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The European railway project MAINLINE coordinated by UIC presents its Life Cycle Assessment Tool (LCAT)

(Paris, 25 July 2014) MAINLINE is a European railway project funded under the 7th Framework Programme¹, coordinated by UIC with support from ARTTIC. As the project ends in September 2014, the presentation of final results has now started.

MAINLINE develops methods and tools contributing to an improved railway system by taking into consideration the whole life of specific infrastructure – tunnels, bridges, track, switches & crossings, earthworks and retaining walls.

MAINLINE's main outputs are:

- a **Life Cycle Assessment Tool (LCAT)** that evaluates whole life environmental and economic impact for maintenance and renewal activities of three specific rail assets – bridges, track and earthworks – and the corresponding user manual
- a **Guideline to the application of new technologies to extend the life** of elderly rail infrastructure
- a **Guideline for replacement** of elderly rail infrastructure

The results related to life extension, exchange and monitoring, and the Life Cycle Assessment Tool (LCAT) were presented during a **Workshop targeted at Central and Eastern Europe** that took place on 15 May 2014 in Budapest, Hungary. **Presentations are available on the MAINLINE public website:** www.mainline-project.eu.

In addition, the project is organising a **Training session for the use of the Life Cycle Assessment Tool** developed in the project. The first step took place in London from 11 – 12 June. The following railways participated: DB Netz AG (Germany), INFRABEL (Belgium), MÁV (Hungary), Network Rail (United Kingdom), NRIC (Bulgaria), ÖBB (Austria), REFER (Portugal), Rete Ferroviaria Italiana (Italy), SNCF (France), TCDD (Turkey), Trafikverket (Sweden).

The three models currently developed in the project – for metallic bridges, plain track and soil cuttings – have been presented in detail. Their aim is to reduce whole life cycle costs thanks to better planning and maintenance.

The LCAT for Bridges is one of the first models to combine condition and capacity, together with environmental and economic impacts.

The LCAT for Cuttings uses a risk-based analysis. On the contrary, the model developed by MAINLINE's sister project SMARTRAIL is using monitored data, so that both tools are complementary and can be used in a combined way.

The LCAT for Track is based on boundary conditions. As the depreciation of investment causes the biggest portion of life cycle costs, the tool is focused on predicting the possible technical service life in a simple way.

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The project participants will use feedback and data from the attendees to improve the models until delivering the final versions at the second step of the training from 11 – 12 September at UIC in Paris.

More recently, a **Mini Symposium dedicated to MAINLINE took place during the IABMAS 2014 Conference in Shanghai (7-10 July)**: <http://www.iabmas2014.org/page.asp?id=28>

IABMAS stands for International Association for Bridge Maintenance and Safety and was founded in 1999. IABMAS arranges conferences every two years. The 2014 conference brought together 728 participants from about 40 countries.

In the Mini Symposium the 8 papers were presented: learn more at: <http://www.uic.org/com/uic-e-news/408>

All final results – tools and guidelines – will be presented and distributed during the project Final Workshop, taking place **on 30 September 2014 at UIC, in Paris**. Activities that will promote market take-up will also be introduced. If you are willing to participate in this workshop, please register no later than 22 August 2014 on this page: <http://www.uic.org/spip.php?article3091>.

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