



The PROSPER Project

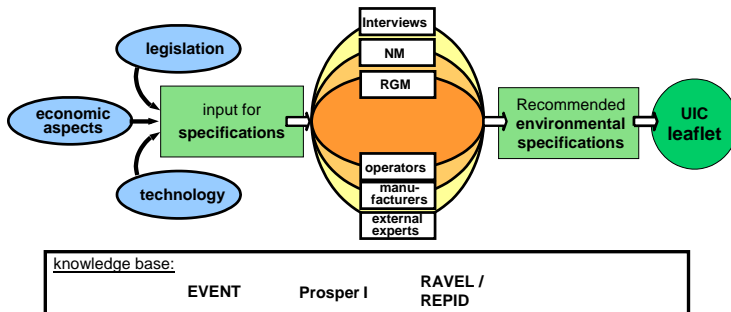
Harmonised Environmental Specifications for new Rolling Stock



To maintain and even enhance the environmental advantage of rail transport continuous environmental improvements without compromising functionality or cost is needed. This can only be achieved if a harmonised approach exists within the rail sector to handle these aspects consistently during the procurement and manufacturing process.

The UIC funded project PROSPER (Procedures for Rolling Stock Procurement with Environmental Requirements) facilitates such a harmonised approach.

The project provides a set of harmonised environmental specifications in the four environmental key areas *Energy Efficiency, Materials/ Recycling/ Waste, Noise and Exhaust Emissions*. The results will become available in the **UIC leaflet “Environmental Specifications for New Rolling Stock”** which will be published in March 2006.



The stakeholder engagement process

Using a comprehensive three-phase consultation process, all relevant stakeholders were involved in the project. By means of written documentation, interviews and discussion forums such as reference group (RGM) and network meetings (NM) the expertise of operators, manufacturers, sub-suppliers and other experts has been incorporated in the project results.

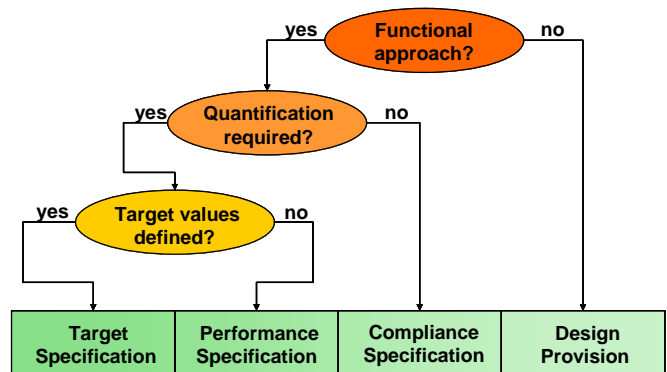
Setting environmental requirements

In a three-step process for each environmental specification in the leaflet it was examined whether:

- the specification is quantifiable,
- an agreed measurement method (standard) exists and
- the procedure is usable to define a single target value

Based on the answers to these questions the environmental specifications were classified according to the degree of quantification.

Procedures for quantification of specifications



	Performance mainly dependent on design		Performance mainly dependent on operation	
	key area	specification	key area	specification
Legally mandatory specifications	Noise	<ul style="list-style-type: none"> Passing-by noise Stationary noise Starting noise 	Not applicable	Not applicable
	Diesel exhaust emissions	<ul style="list-style-type: none"> Diesel exhaust emissions 		
	Materials	<ul style="list-style-type: none"> Legally restricted materials 		
	Others	<ul style="list-style-type: none"> Electromagnetic fields 		
Voluntary specifications	Energy	<ul style="list-style-type: none"> Specific mass 	Energy	<ul style="list-style-type: none"> Traction energy consumption On-board energy consumption Energy recovery/regeneration Energy management for parked vehicles Energy metering devices
	Materials	<ul style="list-style-type: none"> Unwanted and controlled materials Hazardous waste Recycling rate Renewable materials 		
	Others	<ul style="list-style-type: none"> Emissions from brake friction material Spillage/ leakages 	Diesel exhaust emissions	<ul style="list-style-type: none"> Diesel exhaust emissions – specific load conditions Diesel exhaust emissions at longer standstills

The core of the UIC leaflet *Environmental Specifications for New Rolling Stock* is a set of harmonised environmental specifications in the four environmental key areas *Energy Efficiency, Materials/ Recycling/ Waste, Noise and Exhaust Emissions*.

The table to the left lists these environmental specifications in a structured overview. The following general strategic orientations can be attributed to the different types of specifications:

Legally Mandatory Specifications

For the specifications in the first row, the environmental performances are legally regulated. A potential better performance than the legal baseline could represent a more sound long-term investment in rolling stock because it reduces the risk of future expenses and efforts to meet higher environmental legal standards.

Voluntary Specifications

The second row contains specifications which are not governed by legislation. These specifications can be used in invitations to tender according to the environmental strategy of the company, national requirements and priorities as well as economic assessments.

Performance mainly dependent on design

The first column comprises specifications which have a direct influence on the environmental performance of rolling stock basically independent of the operation of the rolling stock. As examples the rate of renewable materials and the specific mass are fixed by construction and do not change during the lifetime of the vehicle unless design changes are made to the vehicle.

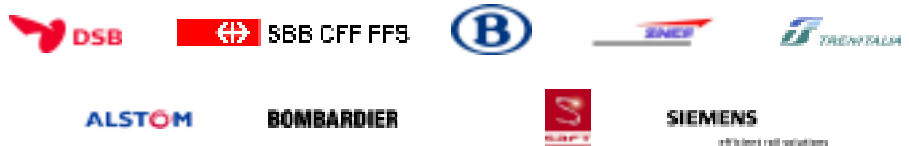
Performance mainly dependent on operation

The environmental performance with respect to issues addressed in the second column depends to a high degree on how the new rolling stock is actually used in operation. The design is certainly a precondition to obtaining a good performance. But whether or not it is reached in practice depends to a large extent on operational patterns and the infrastructure on which the rolling stock is used. Energy meters for example will not yield any reduction in energy consumption by themselves, but are a prerequisite for energy efficient driving campaigns with which energy consumption can be reduced dramatically.

Contact:

<u>Project manager:</u>  Henning Schwarz DB AG - Bahn-Umwelt-Zentrum Caroline-Michaelis-Str. 5-11; D-10115 Berlin phone: +49(0) 30 297-565 17 Henning.Schwarz@bahn.de	<u>Project consultant:</u>  IZT – Institute for Futures Studies and Technology Assessment Schopenhauerstr. 26; D-14129 Berlin phone: +49(0) 30 803088-0 www.izt.de
<u>UIC:</u>  Raimondo Orsini UIC – Senior Advisor Environment 16 rue Jean Rey; F- 75015 Paris phone: +33 (0) 1 44 49 20 36 orsini@uic.asso.fr	<u>UNIFE:</u>  Susana Martins UNIFE - International Affairs Manager 221 Av. Louise; B-1050, Brussels phone: + 32 2 626 12 69 susana.martins@unife.org

Project Partners (Reference Group):



For more information visit:

www.railway-procurement.org