

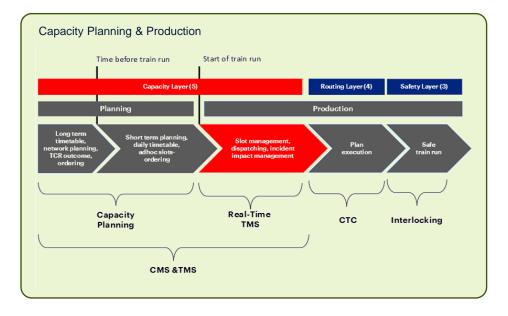
Task 3: TMS/CMS

The Task 3 Capacity and Traffic Management is the domains responsible for all planning activities including producing the operational plan and keeping it up to date, based upon the RT-operational state and RT-operational events of a railway infrastructure provider.

The two main areas of activities are:

- **Capacity planning (CMS):** long and short-term Capacity planning (infrastructure planning, planning resulting from Temporary Capacity Restrictions (TCRs)) and,
- Capacity production (TMS): Capacity production based on capacity plan including its dispatching to Traffic CS and management of disruptions

The idea behind a European roof CMS & TMS is to strengthen the cooperation in the traffic planning and management in the form of a European network. The network is based on the full commitment of each RIM to implement guidelines which will allow a major improvement in the quality of international traffic management.



System Architecture - Railway System - CMS & TMS Scope Client Layer (Passenger/Freight) Information Service Lave **Rail System** Transport Network Layer (ROC) Infrastructure Planning Rolling Stock Planning Crew Pla ົດ sport Infrastructure Capacity Layer Capacity & Traffic ent (C & TM Routing Laver Other Safety Laver Trackside Assets Contro & Supervision (SA CS) Platform (Voice & Vehicle Layer (ROC) Train Control & Supervision (Train CS) Physical Layer Control & Sun (Tracks / Trackside Assets / Stations Yards / Energy Supply) CCS/TMS/CMS

The Task 3: TMS/CMS Team will focus on developing the following new functions and technical enablers for the **"Harmonized European Rail Operation"** migration plateau and the **"Automated European Railway"**:

- · Long-term and Short-term Capacity planning and support to defined Operational Processes
- Instantiation of an operational plan based on the capacity plan and real-time adaptation to the evolution due to the real-time field events
- Traffic management for any topology geometry according the published data model
- Conflict Detection and Solution and Operational Plan optimization
- · Management of the impact due to incidents and collaboration with neighboring systems
- Integration into the Digital European Railway
- TMS / CMS: Full SP Task 3 architecture



Task 3: TMS/CMS



Lead STIP Deliverables

- STIP_16: Integration of TTR messages (D03) tbd
- STIP_17: Function distribution and Interface between TMS/TCS (D03) 2026
- STIP_18: Function distribution and Interface between TMS/CMS (D02) 2026

Deliverables Request for Service (SC2.4) - Year 3 [Oct-24 - Oct-25]

D01 Interface TMS/Traffic CS: Update Func. distribution and Interface between TMS/TCS - Q3 2025

D02 Recommendation of harmonization scope TMS/CMS - Q1 2025

D03 Integration of TTR Messages- Q3 2025

D04 Cross border variants analysis CMS & TMS $-\,\mathrm{Q3}\,2025$

Latest Achievements, Challenges and Design Decisions (to be filled periodically by the domain)

- Latest Achievements: The following achievements have been accomplished by the CMS/TMS domain:
 - Planned 2024 Deliverables: Released for SP domain, CG and Mirror Group review.
 - Remit Plan 2023-2024- Summary of activities: Cover document released to gave a synthesis of 2024 activities
 - CMS TMS Variants Executive Summary SPSG: Cover document focusing on CMS/TMS Variants analysis, for SP STG
 - Task 3 Kickoff: meeting done, to agree and start 2024 planned activities.
- Domain Current challenges: The domain is facing the following challenges:
 - **TMS/Traffic CS interface :** Anticipate the finalization of the Interface TMS/Traffic CS specification, to support Motional design activity
 - **Domain Stability**: Ensure work continuity in SC2.4 period, replacing contribution SBB who left SP
- **Design Decisions:** The domain has made the following design decisions that impact the Overall Model: None

Expected outcomes for sector review in the next 3 months

Closeout Phase 2.3

- Document update and release according to Mirror Group and other stakeholders' reviews
- Close Cover documents with integrations from SPCG review

• Prepare Phase 2.4

- Set up of roles of team members in the RACI Matrix
- Finalize 2025 planning with intermediate milestones in Polarion