

SABARIS

Development of procedures for cross asset management optimisation

A research project of the cross-border funded joint research programme “ENR04 – Effective asset management meeting future challenges”

The programme is a cross-border funded, transnational joint research programme that was initiated by **ERA-NET ROAD II** (ENR2).

The participating National Road Administrations (NRA) in this Joint Research Programme are Belgium (Flanders), Denmark, Finland, France, Germany, Ireland, Lithuania, Netherlands, Norway, Slovenia, Sweden, Switzerland, and United Kingdom.

The budget is EUR 2.85 million and the duration of this joint research programme is 30 months.

Intro

Roads (e.g. pavement, bridges, and tunnels) deteriorate over time due to environmental factors and use, and the required levels of service, in general, either increase or remain constant, the road sections must be maintained by executing interventions (e.g. asphalt crack sealing and chip sealing of pavement, painting or replacing the girders of a steel bridge).

There are an extensive number of possible intervention strategies (e.g. the types of interventions to be executed and the time of execution) that road agencies may use to ensure that roads continue to provide an adequate level of service.

Description

The research project SABARIS addresses the challenge of road agencies to select an intervention strategy for road network that is optimal taking into consideration the varying and conflicting values of road benefits for the stakeholders of this network. The objective of the project SABARIS is to support this decision making by:

- Identifying the stakeholders of different types of roads in different European countries,
- Determining the road benefits for the stakeholders and ways of engaging the stakeholders to determine these benefits and to communicate to them that their concerns are being taken into consideration,
- Analysing the values of the benefits for the stakeholders,
- Assessing the impact of the valuation of benefits on the optimality of intervention strategies for roads
- Evaluating the sensitivity of the optimality of the intervention strategies due to variations in benefit values, especially when conflicting valuations between stakeholders exist.

Expected results

The SABARIS project will produce results that will be of immediate use to infrastructure managers in European road agencies:

- Classification of stakeholders in terms of road types and road benefits,
- Ranking of benefits for different categories of road types according to stakeholder valuation,
- Stakeholder engagement strategies for different categories of road types,
- A prototype optimization tool for the evaluation of intervention strategies that simultaneously takes into consideration the different valuations of road benefits from multiple stakeholders,
- Guidelines for use and implementation of such an optimization tool, in general and for different road types, and for different road agencies

- Case studies illustrating and comparing the implementation, usage and outcome of the optimization tool.

Duration	01/09/2010 – 30/08/2012
Project coordinator	Geert Dewulf/Andreas Hartmann, University of Twente, the Netherlands
Project manager	Jenne Van der Velde, Rijkswaterstaat, the Netherlands
Partners	University of Twente, the Netherlands Swiss Federal Institute of Technology Zurich, Switzerland French Public Works Research Laboratory, France Katholieke University Leuven, Belgium AT Osborne B.V., the Netherlands