

RTM use cases and application examples

This page will concentrate on the RailTopoModel® Use Cases and Application Examples.

The following use cases were identified and structured in a general framework.

Interfaces\Field	Technical	Operational	Legal
Internal between departments	Standardised data exchange between technical departments (e.g. engineering + capacity allocation) often using different IT technologies and definitions synergy effects	Standardised data exchange between planning and monitoring of operations e.g. timetabling and real-time circulation tracking synergy effects	Improved monitoring of the network condition, via dedicated 'Dashboards' providing network data summaries easier & faster data transfer and processing
National/Business between partners	Standardised data exchange between IMs and their business partners, such as ETCS suppliers and maintenance sub-contractors savings in data production and transmission less vendor lock-in	Standardised data exchange between IMs and RUs (e.g. for track possessions). reduced operational costs	Ability of RUs to determine permissible train characteristics (esp. braking) on any infrastructure, as required by EU legislation (esp. TSI OPE) time savings, less errors
International between countries, organisations, EU	Standardised data model/exchange on which ETCS-, IT- and other industries can design their products from taylor-made to <u>in</u> expensive mass market solutions	Standardised <u>inter</u> modal communications enhanced railway market share Standardised data exchange within corridors and between organisations (RNE, ...) no need to develop multiple data conversion interfaces Information exchange concerning station accessibility contribution to TSI PRM objectives	Standardised data provision to national administrations such as land registers, regions, ministries. (Example: multiannual MS-IM contract as per 2012/34, art. 8 and 30) improved quality; scalable level of detail; improved credibility of rail Standardised/unique data provision to legal obligations; NS, RINF, Inspire, EU Freight corridors, TEN-T network Savings in data conversions and reduction of administrative burden

railML® (Data Exchange)

?Main Article: [railML® \(Data Exchange\)](#)

Railway Infrastructure Manager Database

?Main Article: [Railway Infrastructure Manager Database](#)

Many different topological infrastructure data models and interfaces have been created over the years, either to fulfill railway needs or to support EU directives. Indeed, in the absence of any commonly agreed standard for (international) data exchange each railway or EU initiative has been obliged to create its own data model and interface, often from scratch. Subsequently IMs are constantly requested to convert their data according to these different interfaces and data usages generating poor data quality and high data management costs.

Several topological data models have been investigated to understand their converging and diverging points. This analysis provides the basic understanding of the current state-of-art and the feasibility of a common data model in the future.

The following models have been considered in a more detailed manner:

- RINF (ERA)
- ARIANE (SNCF Réseau, France)
- InfraNet (Infrabel, Belgium)
- Banedata (Jernbaneverket, Norway)
- RINM (Network Rail, United Kingdom)
- ProRail Database (Netherlands)

What you should have learned

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