeholder involvement

- ***Eight Founding Members***

Consultative process with hundreds of stakeholders from EU28, led by UNIFE, based on Commission criteria:

- Financially sound **single legal entities** with headquarter (or HQ of rail division) in EU Member State
- Individual own financial contribution of at least **EUR 30 million** for the full duration of Shift2Rail

6 rail equipment manufacturers (Alstom, Ansaldo STS, Bombardier, Siemens, Thales, CAF) and **2 infrastructure managers** (Trafikverket, Network Rail)

- Automatic representation in the **Governing Board**



Key principle Openness and stakeholder involvement

- **Associated Members selected via open call**
 - Can be a **grouping or consortium** of legal entities;
 - **Individual own financial contribution** of at least 2.5% of the budget of the Innovation Programme in which it participates (~ €2 to €6 million depending on the IP);
 - **Maximum 70 Associated Members** based on available budget, although **closer to 35 expected**;
 - Participation of **SMEs** and actors from the **entire rail value chain** encouraged;
 - At least one Associated Member per Innovation Programme represented in the **Governing Board**.



Key principle Openness and stakeholder involvement

- **Entities can participate via 4 different mechanisms:**
 - as an **associated member** (individually or consortium);
 - as a **subcontractor**, consultant or other arrangements;
 - through the **fully open calls**;
 - through **dedicated working groups**.
- **Horizon 2020 rules to apply, i.e. minimum 20% of Union budget going to SMEs:**
 - → **€90 million to go to SMEs over 7 years** (In FP7, approx. €22 million for SMEs, out of a total of €155 million)
 - **Subject to regular quantitative and qualitative assessments**

Mehr Information:

- **Besuchen Sie DG MOVE's Webseite:**
<http://ec.europa.eu/transport/rail>
- **Oder kontaktieren Sie:**
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**Vielen Dank für Ihre
Aufmerksamkeit !**

