

Task 2: Transversal CCS

and for engineering use cases.



System Pillar TCCS Domain supports the end-to-end data process in digital railways



Lead STIP Deliverables

- STIP_8: Data interface between Digital Register and CCS/TMS components (Phase 1) 2025
- STIP_10: Specification of Standardized Diagnostics Interface (CCS/TMS): System requirement specification for an integrated technical diagnostic and monitoring system on CCS level including standardized data, functionality, interfaces, and protocols – 2025
- STIP_11: CCS/TMS Data Model see https://github.com/StructLab/CCSTMS-Data-Model
- STIP_7: Specification of Standardized Maintenance Interface (CCS/TMS): Definition of the methods/protocol/data to be implemented by the CCS system components. 2026
- STIP_6: Configuration management 2026

Latest Achievements, Challenges and Design Decisions

- Latest Achievements: The following achievements have been accomplished by the Transverse CCS domain:
 - Achievement #1: ERA extended ontology encompasses the CCS/TMS Data Model in full. 2monthly updates foreseen. ERA GitLab becomes starting point for users.
 - Achievement #2: EU-RAIL MOTIONAL in cooperation with System Pillar TCCS provided the DOW on data validation process and prototype development to ERJU
 - Achievement #3: Product Group Models for Diagnosis under joint development with Task 5
 - Achievement #4: Reference implementations for service function diagnosis and service function configuration under preparation
- **Domain Current challenges:** The domain is facing the following challenges:
 - **Challenge #1:** Finding testing opportunities for diagnosis and configuration according to SP STG Decision 4/2024
 - Challenge #2: Development of Data Validation Tool by ERJU to be contracted
- Design Decisions: The domain has made the following design decisions that impact the Overall Model: Service Function Configuration has been upgraded for matching with cascading registries and thus serving overall system requirements: <u>https://polarion.rail-</u> <u>research.europa.eu/polarion/#/project/SPT2TS/wiki/TCCS%20Planning/TCCS%20Document%20</u> <u>Plan</u>

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- **D01 SD1 Data model & Digital Registry -** Q3 2025
- **D02** SD2: Generic Diagnostics System Specification Q3 2025
- **D03** SD2: Traffic CS Diagnostics Data Model Specification Q3 2025
- **D04 SD3 Configuration & Maintenance Management** Q3 2025
- **D05** SD3: Configuration Management Specification for trackside constituents Q3 2025

Expected outcomes for sector review in the next 3 months

- TCCS E2E data process overview document including document plan and timeline has been agreed with domains and projects in EU-RAIL and forwarded to SP STG for information in the upcoming SP STG Meeting on 6/2025.
- Proposal for contributing to SCI-CMD with data related to the ERA-extended ontology and the associated "Catalogue of symbols" (CoS)
- Identification of test opportunities for diagnosis (SDI) and configuration (SMI v3) processes

