DESTinationRAIL

Decision Support Tool for Rail Infrastructure Managers

**Funding:** European (Horizon 2020)
**Duration:** May 2015 - Apr 2018
**Status:** Complete
**Total project cost:** €3,924,800
**EU contribution:** €2,997,000

**Call for proposal:** H2020-MG-2014_TwoStages
CORDIS RCN: 193391

**Objectives:**
The project provides solutions for common infrastructure problems encountered in diverse regions of Europe, e.g. deterioration and scour damage to bridges, slope instability, damage to switches and crossings and track performance. Whilst similar failure modes are seen around the EU, the triggers (precipitation, earthquake loading etc.) are regional. The DESTination RAIL project will develop management tools based on scientific principles for risk assessment using real performance measurements and other vital data stored in an Information Management System. This will allow for a step-change in the management of European rail infrastructure.

The objectives will be achieved through a holistic management tool based on the FACT (Find, Analyse, Classify, Treat) principle:

- **Find** - Improved techniques for the assessment of existing assets will be developed.
- **Analyse** - Advanced probabilistic models fed by performance statistics and using databases controlled by an information management system.
- **Classify** - The performance models will allow a step-change in risk assessment, moving from the current subjective (qualitative) basis to become fundamentally based on quantifiable data.
- **Treat** - The impact of proposed remediation or reconstruction will be assessed using the a probabilistic whole life cycle model which includes financial and environmental costs and the impact of work on traffic flow.

The FACT principles will be implemented in a holistic decision support tool for infrastructure managers.

DESTination RAIL will have a significant impact in relation to the objectives of the work programme. It will (i) reduce the cost of investment by using the IMS to manage the network, (ii) monitoring and real-times analyses will prevent unnecessary line restrictions and closures, (iii) lower maintenance costs by optimising interventions in the life cycle of the asset and (iv) optimise traffic flow in the network.

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

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

**Lead Organisation:**
Gavin And Doherty Geosolutions Ltd

Address:
Killacloran Upper
N/A
Aughrim Wicklow
Ireland
**EU Contribution:** €505,250

**Partner Organisations:**

**Iarnrod Eireann**

**Address:**
Amiens Street Connolly Station
1
Dublin
Ireland

**EU Contribution:** €75,000

**Tri Limited**

**Address:**
Crowthorne House Nine Mile Ride 0
Wokingham
RG40 3GA
United Kingdom

**Organisation Website:**
http://www.trl.co.uk

**EU Contribution:** €271,500

**Roughan & O'donovan Limited**

**Address:**
Arena Road Arena House
18
Sandyford
Ireland

**EU Contribution:** €223,750

**Opentrack Railway Technology Gmbh**

**Address:**
KAASGRABENGASSE 19
1190 WIEN
Austria

**Organisation Website:**
http://www.opentrack.at

**EU Contribution:** €141,250

**Slovenske Zeleznice Doo**

**Address:**
Kolodvorska Ulica 11
1000 Ljubljana
Slovenia

**EU Contribution:** €66,250
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<tr>
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<td>Technische Universitaet Muenchen</td>
<td>Arcisstrasse 21, 80333 MUNCHEN Germany</td>
<td>€183,750</td>
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<td>Universiteit Twente</td>
<td>Drienerlolaan 5, 7522 NB Enschede Netherlands</td>
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<tr>
<td>Eidgenoessische Technische Hochschule Zuerich</td>
<td>Raemistrasse 101, 8092 ZURICH Switzerland</td>
<td>€0</td>
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<td>Stiftelsen Norges Geotekniske Institutt</td>
<td>Sognsveien 72, N-0855 OSLO Norway</td>
<td>€256,250</td>
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<td>Zavod Za Gradbenistvo Slovenije</td>
<td>DIMICEVA ULICA 12, 1000 LJUBLJANA Slovenia</td>
<td>€253,700</td>
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<td>Robson Michael Alan</td>
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<tr>
<td><strong>Address:</strong></td>
<td>FRA ANDRIJE KACICA MIOSICA 26 10000 ZAGREB Croatia</td>
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<td><strong>Organisation Website:</strong></td>
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**Technologies:**
- Infrastructure management
- Decision Support Tools for infrastructure management

**Development phase:** Research/Invention

**STRIA Roadmaps:** Infrastructure

**Transport mode:** Rail transport

**Transport sectors:** Passenger transport, Freight transport

**Transport policies:** Digitalisation

**Geo-spatial type:** Other