

ISO Raildax Executive explanation

The purpose of the standard is to facilitate for planning of railway operations between organisations in the transportation sector (communication between interested parties).

This is to provide a common format for necessary railway data exchange between interested parties in the industry during the conceptual, strategic, and tactical phases of railway service planning.

Examples of roles of interested parties are:

- railway authorities;
- public transport authorities;
- train operators;
- infrastructure managers;
- rolling stock companies;
- suppliers to the railway sector (rolling stock, signalling systems, etc.)
- consultants.

These roles may be taken by separate entities or by different units within one integrated entity or company.

The following planning aspects are covered by the standard.

Conceptual:

Years in advance of construction of the new or improved infrastructure.

Strategic:

Usually for new timetable concepts, new rolling stock or improved infrastructure, more than 15 months before implementation of new annual timetable:

- tendering process for passenger train operators (calculating tenders);
- feasibility studies for commercial train operators (freight and pax);
- temporary infrastructure capacity restrictions.

Tactical:

Usually for a new timetable, typically construction the annual timetable:

- train path and capacity requests (train operators);
- train path and capacity allocation (infrastructure managers).

During planning there is a continuous need for exchange of (machine readable) information between different stakeholders.

These stakeholders are using different applications for their internal processes (runtime calculations, rostering, temporary capacity restrictions etc). Within large organisations there may also be different applications in use, where effective exchange of information is essential.

A common (standardized) format for exchanging information between different applications will reduce time consuming manual work and will improve accuracy. RailDax is a format standard for exchanging railway data between applications.

RailDax is meant to be used by railway and transportation authorities, infrastructure managers and train operators during long-term planning, tendering processes, commercial evaluations and the yearly capacity allocation processes leading to the annual timetable.

RailDax is developed in parallel with the data exchange language railML 2.5, which is managed by railML.org. Necessary agreements between ISO and railML.org have been signed. See Annex B.

Figure 1 illustrates the use of RailDax for conceptual, strategic, and tactical planning of railway services and operations, leading to an annual timetable. Other exchange formats will be more suited for exchange of network and timetable data for public (customer’s) travel planning and ticketing solutions.

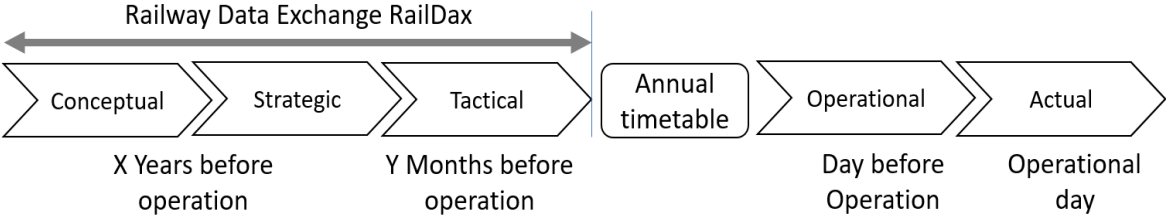


Figure 1 — RailDax serves as a railway data exchange format in conceptual, strategic and tactical processes leading to the annual timetable

RailDax serves as a data exchange format between applications used for railway service planning; connecting information about infrastructure, rolling stock and timetable basics which is necessary for capacity management and timetable planning.

RailDax is *not* intended as a data exchange format for applications serving the following purposes:

- (i) Asset Development and Maintenance Applications for infrastructure and rolling stock;
- (ii) Public travel plan and fare management.

The interface between RailDax and purpose ii will typically be the annual timetable.

Train operators might be legally obliged to publish in other formats, for example in Europe NeTEx for public travel plan and fare management and TSI TAP for slot ordering at National Access Points. The relationship of RailDAX with these specifications is explained in Annex A.

Starting up this project it was deemed necessary to base RailDax on an mature (proven in use) data exchange language and to cover the RailDax use cases. Based on a study, RailML 2.x was chosen. Of the same reason RaiDax is developed as a twin to RailML version 2.5. Possible future revisions of RailDax may be considered developed as twin to later RailML versions or other formats.