DYNAFREIGHT stands for Innovative technical solutions for improved train DYNAmics and operation of longer FREIGHt Trains. The project will provide inputs for the development of the next railway freight propulsion concepts within S2R. Two main areas will be addressed:

1. Freight running gear for locomotives: DYNAFREIGHT will design and develop the necessary concepts that will allow a locomotive freight bogie to reduce wheel and track wear, to have lower noise and lower LCC, by focusing on:
   - Materials with freight vehicle applicability that allow a lighter bogie frame.
   - Noise optimized wheelsets and absorbing structures to reduce running gear related
• Passive and mechatronic systems for radial steering, improving running performances compared to conventional bogies. Reduction of wheel wear and damage, improved traction in curves and reduced resistance to motion in sharp curves will be achieved.
• Monitoring of the most maintenance cost-intensive bogie elements, reducing LCC and improving the reliability and availability of the locomotive.

2. Operation of long freight trains: following the outcomes of MARATHON, DYNAFREIGHT will prepare the path for regular operations of long freight trains:
• Defining functional, technical and homologation requirements for a radio remote controlled system.
• Proposing safety precautions in train configuration and brake application by simulating the longitudinal forces and the derailment risk of long freight trains.
• Identifying infrastructure adaptions for the operation of long freight trains.

By the end of the project, the main achievements will be:
• Improved performances: traction, speed, running dynamics and wheel/rail efforts
• Reduced rail freight noise at the source
• Enhance capacity/traffic throughput with the operation of longer trains
• Reduced of operation and maintenance costs (reduce wheel and rail wear, smarter maintenance, etc.)

Fields of science

Programme(s)

Topic(s)

Call for proposal

H2020-S2RJU-OC-2015-01-2

Funding Scheme

Shift2Rail-RIA - Research and Innovation action

Coordinator
UNION DES INDUSTRIES FERROVIAIRES EUROPEENNES - UNIFE

Address
Avenue Louise 221
1050 Bruxelles
Belgium

Activity type
Other

EU contribution
€ 87 625

Website Contact the organisation

Participants (9)

STADLER RAIL VALENCIA SAU

Spain

EU contribution
€ 181 093,75

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Address
Calle Mitxera 6
46550 Albuixech

Contact the organisation

LUCCHINI RS SPA

Italy

EU contribution
€ 62 750

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Address
Via Oberdan 6/A
25128 Brescia

Website Contact the organisation

TECHNISCHE UNIVERSITAT BERLIN

Germany

EU contribution
€ 111 125

Activity type
Higher or Secondary Education Establishments

Address
Strasse Des 17 Juni 135
10623 Berlin

Website Contact the organisation
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**Record number:** 206224  

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