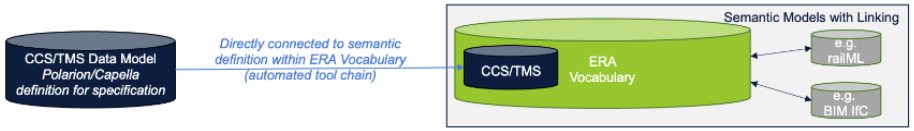
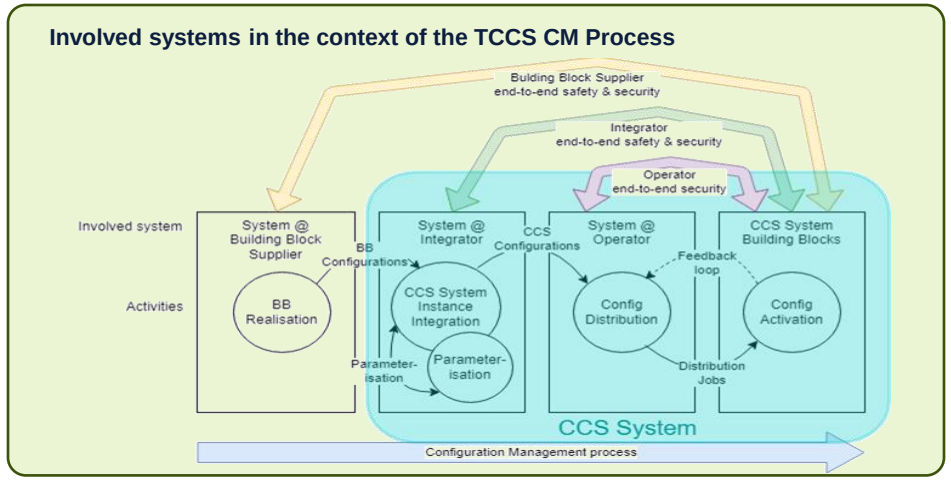
Task 2: Transversal CCS

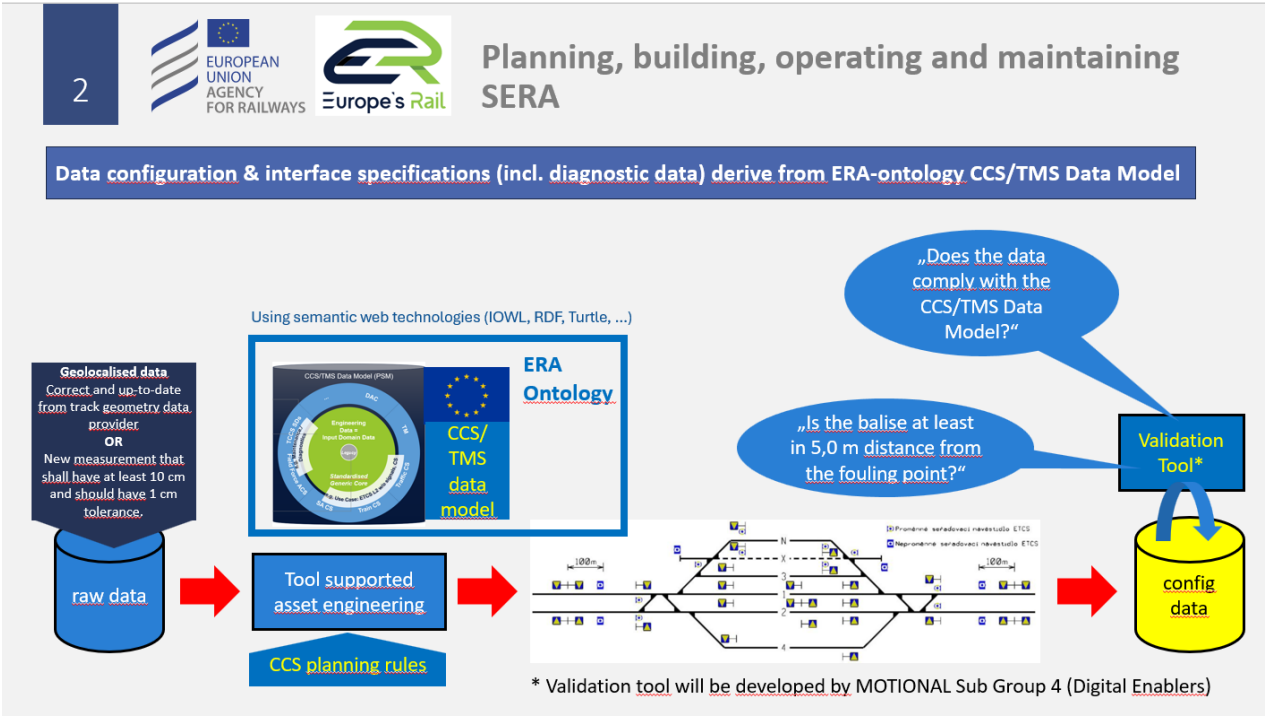
The Task 2 Transversal Systems domain and its three subdomains provide systems, standard protocols, and data structures for functionalities that are needed on network level and for engineering use cases.

The main responsibilities of Transversal CCS Domain are

- Define engineering and asset data, functional network topologies (maps), harmonized graphical representation
- Provide Asset Condition data and technical intervention management, Harmonised Diagnostics for CCS Systems Trackside and Onboard
- CCS Configuration Management Trackside and Onboard
- Setup and manage Transversal Taskforces with impacted Domains to deliver respective work







The Task 2 Transversal CCS Team will focus on developing the following new functions and technical enablers for the **“Harmonized European Rail Operation” migration plateau**:

- Harmonized “command " interface SCI-CMD between TPS and EAL
- All other interfaces of the System Pillar Target Architecture, which are perhaps agreed and published at this time, can be used for optional implementation.

Task 2: Transversal CCS

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/CCS-TMS-1.0/tree/main
- **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** - tbd

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

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

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

- **Latest Achievements:** The following achievements have been accomplished by the Transverse CCS domain:
  - **Achievement #1:** CCS/TMS Data Model published (see STIP 11) according to SP STG Decision 3/2024: https://rail-research.europa.eu/wp-content/uploads/2024/10/20241030-CCS-TMS-data-model-Decision-2024-03-final-clean.pdf
  - **Achievement #2:** EU-RAIL internal publication of the CCS/TMS diagnosis and configuration concepts to allow testing and validation and further development (see STIP 6, 7, 10) according to SP STG Decision 4/2024: https://rail-research.europa.eu/wp-content/uploads/2024/10/20240913-Diagnostics-and-configuration-Decision-2024-04-final.pdf
- **Domain Current challenges:** The domain is facing the following challenges:
  - **Challenge #1:** Extending the ERA-ontology according to SP STG Decision 3/2024
  - **Challenge #1:** Finding testing opportunities for diagnosis and configuration according to SP STG Decision 4/2024
- **Design Decisions:** The domain has made the following design decisions that impact the Overall Model: NA

Expected outcomes for sector review in the next 3 months

- Establishing and consolidating collaboration with Domains and Projects as required by SC2.4 and beyond, if needed
- CCS/TMS Data Model fully derived from extended ERA-ontology, including extended diagnosis domain
- Proposal for contributing to SCI-CMD with data related to the catalog of symbols
- Further update and extension of the catalog of symbols
- Progressing with SDI and SMI+ specification further towards level 5 (PA)
- Identification of first test opportunities for diagnosis (SDI) and configuration (SMI+) processes