

OCORA

Open CCS On-board Reference Architecture

Release Notes

OCORA Release R4

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Revision history

Version	Change Description	Initial	Date of change
0.90	DRAFT version for Review	RM	06.06.2023
1.00	Official version for Release	RM	04.07.2023

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1 Release

The OCORA Release R4 is the eighth release (after Alpha, Beta, Gamma, Delta, R1, R2 and R3) of documents prepared by the OCORA cooperation.

- OCORA R4 adds new content and provides deeper insight into a selection of topics.
- It completely replaces the OCORA Alpha, Beta, Gamma, Delta, R1, R2 and R3 Release.

OCORA Release R4 provides its content in a structured manner and provides topic specific documents. An overview is given in chapter 5 Content, highlights are:

- Streamlined Introduction to OCORA and Guiding Principles
- Updated Road Map timewise reflecting EU-Rail System- & Innovation-Pillar
- Results of the Modularisation and Granularity exchange with EU-Rail System-Pillar and X2Rail4, resulting in a Modularisation Roadmap
- Updated CCS Consist Network considering TSI-2023 Subset SS-146 & SS-147, incl. Addendum
- Results PoC Online Monitoring System SS-149

2 Imprint

- Publisher: OCORA Cooperation
- Channel: OCORA publishes exclusively over <https://github.com/OCORA-Public/Publication>
- Any feedback for OCORA is welcome! If you would like to attend a workshop or give a feedback, please contact rolf.muehlemann2@sbb.ch. For specific feedback the *OCORA-BWS01-040 – Feedback Form* shall be used.
- For active collaboration (within the OCORA framework) the OCORA Code of Conduct must be accepted and signed. In case of interest for active collaboration and you are eligible to become a partner according to the OCORA Code of conduct, please drop a "interest of becoming a OCORA member by E-mail" to rolf.muehlemann2@sbb.ch.
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3 Capella Model publishing Announcement

In addition to the official OCORA releases, frequent publications of the Capella Model shall facilitate discussions with other initiatives (e.g. X2Rail4, EU-Rail System-Pillar) and/or potential suppliers without overreaching someone. Model updates will be available for download on OCORA public GitHub.

4 Authors and Reviewers

The OCORA Release has been reviewed by several technical experts, approved by the OCORA Core Team and endorsed for publication by the OCORA Steering Committee.

5 Content

Doc ID – Doc Title	Change	Version
Release Documentation from Business Workstream BWS01		
OCORA-BWS01-010 – Release Notes	Update for R4	1.00
OCORA-BWS01-020 – Glossary	Minimal update for R4	3.3
OCORA-BWS01-030 – Question and Answers	Update for R4	4.11
OCORA-BWS01-040 – Feedback Form	Updated Doc list for R4	1.00
Communication Material from Business Workstream BWS02		
OCORA-BWS02-010 – Executive Summary Slide Deck	Update for R4	1.01
OCORA-BWS02-020 – Program Slide Deck	Update for R4	1.01
OCORA-BWS02-030 – Technical Slide Deck	Update for R4	4.00
OCORA-BWS02-040 – Program Posters	Update for R4	1.11
OCORA-BWS02-050 – Technical Posters	Update for R4	4.00
Program Documentation from Business Workstreams BWS03-08		
OCORA-BWS03-010 – Introduction to OCORA	Update for R4	6.20
OCORA-BWS03-020 – Guiding Principles	Update for R4	2.10
OCORA-BWS04-010 – Problem Statements	Minimal update for R4	4.20
OCORA-BWS05-010 – Road Map	Minimal update for R4	2.20
OCORA-BWS06-010 – Economic Model – Guiding Principles - Assumptions - Assessment Criteria	Minimal update for R4	2.11
OCORA-BWS06-020 – Economic Model	No change for R4	1.00
OCORA-BWS06-030 – Economic Model – Model Description	Minimal update for R4	2.11
OCORA-BWS06-040 – Economic Model – User Manual	Minimal update for R4	2.11
OCORA-BWS06-050 – Economic Model – CCS System Life Cycle Costing Scenario Studies	Minimal update for R4	1.11
OCORA-BWS06-060 – Economic Model – CCS Impact on Vehicle System Life Cycle Costing Scenario Studies	Minimal update for R4	1.10
OCORA-BWS06-070 – Economic Model – Evolution of the modeling	Minimal update for R4	1.10
OCORA-BWS07-010 – Alliances	Minimal update for R4	4.21
OCORA-BWS08-010 – Methodology	No change for R4	3.01
OCORA-BWS08-020 – Tooling	No change for R4	3.10
Technical Documentation from Technical Workstreams TWS01-15		
OCORA-TWS01-010 – Design Requirements	Minimal update for R4	2.2
OCORA-TWS01-025 – Modularisation Roadmap Proposal	New for R4	1.00
OCORA-TWS01-030 – System Architecture	Update for R4	4.00
OCORA-TWS01-035 – CCS On-Board (CCS-OB) – Architecture	Update for R4	4.00
OCORA-TWS01-040 – Capella Modelling	Update for R4	3.20
OCORA-TWS01-041 – MBSE Modelling Guidelines	Update for R4	2.10
OCORA-TWS01-050 – Capella Model Export	Update for R4	30.06.23
OCORA-TWS01-100 – Localisation On-Board (LOC-OB) – Introduction	Update for R4	4.00
OCORA-TWS01-101 – Localisation On-Board (LOC-OB) – Requirements	Update for R4	3.1
EUG 22E126 – LOC-OB System Definition & Operational Context	Update for R4	1.2
EUG 22E135 – LOC-OB Risk Analysis	No change for R4	2.0
OCORA-TWS01-112 – Automated Train Protection On-Board (ATP-OB) - MLM Interface Analysis	No change for R4	1.1
OCORA-TWS01-201 – Train Display System – Discussion Paper	New for R4	1.0
OCORA-TWS02-010 – CCS Communication Network – Evaluation	Minimal update for R4	5.00
OCORA-TWS02-020 – CCS Communication Network – Proof of Concept (PoC)	Minimal update for R4	5.00
OCORA-TWS02-030 – Addendum to SUBSET-147	New for R4	1.00
OCORA-TWS03-010 – SCP – Whitepaper Computing Platform for Railway Applications	No change for R4	1.1
OCORA-TWS03-020 – SCP – High-Level Requirements	No change for R4	4.10
OCORA-TWS03-030 – SCP – Specification of the PI API between Application and Platform	No change for R4	2.0
OCORA-TWS04-010 – Functional Vehicle Adapter – Introduction	No change for R4	6.00
OCORA-TWS04-011 – Functional Vehicle Adapter – Requirements	No change for R4	3.00
OCORA-TWS04-012 – TCMS – Standard Communication Interface Specification	Update for R4	4.10
OCORA-TWS05-010 – Requirements – Management Guideline	No change for R4	2.20
OCORA-TWS05-020 – Stakeholder Requirements	Minimal update for R4	2.2
OCORA-TWS05-021 – Program Requirements	Minimal update for R4	2.2
OCORA-TWS07-010 – RAMS – Modular Safety Strategy	Minimal update for R4	3.50
OCORA-TWS07-020 – RAMS – Evolution Management	Minimal update for R4	3.50
OCORA-TWS07-030 – RAMS – SRAC/AC Management	Minimal update for R4	2.70
OCORA-TWS07-040 – RAMS – Optimised Approval Process	Minimal update for R4	2.30
OCORA-TWS07-050 – RAMS – RAM Strategy	Minimal update for R4	2.10
OCORA-TWS07-060 – Configuration Management – Concept	Update for R4	1.3
OCORA-TWS07-100 – CENELEC Phase 1 – Concept	Minimal update for R4	2.40
OCORA-TWS07-202 – QRAMSS – Plan	New for R4	1.00
OCORA-TWS07-203 – RAMSS – Policy	New for R4	1.00
OCORA-TWS08-010 – MDCM-OB – Introduction	Minimal update for R4	1.03
OCORA-TWS08-030 – MDCM-OB – SRS	Minimal update for R4	1.01
OCORA-TWS09-010 – Testing – Strategy	No change for R4	4.01
OCORA-TWS09-011 – Testing – Requirements	No change for R4	2.00
OCORA-TWS09-050 – Testing – Cybersecurity Testing Strategy	No change for R4	1.00
OCORA-TWS09-110 – Train Adapter Block Integration Plan	No change for R4	1.00
OCORA-TWS09-111 – Testing - Testplan Functional Vehicle Adapter	No change for R4	1.01
OCORA-TWS15-040 – CCS-OB Retrofit - Guideline for Projects	Update for R4	1.03
OCORA-TWS15-050 – PoC OMS SS-149 - Concept	Minimal update for R4	0.30
OCORA-TWS15-051 – PoC OMS SS-149 - Results	New for R4	0.10
OCORA-TWS15-060 – PoC Configuration Management - Concept	New for R4	0.10

Table 1 Release Documents and Content