

OCORA

Open CCS On-board Reference Architecture

Release Notes

OCORA Release R3

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Document ID: OCORA-BWS01-010

Version: 1.01

Date: 03.02.2023

Revision history

Version	Change Description	Initial	Date of change
0.90	• DRAFT version for Review	RM	17.11.2022
1.00	Official version for Release	RM	09.12.2022
1.01	Official version for Release incl. post-released documents	RM	03.02.2023

Table of contents

1	Release	3
2	Imprint	3
3	Capella Model publishing Announcement	3
4	Authors and Reviewers	3
5	Content	4

Table of tables

Table 1	Release Documents and Content	4
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1 Release

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

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

OCORA Release R3 provides its content in a structured manner and provides topic specific documents. An overview is given in chapter 5 Content, highlights are:

- An updated Economic Model
- New Concept on Configuration Management
- Significantly enriched Operational & System Analysis
- Results of the Architecture synchronization of X2Rail4 and RCA
- Enriched investigation results related to the need for TRDP in the CCS Communication Network
- Requirements on Monitoring, Configuration, Diagnoses and Maintenance
- Final Concept for the PoC on 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. RCA, X2Rail4, LinX4Rail) 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 Coreteam 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 R3	1.00
OCORA-BWS01-020 – Glossary	Minimal update for R3	3.21
OCORA-BWS01-030 – Question and Answers	No change	4.00
OCORA-BWS01-040 – Feedback Form	Updated Doc list for R3	1.10
Communication Material from Business Workstream BWS02 –		
OCORA-BWS02-010 – Executive Summary Slide Deck	Update for R3	1.01
OCORA-BWS02-020 – Program Slide Deck	Update for R3	1.01
OCORA-BWS02-030 – Technical Slide Deck	Update for R3	3.00
OCORA-BWS02-040 – Program Posters	Update for R3	1.11
OCORA-BWS02-050 – Technical Posters	Update for R3	3.00
Program Documentation from Business Workstreams BWS03-09 –		
OCORA-BWS03-010 – Introduction to OCORA	Minimal update for R3	6.10
OCORA-BWS03-020 – Guiding Principles	No change	2.01
OCORA-BWS04-010 – Problem Statements	Minimal update for R3	4.10
OCORA-BWS05-010 – Road Map	Update for R3	2.10
OCORA-BWS06-010 – Economic Model – Guiding Principles - Assumptions - Assessment Criteria	No change	2.01
OCORA-BWS06-020 – Economic Model	Update for R3	1.00
OCORA-BWS06-030 – Economic Model – Model Description	No change	2.01
OCORA-BWS06-040 – Economic Model – User Manual	No change	2.01
OCORA-BWS06-050 – Economic Model – CCS System Life Cycle Costing Scenario Studies	No change	1.01
OCORA-BWS06-060 – Economic Model – CCS Impact on Vehicle System Life Cycle Costing Scenario Studies	No change	1.00
OCORA-BWS06-070 – Economic Model – Evolution of the modeling	New for R3	1.00
OCORA-BWS07-010 – Alliances	Update for R3	4.11
OCORA-BWS08-010 – Methodology	No change	3.01
OCORA-BWS08-020 – Tooling	No change	3.10
OCORA-BWS09-010 – Acceptance of Global Standards – Overview	No change	3.01
OCORA-BWS09-020 – Acceptance of Global Standards – Focus on Safety in CCS	No change	2.01
OCORA-BWS09-030 – Acceptance of Global Standards – Cartography of Standards	No change	1.01
OCORA-BWS09-040 – Acceptance of Global Standards – Assessment of Railway Sectoral Needs	No change	2.10
Technical Documentation from Technical Workstreams TWS01-15 –		
OCORA-TWS01-010 – Design Requirements	No change	2.10
OCORA-TWS01-020 – Operational & System Analysis	Update for R3	3.00
OCORA-TWS01-030 – System Architecture	Update for R3	3.00
OCORA-TWS01-035 – CCS On-Board (CCS-OB) – Architecture	Update for R3	3.00
OCORA-TWS01-040 – Capella Modelling	Update for R3	3.10
OCORA-TWS01-041 – MBSE Modelling Guidelines	Update for R3	2.00
OCORA-TWS01-050 – Capella Model Export	Update for R3	08.12.22
OCORA-TWS01-100 – Localisation On-Board (LOC-OB) – Introduction	Update for R3	3.00
OCORA-TWS01-101 – Localisation On-Board (LOC-OB) – Requirements	Update for R3	3.00
EUG 22E126 – LOC-OB System Definition & Operational Context	Update for R3	1.1
EUG 22E135 – LOC-OB Risk Analysis	Update for R3	2.0
OCORA-TWS01-112 – Automated Train Protection On-Board (ATP-OB) - MLM Interface Analysis	No change	1.10
OCORA-TWS02-010 – CCS Communication Network – Evaluation	Update for R3	4.00
OCORA-TWS02-020 – CCS Communication Network – Proof of Concept (PoC)	Update for R3	4.00
OCORA-TWS03-010 – SCP – Whitepaper Computing Platform for Railway Applications	No change	1.10
OCORA-TWS03-020 – SCP – High-Level Requirements	Update for R3	4.10
OCORA-TWS03-030 – SCP – Specification of the PI API between Application and Platform	No change	2.00
OCORA-TWS04-010 – Functional Vehicle Adapter – Introduction	Update for R3	6.00
OCORA-TWS04-011 – Functional Vehicle Adapter – Requirements	No change	3.00
OCORA-TWS04-012 – TCMS – Standard Communication Interface Specification	Update for R3	4.00
OCORA-TWS05-010 – Requirements – Management Guideline	No change	2.20
OCORA-TWS05-020 – Stakeholder Requirements	Minimal update for R3	2.11
OCORA-TWS05-021 – Program Requirements	No change	2.10
OCORA-TWS06-010 – (Cyber-) Security – Project Security Management Plan	Update for R3	4.00
OCORA-TWS06-030 – (Cyber-) Security – Concept	Update for R3	2.00
OCORA-TWS07-010 – RAMS – Modular Safety Strategy	Update for R3	3.30
OCORA-TWS07-020 – RAMS – Evolution Management	Update for R3	3.40
OCORA-TWS07-030 – RAMS – SRAC/AC Management	No change	2.60
OCORA-TWS07-040 – RAMS – Optimized Approval Process	Update for R3	2.20
OCORA-TWS07-050 – RAMS – RAM Strategy	Update for R3	2.00
OCORA-TWS07-060 – Configuration Management – Concept	New for R3	1.10
OCORA-TWS07-100 – CENELEC Phase 1 – Concept	No change	2.30
OCORA-TWS07-201 – QRAMS – QRAMS Strategy	New for R3	1.01
OCORA-TWS08-010 – MDCM-OB – Introduction	Minimal update for R3	1.02
OCORA-TWS08-030 – MDCM-OB – SRS	New for R3	1.00
OCORA-TWS09-010 – Testing – Strategy	Update for R3	4.01
OCORA-TWS09-011 – Testing – Requirements	Minimal update for R3	2.00
OCORA-TWS09-050 – Testing – Cybersecurity Testing Strategy	New for R3	1.00
OCORA-TWS09-110 – Train Adapter Block Integration Plan	No change	1.00
OCORA-TWS09-111 – Testing - Testplan Functional Vehicle Adapter	New for R3	1.01
OCORA-TWS15-040 – CCS-OB Retrofit - Guideline for Projects	New for R3	1.01
OCORA-TWS15-050 – PoC OMS SS-149 - Concept	Update for R3	1.10

Table 1 Release Documents and Content