

Your Partner for Railway Operations Planning & Simulation

*Supporting railway projects
internationally*



*From Service Requirements to
Workable Railway Operations*

RAILWAY OPERATIONS PLANNING & SIMULATION

From service requirements to workable railway operations

RSE develops operating concepts and service plans for new railway lines, extensions, upgrades and existing networks. We translate project requirements into practical operating plans, then use detailed analysis and simulation to verify performance before implementation.

Operations Planning Services



Operations Concept and Service Planning

Define service patterns and frequencies, plan mixed passenger and freight services, and optimise traffic flow.



Timetable Development and Verification

Assess runtimes, headways, dwell times, train paths, conflicts and fleet cycles.



Capacity and Infrastructure Assessment

Identify constraints across lines, stations, junctions, terminals, depots and sidings.



Operational Resilience and Failure Analysis

Evaluate delays, failures, degraded modes, recovery performance and resilience.



Construction and Temporary Operations Planning

Plan track closures, construction stages, temporary operating arrangements and service continuity.



Design and Requirements Verification

Use simulation to verify infrastructure, signalling and operating concepts.

Plan the service. Test the operation. Strengthen the decision.

Clear assumptions, tested scenarios and practical recommendations for railway design, investment and implementation.

Planning and Simulation Tools

Specialist tools supporting informed railway planning and operational decisions

RSE applies specialist railway planning and simulation tools to support informed, evidence-based project decisions.

OpenTrack – Railway Simulation

- Running time, headway and timetable simulation
- Capacity, conflict and bottleneck analysis
- Signalling, infrastructure and robustness assessment

OPEN  **TRACK**

Viriato – Timetable Planning

- Long-term and annual timetable development
- Graphical timetable and train-path planning
- Running-time calculation and conflict detection

sma+  **viriato**

OpenPowerNet – Traction Power Analysis

- Traction-power simulation linked with train operations
- Pantograph voltage, network loading and substation assessment
- Energy consumption and power-system capacity evaluation

 **OpenPowerNet**

OpenPowerNet studies are undertaken in cooperation with IFB, the developer of OpenPowerNet, where required.

Training and Technical Support

RSE is the official OpenTrack representative for East and Southeast Asia and the Viriato representative for Malaysia and the ASEAN region. We provide local implementation, project setup, training and technical support.

- Software installation, configuration and project setup
- Initial and advanced user training with practical exercises
- Assistance during project execution and ongoing technical guidance



Practical training and local support—helping teams apply the tools with confidence.



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**Operations Planning · Timetable Planning · Railway Simulation
Capacity Assessment · Feasibility Studies**

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Railway Data Management