ROLL2RAIL

New Dependable Rolling Stock for a More Sustainable, Intelligent and Comfortable Rail Transport in Europe

Funding: European (Horizon 2020)
Duration: May 2015 - Oct 2017
Status: Complete
Total project cost: €16,000,000
EU contribution: €16,000,000

Call for proposal: H2020-MG-2014_TwoStages
CORDIS RCN: 193368

Objectives:

The ROLL2RAIL project aims to develop key technologies and to remove already identified blocking points for radical innovation in the field of railway vehicles, as part of a longer term strategy to revolutionise the rolling stock for the future.

The high level objectives of the work are to pave the way to:

- Increase the capacity of the railway system and bring flexibility to adapt capacity to demand
- Increase availability, operational reliability and therefore punctuality of the vehicles
- Reduce the life cycle costs of the vehicle and the track
- Increase the energy efficiency of the system
- Improve passenger comfort and the attractiveness of rail transport

Specific developments are proposed the scope of ROLL2RAIL:

- Basis of a radically new traction technology based on emerging electronic components leading towards more energy-efficient traction, which is lighter and more reliable while reducing the noise emitted
- New wireless technology applied to train control functionalities will allow more flexible coupling to increase line capacity
- Carbody solutions based on lightweight composite materials to reduce weight
- A way of quantifying the life-cycle cost impact of new technological solutions for running gear
- Knowledge database of the variety of requirements in Europe for the braking systems to bring down barriers to step-change innovation in this area
- Standardised methodologies for assessing attractiveness and comfort from the passenger’s point of view
- Methodology for noise source separation techniques allowing implementation of novel and more efficient noise mitigation measures

It is also the objective of ROLL2RAIL to serve as a preparation for a fast and smooth start-up of the large scale initiative SHIFT2RAIL. All ROLL2RAIL results will ultimately lead to demonstration in real vehicles or relevant environments in SHIFT2RAIL.

Parent Programmes:
H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport
Shift2Rail - Shift2Rail

Institute type: Public institution
Institute name: European Commission
Funding type: Public (EU)

Lead Organisation:
European Union Road Federation

**Address:**
Avenue Louise 106
1050 BRUXELLES
Belgium

**Organisation Website:**
http://www.unife.org

**EU Contribution:** €240,000

**Partner Organisations:**

**Construcciones Y Auxiliar De Ferrocarriles Investigacion Y Desarrollo Sl**

**Address:**
JOSE MIGUEL ITURRIOZ 26
20200 BEASAIN
Spain

**Organisation Website:**
http://www.caf.net

**EU Contribution:** €1,625,211

**Deutsche Bahn Ag**

**Address:**
Postdamer Platz 2
10785 BERLIN
Germany

**Organisation Website:**
http://www.deutschebahn.com

**EU Contribution:** €216,281

**Kungliga Tekniska Hoegskolan**

**Address:**
Brinellvagen 8
100 44 Stockholm
Sweden

**EU Contribution:** €396,645

**Sncf**

**Address:**
34 Rue du Commandant René Mouchotte
75014 PARIS
France

**Organisation Website:**
http://www.sncf.com

**EU Contribution:** €602,600

**Metro De Madrid**

**Address:**
C/ Cavanilles nº58
28007 MADRID
Spain

Organisation Website: http://www.metromadrid.es
EU Contribution: €173,331

Fraunhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.v.

Address: HANSASTRASSE 27C
80686 MUNCHEN
Germany

Organisation Website: http://www.fraunhofer.de
EU Contribution: €426,709

Thales Six Gts France Sas

Address: Avenue Des Louvresses 4
92700 Colombes
France
EU Contribution: €240,000

Stadler Rail Valencia Sau

Address: C/ Mitxera 6
46550 Albuixech
Spain
EU Contribution: €365,984

Trafikverket

Address: RodaVagen 1
781 89 BORLANGE
Sweden

Organisation Website: http://www.trafikverket.se
EU Contribution: €100,000

Trenitalia Cargo S.p.a.

Address: Piazza della Croce Rossa, 1
00161 ROMA
Italy

Organisation Website: http://www.trenitalia.it
EU Contribution: €227,500

Network Rail Infrastructure Limited
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<tr>
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<td>Deutsches Zentrum Fr Luft Und Raumfahrt E.v</td>
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<td>Kompetenzzentrum - Das Virtuelle Fahrzeug Forschungsgesellschaft M.b.h.</td>
<td>Inffeldgasse 21a / 1. Stock 8010 GRAZ Austria</td>
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<td>University Of Southampton</td>
<td>Highfield Southampton SO17 1BJ United Kingdom</td>
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<td>Knorr Bremse Systeme Fr Schienenfahrzeuge GmbH</td>
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<td>Railenium</td>
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<td>Institut Francais Des Sciences Et Technologies Des Transports, De L'amenagement Et Des Reseaux</td>
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