DESTination RAIL NEWS

Welcome to the first edition of DESTinationRAIL Newsletter, June 2015

A warm welcome to our readers of this the first edition of the DESTinationRAIL, (Decision Support Tool for Rail Infrastructure Managers) News. This edition describes the project and introduces the team charged with delivering a successful outcome.

The DESTination Rail project began work on May 1st 2015. The project kick-off meeting was hosted by Irish Rail at their Inchicore Railway Works in Dublin on May 19th and 20th 2015. At this meeting the project coordinator Dr. Ken Gavin outlined the principal aims of the project:

(i) To provide solutions for common infrastructure problems encountered in diverse regions across Europe e.g. bridge scour, slope instability, ballast degradation, rock-falls and failure of switches and crossings.

(ii) The project will develop management tools based on scientific principles for risk assessment using structural health monitoring (SHM) and other vital data stored in an Information Management System.

(iii) An online tool will be developed to allow decisions on investments for maintenance and new works to be made by Infrastructure Managers (IM's) on the basis on scientific principles.

A feature of the project was that test sites would be developed in conjunction with the three IM's (in Croatia, Slovenia and Ireland) to demonstrate the efficacy of the project outputs.

The audience for the event was composed of Infrastructure Managers, Research Institutions and SME's from across Europe.

The 3 year Horizon 2020 project is funded by the European Commission, through the Innovation and Networks Executive Agency (INEA) under the call MG-2.1-2014, I2I Intelligent Infrastructure.

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Introducing the DESTinationRAIL project

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. These solutions will be implemented using a decision support tool, which allows rail infrastructure managers to make rational investment choices, based on reliable data. At present Infrastructure Managers make safety critical investment decisions based on poor data and an over-reliance on visual assessment. As a consequence their estimates of risk are therefore highly questionable and large-scale failures are happening with increasingly regularity. As the European rail Infrastructure network ages, investment becomes more challenging. As a result reliability and safety are reduced, users perception of these is negative and the policy move to increased use of rail transport is unsuccessful.

Figure 1. DESTination RAIL Holistic Management Tool

The objective of this project (safer, reliable and efficient rail infrastructure) will be achieved through a holistic management tool based on the FACT (Find, Analyse, Classify, Treat) principle as shown in figure 1.

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 will be used to determine the level of safety of individual assets.

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. A decision support tool will take risk ratings and assess the impact on the traffic flow and whole life cycle costs of the network.

Treat - Novel and innovative maintenance and construction techniques for treating rail infrastructure including tracks, earthworks and structures will be developed and assessed by whole life cycle assessment and impact on the traffic flow.

DESTinationRAIL members at the launch meeting held at Inchicore Works

Introducing Members of the Project

The project has 15 partner organisation who represent a wide geographical spread and bring different skills and expertise to the project. These members can be divided into 3 groups: Infrastructure Managers, Research Bodies along with Small and Medium Sized Enterprises (SMEs)

Members of the DESTinationRAIL team discussing individual work packages following the launch of the project

Work Package Leaders

Each of the 6 work packages has a Work Package Leader as shown in the list below. The Work Package Leaders are responsible for coordinating the delivery of the different elements of their work packages to ensure that the project deliverables are met in a timely way. Further details of the individual elements of the work packages will be the subject of future articles

WP1 Find: Irish Rail (IE, Cathal Mangan)
WP2 Analyse: Roughan & O'Donovan Limited ROD, Alan O'Connor)
WP3 Classify: Risk Assessment. University of Twente (UT, Irina Stipanovic)
WP4 Treat: Transport Research Limited (TR, Vijay RamdasL)
WP5 Integration and Dissemination: Robson's International Railway Consultancy (RIRC, Michael Robson)
WP6 Project Management: Gavin and Doherty Solutions (GDG, Ken Gavin and Carla Marina)

Participants Organisation Name	Initials	Country
Gavin and Doherty Geosolutions	GDG	Ireland
Irish Rail	IE	Ireland
Transport Research Laboratory	TRL	UK
Robson's International Rail Consultancy	RIRC	UK
University of Zagreb	UZ	Croatia
Croatian Railways	HZ	Croatia
Technical University of Munich	TUM	Germany
Slovenian National Building and Civil Engineering Institute	ZAG	Slovenia
Norwegian Geotechnical Institute	NGI	Norway
Norwegian National Technical University	NTNU	Norway
University of Twente	UT	Netherlands
Open Track Railway Technology	OTRT	Austria
Roughan O'Donovan Innovative Solutions	RODIS	Ireland
Eidgenoessische Technische Hochschule Zurich	ETH	Switzerland
Slovenian Railways	SZ	Slovenia

Boyne Viaduct Ireland which is one of the project case studies

Content of Future Issues

DESTinationRAIL News will be issued at 6 monthly intervals to coincide with milestones in the project. These will contain a more detailed description of the individual work packages and the output from them. Details of opportunities to visit test/pilot sites will also be included along with details of future workshops being held on specific topics e.g. the Decision Support Tool also be a feature

Another feature of future issues will be short summaries of research papers which have been submitted along with links to the relevant document.

The Project Co-coordinator will have a regular column where overall progress with the project will be described. The last issue of DESTinationRAIL News will feature highlights from the final conference.

Do not forget that you can always download this newsletter along with any other published material from our website www.destinationrail.eu

Future Events and Planned Presentations

This section will be developed to provide information of presentations and events that the DESTinationRAIL team will be organising or involved in with up to date information also being available on our website www.destinationrail.eu

A presentation on the DESTinationRAIL project will be given at the Railway PRO Investment Summit being held in Bucharest on 6/7th October 2015.

CONTACT US!

If you would like further information on the project then why not visit our website where you both view information and ask questions at:

www.destinationrail.eu

The Project coordinator is:
Dr. Ken Gavin (kgavin@gdgeo.com)

The Project administrative manager is:
Mrs. Carla Soriano (cmarina@gdgeo.com)

Or Call us on
00 353 1207 1000

We will also be creating a Linked In group which you may like to join.