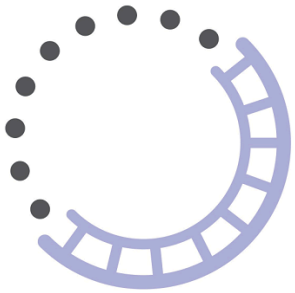


OPENRAIL

Quarterly Metrics Report

Q4 2025

Scope: September - November

Issue date: Dec 23, 2025

Prepared by: Igor Zubiaurre

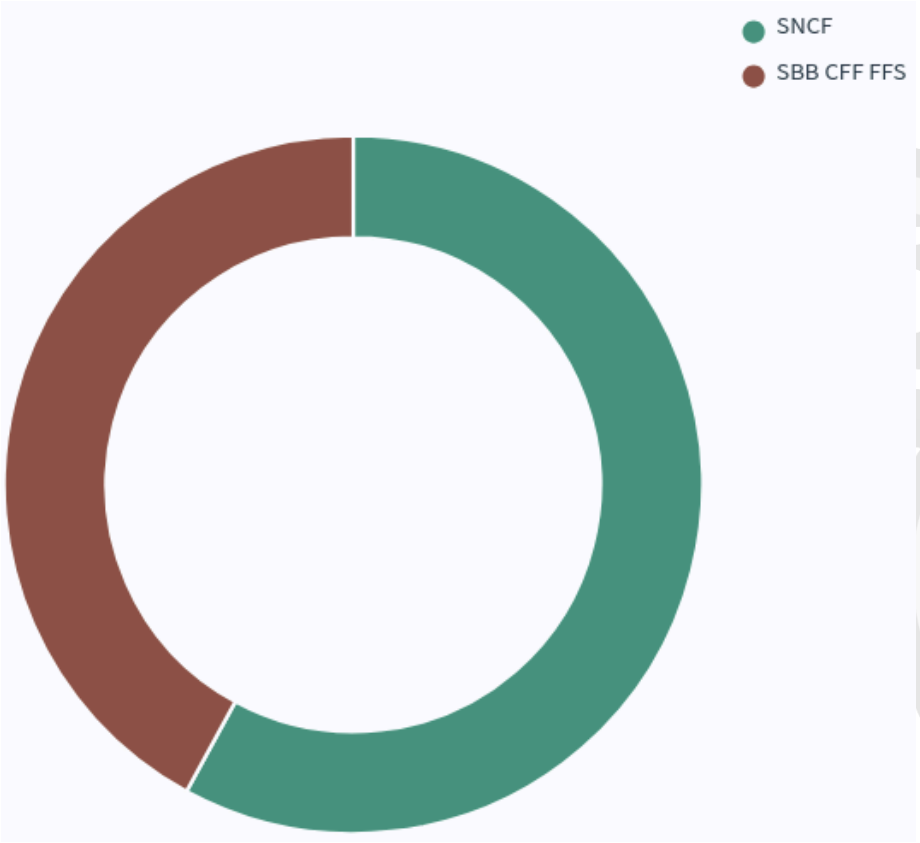
The State of OpenRail

This report delves into the following topics:

1. Spotlight Metric of the Quarter

Cross-company collaboration is already happening

Cross-company collaboration is already happening for Netzgrafik-Editor. As shown in the chart, there's a pretty 2-party balance between SBB CFF FFS and SNCF.

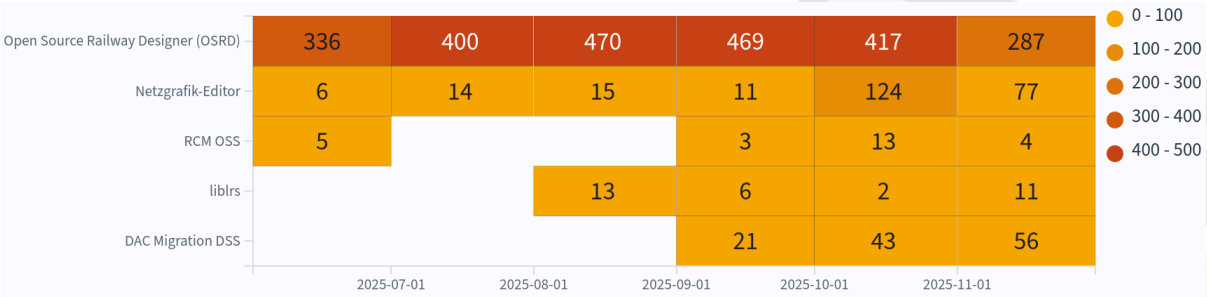


2. OpenRail-Wide Project Statistics

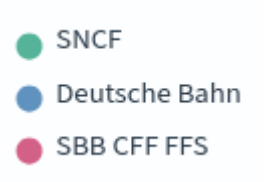
Summary Statistics (Sep-Nov)**:**

- Total active contributors[1]: **128**
- Total active committers: **64**
- Number of human commits across all projects: **1533**
- Number of code-contributing organizations: **3**

Activity Trend (human commits):



Code-committing Organizations:



Some freelancers and individuals have contributed code too, but are not listed as *organizations*.

[1] In this report, *contributions* include commits, issue submissions, pull request submissions, and comments on both issues and pull requests.

3. Project Overview Pages

Stage 2 - Qualified

OSRD – Open Source Railway Designer

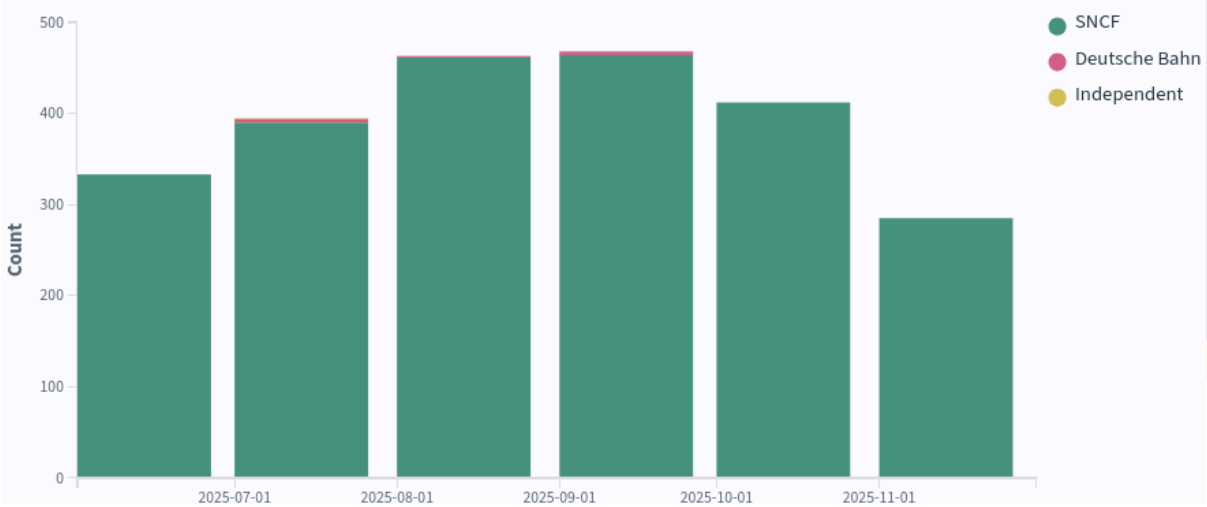
Website: https://osrd.fr/en

Description:

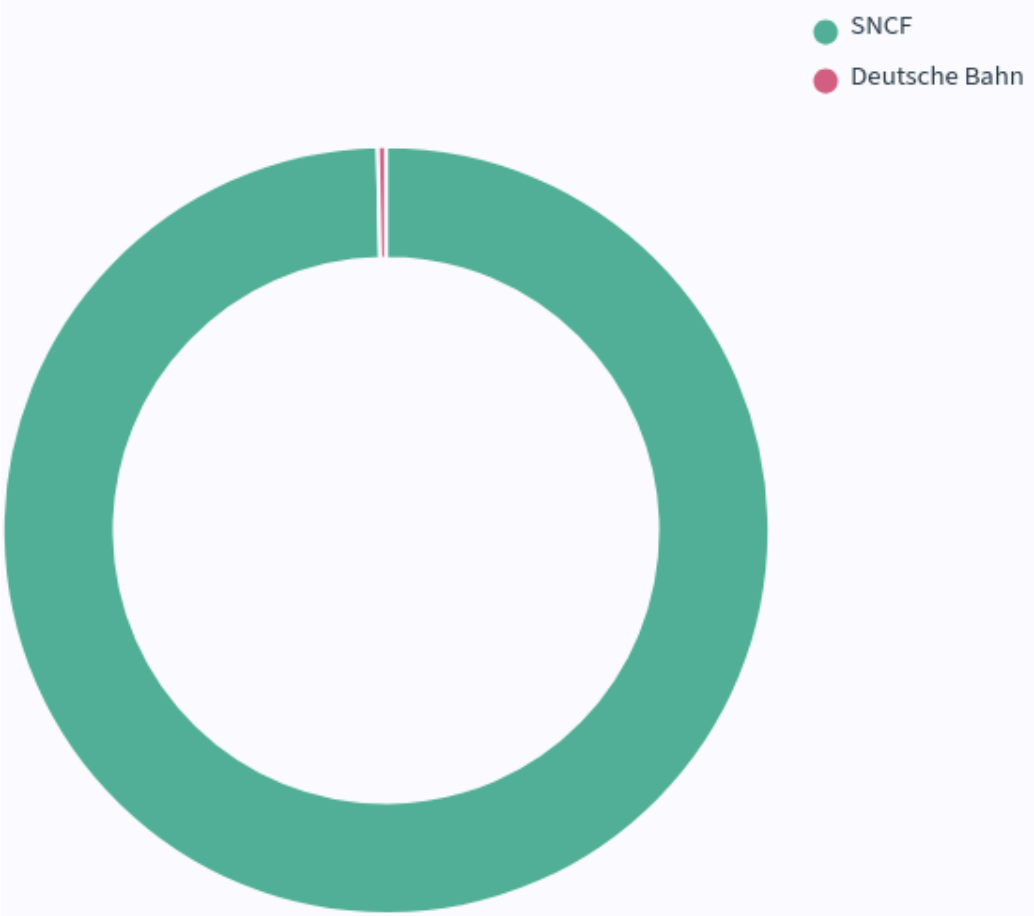
Platform for railway infrastructure simulation, timetable planning, and capacity analysis. OSRD is a railway toolbox designed for multiple use cases. These tools have in common a reliance on railway infrastructure simulation and results analysis.

Contributors: 97 (56 committers) between September and November (incl.)

Activity trend (human commits):



Code-committing organizations:



Repositories:

- https://github.com/OpenRailAssociation/osrd.git
- https://github.com/OpenRailAssociation/osrd-chart.git
- https://github.com/OpenRailAssociation/osrd-design.git
- https://github.com/OpenRailAssociation/osrd-images.git
- https://github.com/OpenRailAssociation/osrd-ui.git
- https://github.com/OpenRailAssociation/osrd-website.git

Stage 1 - Onboarded

RCM OSS - Rail Condition Monitoring Open Source Software

Website:

https://bahninfrastruktur.sbb.ch/de/produkte-dienstleistungen/bahninformatiksysteme/anlagenmanagement/rail-condition-monitoring.html

Description:

RCM by SBB comprises a suite of products for rail condition monitoring. Based on the open-source data format RCM-DX (RCM Data eXchange), RCM enables easy accessibility and visualization of railway diagnostic data.

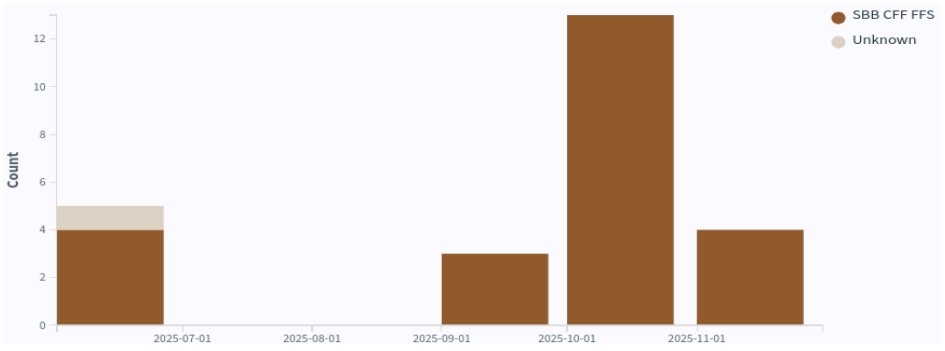
The aim of RCM OSS is to make rail condition data easy to access, store and visualize. Therefore, RCM OSS is beneficial to railway companies as well as measurement system suppliers.

The repository hosted by the OpenRail Association contains the specification of the RCM-DX data format.

Contributors: 3 (2 committers) between September and November (incl.)

Key organizations: SBB-CFF-FFS

Activity trend (human commits):



Repositories:

- https://github.com/OpenRailAssociation/rcm-dx.git
- https://github.com/OpenRailAssociation/rcm-dx-examples.git

DAC Migration DSS

Website: (no website yet)

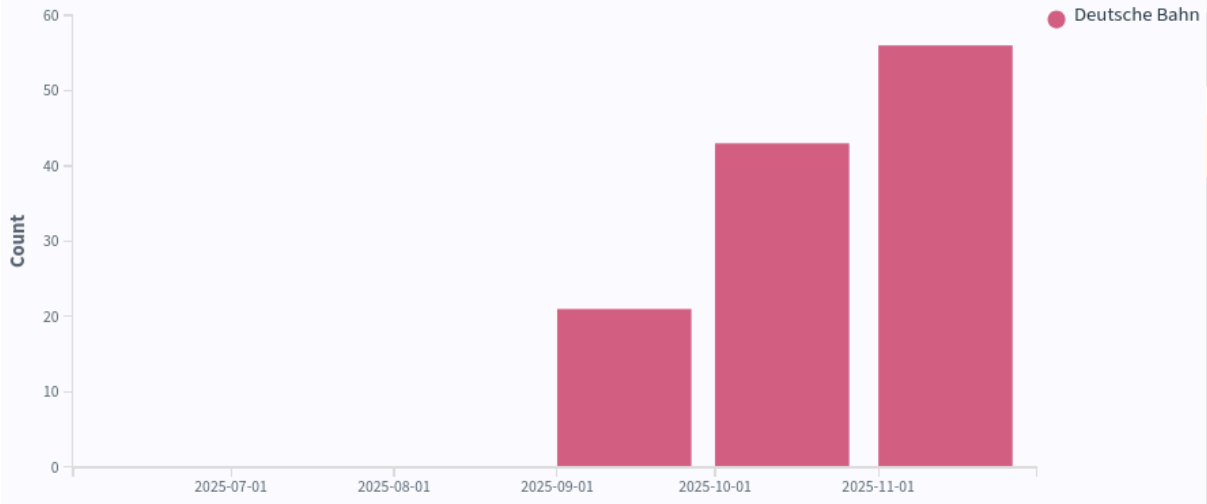
Description:

Within the next years, around 500 K freight wagons all over Europe owned and operated by various corporations will be converted from screw couplers to digital automatic couplers (DAC). To facilitate the migration process, a decision support system (DSS) is planned under the project.

Contributors: 7 (5 committers) between September and November (incl.)

Key organizations: Deutsche Bahn

Activity trend (human commits):



Repositories:

- https://github.com/OpenRailAssociation/dac-migration-dss.git
- https://github.com/OpenRailAssociation/dac-migration-dss-popupsim.git

Netzgrafik-Editor

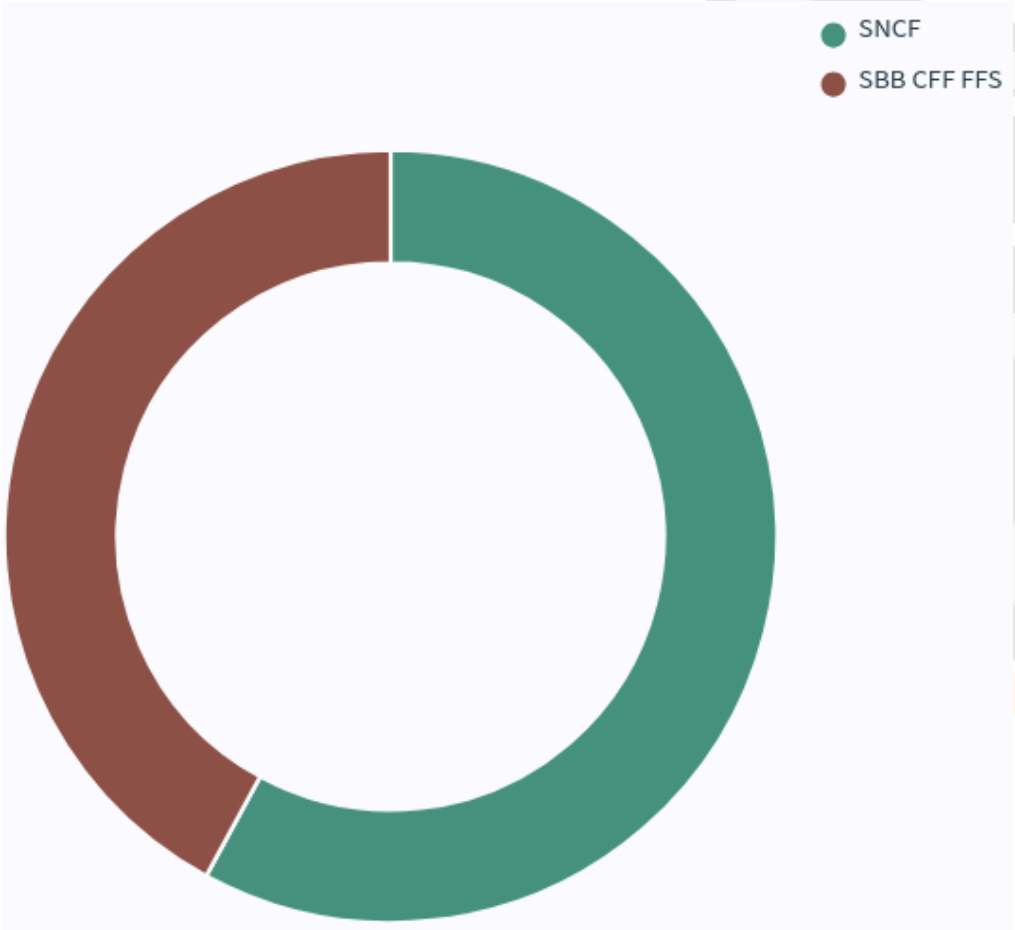
Website: No website

Description:

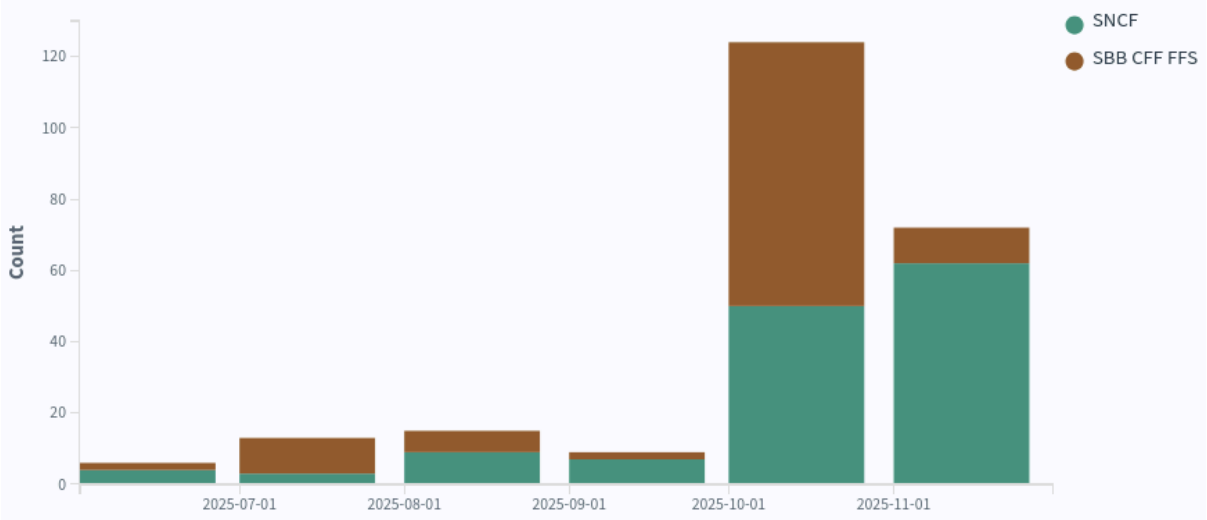
A mature tool for creating and analyzing regular-interval timetables. It's versatile for logistics planning in various domains. Features include interactive editing, graphic timetables, trainrun editing, and logistics analysis.

Contributors: 23 (11 committers**)** between September and November (incl.)

Code-committing organizations:



Activity trend (human commits):



Repositories:

- https://github.com/OpenRailAssociation/netzgrafik-editor-backend.git
- https://github.com/OpenRailAssociation/netzgrafik-editor-frontend.git

liblrs

Website: No website

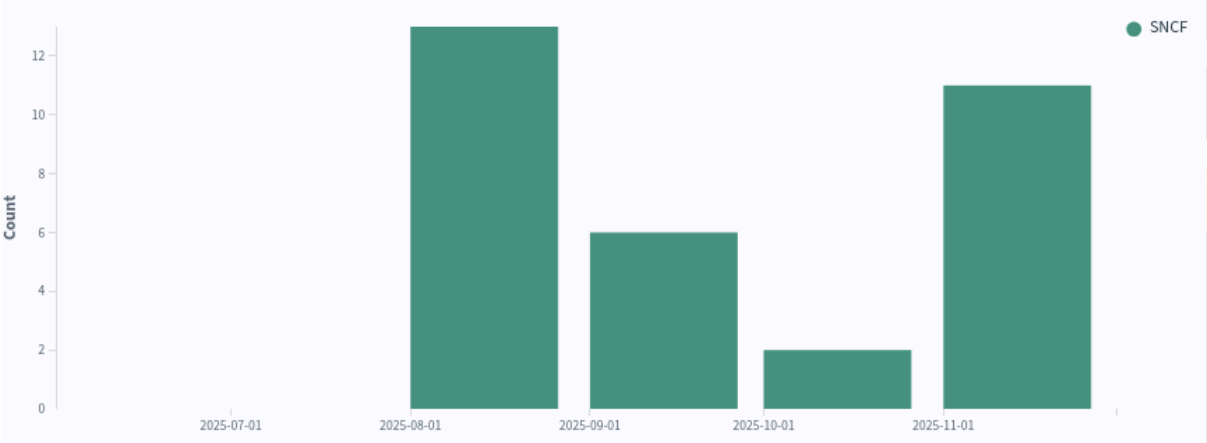
Description:

Library for Linear Reference Systems (LRS). It is used to manipulate linear coordinates and convert them from and to geographical coordinates. It helps to localize objects along curves (e.g. signals on a train track).

Contributors: 5 (3 committers**)** between September and November (incl.)

Key organizations: SNCF.

Activity trend (human commits):



Repositories:

- https://github.com/OpenRailAssociation/liblrs.git

Appendices

Methodology

Leveraging its open-source Bitergia Analytics Platform[2] toolset, Bitergia applies data hygiene and transforms raw, siloed community activity collected from many collaboration tools. In the case of OpenRail Association, we only collect data from Git commits, and GitHub issues, pull requests and repositories.

The different identities of every contributor over time and across collaboration tools are then merged to build its individual profile, yielding trustworthy datasets that accurately reflect genuine human engagement (we count the same person once). Bots are filtered as needed.

By applying the pareto principle, some automations, and manual effort, we assign temporal organizational affiliations (e.g. contributions before being hired are not attributed to the current employer) to the most active contributors to maximize the affiliation of contributions. Error rates are kept under control. Metric calculations are reproducible, so they can be re-calculated after data fixes.

Bitergia

[3]Bitergia originated as a spin-off from a university research team that studied the collaboration within open source software development. There, tools were built and models were validated models for rigorous analysis of software development projects, establishing a lineage of academic rigor that underpins all Bitergia analytics.

Bitergia is a founding and leading member of the **CHAOSS** (Community Health Analytics for Open Source Software) project, co-shaping the community-vetted standard metrics for open source health and sustainability.

Its deep fusion of academic research, open-source transparency, and methodological discipline positions Bitergia as the essential authority for organizations seeking to measure the value, govern the structure, and ensure the long-term health of their free software communities.

[2] https://bitergia.com/bitergia-analytics/
[3] https://bitergia.com

OpenRail

https://openrailassociation.org

Why OpenRail Association?

Over the years, many private or commercial initiatives have resulted in valuable, but mostly "in-house" applications or frameworks. These disconnected initiatives necessarily overlap, within a context of constrained IT development resources.

Efficiency and Rationalization of efforts

The objective of the OpenRail Association Initiative is to provide an open space to foster innovation and software development in the railway sector.

Software development activity is now an inherent part of rail operations, and all players have software development teams working on internal projects. Often using tools provided by private software publishers, these teams continually create value. They know the needs and constraints of the business. They can innovate and propose reliable technical solutions. They are already doing this, but in isolation.

OpenRail Association's vision is to federate the efforts that are made by software development teams in the railway sector around the world in open, collaborative, scalable and robust software projects.

Open source software by the railways and for the railways.

The Open Rail Association

The OpenRail Association, founded as an international non-profit organization in 2024, provides a neutral space for hosting and developing open source software in the railway sector. Its objective is to help railways, industry and academia to increase efficiency, accelerate innovation, and strengthen interoperability by bringing proven open source concepts to the railway world.

CONNECT WITH US!

Bitergia helps companies and organizations managing open source and InnerSource software development. We provide the tools and insights to effectively manage and understand development processes, community dynamics, and key performance factors.

Interested in diving deeper into the **OpenRail** metrics with us?

Please reach out to our research team

info@bitergia.com

bitergia.com

Bitergia

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