Sand Mitigation around Railway Tracks

From 2017-01-01 to 2020-12-31, ongoing project | SMaRT Website

Project details

| Total cost: | Topic(s): |
| EUR 794 224,80 | MSCA-ITN-2016 - Innovative Training Networks |

| EU contribution: | Call for proposal: |
| EUR 794 224,80 | H2020-MSCA-ITN-2016 See other projects for this call |

| Coordinated in: | Funding scheme: |
| Italy | MSCA-ITN-EID - European Industrial Doctorates |

Objective

In the last decade, a growing number of railways and other civil or industrial infrastructures have been designed and/or built in arid regions worldwide. The European Railway Industry is often selected for such projects, because of its strong overall know-how.

In arid environmental conditions, windblown sand can have undesired effects on both the safety and the serviceability/maintenance of railways. Despite efficient Sand Mitigation Measures (SMM) are mandatory, their design and assessment are at their infancy worldwide. Both tasks require innovation and development, by means of transfer of knowledge from base and/or specialist research fields to the Civil Engineering design practice and Railway Industry.

The European Railway Industry competences should be enriched with advanced and specialized knowhow in the SMM field, by means of raise of the quality of knowledge and human capital. Innovative sand mitigation competences should find their place in the production chain of the Railway Industry.

The present Research and Training Programme is inspired by the problem features mentioned above and aims at: • innovating the sand mitigation research field, by:

  o a Computational Based Engineering rationale approach to the design of SMM;
  o a new approach to the modeling and simulation of the coupled multiphase wind-sand flow around three-dimensional complex orography SMM and railway body;
  • training Early Stage Researchers (ESRs), by means of:
    o a multidisciplinary doctoral formation because of the nature of the problem;
    o an academy-industry intersectoral doctoral formation because of the innovation ability of the former and the stimuli to research coming from the needs of the latter;
    o a consortium’s layout reflecting the production chain of the railway industry to train the ESRs in a proper “in vitro” replica of the their future real world working context;
  • enriching and complementing the competences of the European Railway Industry in a growing market sector.

Related information

Report Summaries

Periodic Reporting for period 1 - SMaRT (Sand Mitigation around Railway Tracks)
**Coordinator**

POLITECNICO DI TORINO  
CORSO DUCA DEGLI ABRUZZI 24  
10129 TORINO  
Italy  

EU contribution: EUR 258,061.32

See on map

**Activity type:** Higher or Secondary Education Establishments

Contact the organisation

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**Participants**

OPTIFLOW  
160 CHEMIN DE LA MADRAGUE VILLE  
13015 MARSEILLE  
France  

EU contribution: EUR 262,875.60

See on map

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

Contact the organisation

THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD  
WELLINGTON SQUARE UNIVERSITY OFFICES  
OX1 2JD OXFORD  
United Kingdom  

EU contribution: EUR 273,287.88

See on map

**Activity type:** Higher or Secondary Education Establishments

Contact the organisation

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**Partner organisations**

ANSA...
RECO S.R.L.  
VIA DI PIETRALATA, 140  
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See on map

**Activity type:** Private for-profit entities (excluding Higher or Secondary Education Establishments)  
Contact the organisation

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