

DECISION OF THE SYSTEM PILLAR STEERING GROUP

Approval of the 2026 revision to the Train CS System Architecture Description

N° 09/2026

THE SYSTEM PILLAR STEERING GROUP OF EUROPE'S RAIL JOINT UNDERTAKING,
NOTES:

PURPOSE OF THE DECISION

The Train CS Architecture Baseline 2 was approved under Decision N° 8/2025. The present decision does not reopen that complete architectural baseline. It asks the SP-STG to approve the material changes introduced in the 2026 Train CS System Architecture Description and to confirm the scope of that approval.

WHY A REVISION IS PRESENTED

Since the 2025 approval, the former Train CS Architecture Baseline 2 has been reorganised into two deliverables:

- the Train CS System Architecture Description, containing the CCS-OB architectural content; and
- a separate Train CS Migration document, containing migration, deployment and upgradeability considerations.

The 2026 SAD also incorporates additional work completed by the Train CS domain, other System Pillar domains and the Innovation Pillar. The architectural direction approved in 2025 remains unchanged.

WHAT HAS CHANGED

- Target 1 has been clarified. Its principal elements are the CCS Consist Network, FRMCS support, Train Interface enhancements, Train Length and Train Integrity where relevant, and Shared Cybersecurity Services.
- Odometry performance and robustness enhancements and the Odometry/Localisation interface remain under discussion and are excluded from approval by this decision.
- Full ASTP and the Multi-Display System are now clearly positioned in the non-binding Target 2/A outlook.
- Cybersecurity content has been further integrated into the Target 1 physical architecture.
- The Computing Environment content is clarified as an impact analysis only. It is not proposed as an approved Target 1 architectural element or deployment solution.
- The Target 2/A outlook has been expanded with Remote Driving contributions, Repository-based track-train communication, ATO up to GoA4, ADM, APM, Perception, Full ASTP, GNSS/EGNOS and future compatibility considerations.

WHAT SP-STG MEMBERS ARE ASKED TO CONSIDER

- the separation of the previously approved combined document into the SAD and the Train CS Migration document;
- the clarified Target 1 content and approval boundary;
- the exclusion of the pending odometry enhancement and Odometry/Localisation interface decision;
- the updated cybersecurity content as part of the Target 1 architectural basis;
- the Computing Environment content as an impact analysis only; and
- the updated Target 2/A content as a non-binding architectural outlook.

APPROVALS

The Train CS System Architecture Description was approved by the Train CS domain for sector review as version 1.2 and version 1.3 was submitted for Core Group review in August 2026 and approved by Core Group during the Train CS closing on 15th of September 2026.

THE SYSTEM PILLAR STEERING GROUP OF EUROPE'S RAIL JOINT UNDERTAKING, AGREES:

- That the architectural direction approved under Decision N° 8/2025 remains valid.
- That the reorganisation of the former Train CS Architecture Baseline 2 into the Train CS System Architecture Description and a separate Train CS Migration document is acknowledged.
- That the material changes to the Target 1 architecture described in this decision, excluding the pending odometry enhancement and Odometry/Localisation interface decision, are approved as an updated basis for future sector work, pre-assessment activities and preparation of Change Requests towards ERTMS.
- That odometry performance and robustness enhancements and the associated Odometry/Localisation interface remain pending and shall be submitted separately for Sector decision.
- That the updated Target 2/A content is acknowledged as a non-binding architectural outlook and does not constitute approval of the individual concepts, allocations, interfaces, technical solutions or specifications represented therein.
- That the Computing Environment content is acknowledged as an impact analysis only and does not approve a Target 1 architectural element or a CCS-OB deployment solution.
- That future specification and implementation decisions shall follow the applicable System Pillar technical and governance processes.

ANNEX A - SUBMITTED DOCUMENT

SPT2-TrainCS_D5a_On_board_modularity_System_Architecture_Description_Train_CS_v3

ANNEX B - READER GUIDANCE

1. Document restructuring

The previously approved baseline combined architecture and migration content. The revision separates the architectural description from migration, deployment and upgradeability recommendations. This change clarifies document purpose and approval scope; it does not change the architectural direction approved in 2025.

2. Target 1 clarification

The revision distinguishes approved architectural basis, evolving elements and pending topics. Odometry enhancement and its associated interface remain pending. Full ASTP and MDS are treated as later-target outlook topics.

3. Target 1 technical updates

The SAD further integrates cybersecurity into the Target 1 physical architecture. The Computing Environment analysis is retained solely to assess potential architectural impact and does not approve its deployment in Target 1.

4. Target 2/A extension

The outlook has been expanded using System Pillar and Innovation Pillar inputs concerning Remote Driving, Repository-based communication, ATO up to GoA4, ADM, APM, Perception, Full ASTP, GNSS/EGNOS, MDS and compatibility. These remain non-binding future-work inputs.

5. Focused review

Members should review the revised approval boundary, the pending odometry topic, the Target 1 cybersecurity integration, the limitation applied to the Computing Environment analysis and the non-binding status of Target 2/A. A full reassessment of unchanged architectural content is not requested.