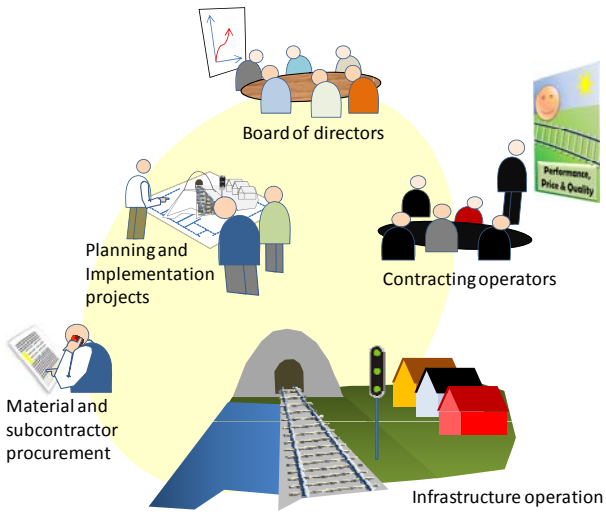
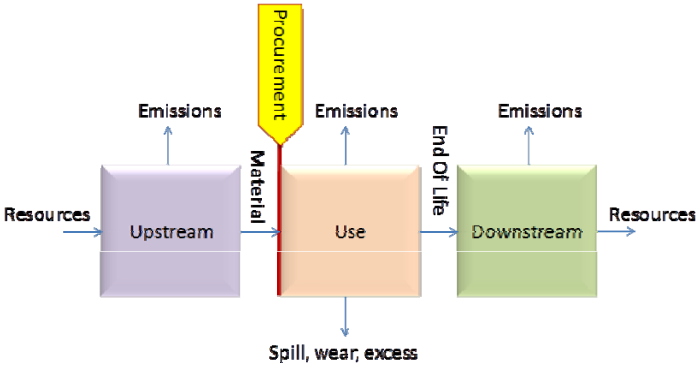
ESTABLISHED METHODOLOGY



A systems analytical assessment of the environmental management of railway infrastructure managers is performed. There are in particular five key functions within these organisations where environmental performance can be controlled.



Material flow analysis has been combined with life cycle assessments according to the international standards ISO 14040-44, to quantify the environmental performance of railway infrastructure eco-procurement.

SHORT ON InfraGuidER

The InfraGuidER FP7 Coordinated Action was established with inspiration from the results of BRITE/EURAM projects RAVEL and REPID and the UIC project PROSPER, and especially the UIC Leaflet 345 “Environmental specification for new rolling-stock”.

InfraGuidER intends to provide an European answer to urgent environmental challenges: climate change, hazardous substances and resources management

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ECO-PROCUREMENT GUIDELINE

Eco-procurement guideline

- Eco-procurement seamlessly integrated in regular procurement.
- Includes the environmentally significant materials and components of railway infrastructure.
- Key eco-procurement indicators are identified.

Eco-performance calculator

- An eco-performance value is calculated.
- Calculator effectively integrated with eco-procurement.
- Eco-ranking of alternative products and offers.
- Calculate eco-efficiency of products and offers.
- Eco-configure invitation to tender.

Based on environmental standards

- Integrates perfectly with the ISO 14001 Environmental management standard.
- Performance indicators based on ISO 14031.
- Life cycle assessments based on the ISO 14040-standards.

InfraGuidER

ECO-INDICATORS FOR ENVIRONMENTALLY SIGNIFICANT RAILWAY INFRASTRUCTURE MATERIALS AND COMPONENTS

The eco-indicator list has been identified through a combination of environmental significance of material and components and feasibility of acquiring information during the procurement stage.

The material and components list has been identified through several studies concerning environmental significance of railway materials and components. Baseline values are intended to guide improvement goals.

Definition	eco-indicator name	Baseline value	Life cycle phase	
Monitors how much greenhouse gas the product has released during its processed during its lifetime. Expressed as kg/unit	Carbon footprint	kg/sleeper	Whole life cycle	Concrete sleeper
Monitor the designed lifetime that the product is designed to have.	Design lifetime	years	Whole life cycle	
Monitors how much greenhouse gas the product has released during its processed during its lifetime. Expressed as kg/unit	Carbon footprint	kg/sleeper	Whole life cycle	Wooden sleeper
Monitor the designed lifetime that the product is designed to have.	Design lifetime	years	Whole life cycle	
Monitors how much greenhouse gas the product has released during its processed during its lifetime. Expressed as kg/unit	Carbon footprint	kg/kg	Whole life cycle	Rail
Monitor the designed lifetime that the product is designed to have.	Design lifetime	years	Whole life cycle	
Monitors how much greenhouse gas the product has released during its processed during its lifetime. Expressed as kg/unit	Carbon footprint	kg/kg	Whole life cycle	Ballast
Monitor if the chemical properties of the ballast have been evaluated.	Chemical	Yes/No	Whole	
				Electric installations
				Herbicides
weight in kg/unit.				Lubricants
Monitor the amount of product that is used per kilometre rail expressed as kg/km	kg per km rail	kg/km	Whole life cycle	

ECO-PERFORMANCE CALCULATOR

The eco-performance calculation is based on the eco-indicators that are communicated in the procurement, in the call for tenders and in the tender evaluations. This gives an immediacy between procurement specifications and eco-performance evaluation.

The eco-performance evaluation is based on a structured and holistic environmental impact assessment, which makes different environmental impacts comparable. This is further facilitated by using a common evaluation unit. In addition, by having a monetized evaluation unit, it is easy to calculate an eco-efficiency value for products and offers.

The eco-performance calculation tool is configurable. The list of indicators is not fixed and can be adjusted according to project goals, policies and targets.