

# RailML (Data Exchange)

## Overview

This page describes the relation between RailTopoModel® as model and railML® as exchange format.

Very closely related to the evolution of the RailTopoModel® is the work done by members of railML.org. railML® is an open-source XML-based data exchange format for IT applications in railways. railML® is developed and maintained by the railML.org initiative and it has been published so far up to version 2.3. Currently, railML.org is actively contributing to the UIC RailTopoModel® Expert Group with the objective to base its new version, railML® 3, on the fundament of the RailTopoModel®. Thus, railML® 3.0 can be considered to being the exchange format for any infrastructure data base following the RailTopoModel® concept. The current state of development of railML® 3 is described on the website besides infrastructure, railML® is also able to handle information about timetable, rolling stock and interlocking. Thus, being a widely applicable data exchange format, railML® is used by many railways, manufacturers and other institutions for internal and external data exchange. Further information on railML® can be found at <https://www.railml.org>.

Considering the work done by the railML® initiative project in co-operation with this modelling work, there are currently two products available to facilitate the exchange of data in the domain of railway infrastructure.

**The RailTopoModel®** is a generic railway data model designed to support current and future business needs. It is particularly useful for:

Logical model

- Engineering activities - mainly based on installations and components, and
- Circulation activities - mainly based on routing and scheduling.

railML® **railML® 3** is the latest evolution of the format created by railML.org. railML® 3 was specifically developed to be compliant to the UIC's RailTopoModel®.

Thus, railML® can be viewed as the first benefit of RailTopoModel®. Figure 2 summarises the role that RailTopoModel® and railML® would play when fully integrated in existing systems.

Investing in a standardised railway data exchange format will provide multiple benefits for the sector, including:

- Improved data quality,
- More efficient business performance,
- Streamlined and re-usable development,
- Integrated IT systems, and
- Return on investments.

Detailed Information about railML® can be found on the railML® website at <http://www.railML.org>.

## What you should have learned

- Difference between RailTopoModel® and railML®
- Aim of railML® and <http://railML.org>
- What you can do with RailTopoModel® and railML®

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