21\textsuperscript{st} International Bridge Symposium

Brno 21/22 April 2016
DESTinationRAIL

Decision Support Tool for Rail Infrastructure Managers
What is the DESTinationRAIL Project

• Horizon 2020 funded
• Runs for 3 years from May 2015 to April 2018
• Looking at reducing Infrastructure Costs
• Delivers practical solutions
### Consortium

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<tr>
<th>Participant organisation name</th>
<th>Country</th>
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<td>Gavin and Doherty Geosolutions (GDG)</td>
<td>Ireland</td>
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<td>Irish Rail (IÉ)</td>
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<td>Transport Research Laboratory (TRL)</td>
<td>United Kingdom</td>
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<td>Robson’s International Rail Consultancy (RIRC)</td>
<td>United Kingdom</td>
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<td>University of Zagreb (UZ)</td>
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<td>Croatian Railways (HZ)</td>
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<td>Technical University of Munich (TUM)</td>
<td>Germany</td>
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<td>Slovenian National Building and Civil Engineering (ZAG)</td>
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<td>Norwegian Geotechnical Institute (NGI)</td>
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<td>Norwegian National Technical University (NTNU)</td>
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<td>University of Twente (UT)</td>
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<td>Open Track Railway Technology (OTRT)</td>
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<td>Roughan O’Donovan Innovation Solutions (ROD)</td>
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<td>Eidgenoessische Technische Hochschule Zurich (ETH)</td>
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<td>Slovenian Railways (SŽ)</td>
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Project Aim

The aim of DESTination RAIL is to provide solutions for a number of problems faced by EU infrastructure managers.

Novel techniques for identifying, analysing and remediating critical rail infrastructure will be developed.
Objectives

These solutions will be implemented using a decision support tool, which allows rail infrastructure managers to make rational investment choices, based on reliable data.
Project Organisation

• **Work Package 1; FIND**
  How do we locate and identify risky assets before they fail?
  Using a combination of remote monitoring and expert judgement

• **Work Package 2; ANALYSE**
  How do we determine the real-time safety of existing infrastructure?
  ANALYSE - Using advanced models updated using monitoring data
Project Organisation

- **Work Package 3 CLASSIFY**
  How do we determine the level of safety and assign scarce resources?
  CLASSIFY – Risk management, as an interdisciplinary infrastructure management tool.

- **Work Package 4 TREAT**
  How do we choose the optimal rehabilitation technique?
  TREAT - Construction Techniques assessed through Probabilistic Whole Life Cycle Model

- **Work Package 5 Dissemination and Exploitation**

- **Work Package 6 Project Management**
Identification of Infrastructure Problems

• Establishment of a database of key issues facing infrastructure managers
• How to identify “hot spots” for possible future problems
• Monitoring of Switches and Crossings
• Monitoring of earthworks
• Monitoring of Structures
Challenges
Challenges
Challenges
Monitoring of Structures

DESTination RAIL
Decision Support Tool for Rail Infrastructure
EU Project No. 636285
Summary

• The project is moving from the first phase which is “Find” to the second phase “Analyse.”

• Results from this work will be reviewed to see what improvements can be made to detecting problems before they occur.

• This work will also feed into the Decision Support Tool model.

• The project is on course to deliver a tool which will help Infrastructure Managers to optimise work.
Thank You for your attention

Michael Robson, Member of the Executive Board
DESTinationRAIL
www.destinationrail.eu