

## Release notes

### RCA Baseline set 0, Release 3

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#### 1. RCA Baseline set 0, Release 3

RCA BL0 R2 is an internal release (after Alpha, Beta and Gamma, BL0 R1, BL0 R2) of the documents prepared by the RCA initiative.

- This release includes updates to previously released documents and several new documents. Content which belongs to the specification in strict sense is being prepared in a MBSE (model-based systems engineering) approach.
- The documentation structure is described in “RCA Documentation Plan” [RCA.Doc.6].
- Access: RCA public releases are made directly available here: <https://public.3.basecamp.com/p/Kee-hzqFmXv5R2N7tGDjaEokq> or through links on the EUG or EULYNX websites.
- This release is not yet a complete or precise specification of RCA. It is likely that the architecture will change/evolve, based on feedback we expect from within and outside of the RCA group.

#### 2. Imprint

- Publisher: RCA (an initiative of the ERTMS Users Group and EULYNX Consortium)  
ERTMS User Group ([www.ertms.be](http://www.ertms.be)) and EULYNX ([www.eulynx.eu](http://www.eulynx.eu))
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#### 3. New or updated content of RCA Baseline set 0, Release 2

The complete documentation plan can be found in [RCA.Doc.6]

Id	Name	Short description	Update BL0 R3
RCA.Doc.1	<b>RCA White Paper</b>	The rationale for starting RCA. Foundation for MoU between EUG and EULYNX.	Unchanged
RCA.Doc.3	<b>RCA Process Overview</b>	How the RCA group works to prepare, maintain and bring the RCA specification to the sector.	Unchanged
RCA.Doc.5	<b>RCA Release Notes</b>	Description of current release of RCA deliverables.	Update 11/2021 0.4 (0.A)
RCA.Doc.6	<b>RCA Documentation Plan</b>	Overview of the documentation set of RCA	Update 11/2021 0.5 (0.A)

RCA.Doc.7	<b>RCA FAQ</b>	Frequently asked questions and answers regarding RCA. Useful for a quick overview.	Unchanged
RCA.Doc.8	<b>Concept: Modular Safety</b>	A modular architecture requires and enables concepts to reduce the safety workload.	Unchanged
RCA.Doc.10	<b>Concept: RCA Effects - Business Case</b>	The economic effects (savings) of an RCA-based implementation, based on smartrail 4.0 and extrapolated to other IMs.	Unchanged
RCA.Doc.11	<b>Concept: Plattform Independence</b>	The need to achieve more modularity between applications and the platforms.	Unchanged
RCA.Doc.12	<b>Concept: RCA Effects - Capacity</b>	The effects on traffic capacity for an RCA-based system.	Unchanged
RCA.Doc.13	<b>Concept: Architectural approach / System-of-systems perspective</b>	Architectural principles for the RCA.	Unchanged
RCA.Doc.14	<b>RCA Glossary</b>	<b>Definition of used terms.</b>	<b>Update 11/2021 0.4 (0.A)</b>
RCA.Doc.15	<b>RCA System Concept</b>	A high-level description of the goals and fundamental concepts of RCA:	Unchanged
RCA.Doc.18	<b>RCA Domain knowledge</b>	Defines important domain concepts used in the specification.	Unchanged
RCA.Doc.28	<b>Migration</b>	Illustrates how migration towards an RCA-based system can be planned, including examples of different IMs.  Includes a summary of results in presentation format (Migration Results v0.9).	Unchanged
RCA.Doc.29	<b>Concept: LSL - Enhanced L3, Supervision, Localisation</b>	Evolution of ETCS, rationale for submitted TSI CRs.	Unchanged
RCA.Doc.30	<b>Concept: Principles of the safety logic</b>	Geometric-based interlocking for more capacity and flexibility.	Unchanged
RCA.Doc.31	<b>Concept: Operational plan</b>	<b>Concept for the standardized interface between RCA and a TMS.</b>	<b>Update 11/2021 1.4 (0.A)</b>
RCA.Doc.32	<b>Concept: Degraded modes</b>	The role of degraded modes in specifying RCA.	Unchanged
RCA.Doc.33	<b>Methods and Tooling : Arch Process</b>	<b>Describes the methods and tools used for developing the RCA specification.</b>	<b>New 11/2021 12 (0.A)</b>
RCA.Doc.34	<b>RCA Roadmap</b>	Overview planned development for RCA.	Unchanged
RCA.Doc.35	<b>RCA System Architecture</b>	Definition of the RCA System architecture	Unchanged
RCA.Doc.36	<b>RCA Documentation plan - Annex</b>	Visualization of the documentation plan.	Unchanged
RCA.Doc.37	<b>Concept: RCA effects overview</b>	Overview of potential the effects / benefits of an RCA-based system.	Unchanged

RCA.Doc.40	<b>RCA Architecture Poster</b>	Diagram of the interface architecture of RCA.	Update 11/2021 0.3 (0.A)
	<b>LWG: Railways Localisation System HL Users' Requirements</b>	Provided by the Localisation Working Group of the EUG.	Unchanged
RCA.Doc.43	<b>Concept: Informal Architecture Overview</b>	Provides an informal overview, until the MBSE-generated documents are officially published.	Unchanged
RCA.Doc.45	<b>(Cyber) Security Guideline</b>	A guideline to and definition of a harmonized Security Risk Assessment for System Design process	Unchanged
RCA.Doc.46	<b>Concept : Digital Map</b>	Concept for provision of track and trackside infrastructure information in the form of structured map data.	Unchanged
RCA.Doc.47	<b>Concept : Plan Execution</b>	Overview and the principles of plan execution.	Update 11/2021 0.3 (0.A)
RCA.Doc.48	<b>Realization of RCA goals</b>	Description of the goals and objectives of RCA	Unchanged
RCA.Doc.49	<b>Concept: Architectural Design for Plan Execution</b>	Description for the architectural design related to plan execution.	New 11/2021 0.2 (A.0)
RCA.Doc.50	<b>A.P.M business targets and strategy</b>	Describes the strategy of the A.P.M. part of RCA and business requirements	New 11/2021 0.5 (A.0)
RCA.Doc.53	<b>A.P.M objectives</b>	Objectives (high level requirements) list for APS	New 11/2021 0.3 (A.0)
RCA.Doc.55	<b>Digital Map Business Case</b>	Business Case for Digital Map	New 11/2021 1.0 (0.A)
RCA.Doc.56	<b>Digital Map Evaluation Onboard Map</b>	Solution evaluation for Onboard Map	New 11/2021 1.1 (0.A)
RCA.Doc.57	<b>Digital Map Evaluation Reference Model</b>	Reference Model for evaluation	New 11/2021 0.3 (0.A)
	<b>Computing Platform Whitepaper</b>	Whitepaper for Computing Platform	New 11/2021
	<b>Computing Platform Requirements</b>	Requirements for Computing Platform	New 11/2021
RCA.Doc.60	<b>Explanation to the RCA ARCH Processes</b>	Explanation of the architecture process applied in RCA	New 11/2021 1.0 (0.A)

#### Related documents:

- RCA white paper: the rationale for starting RCA, accessible here [https://ertms.be/workgroups/ccs\\_architecture](https://ertms.be/workgroups/ccs_architecture) and here <https://www.eulynx.eu/index.php/home2/37-reference-ccs-architecture-white-paper>.
- Command and Control 4.0 by Josef Doppelbauer (ERA): [https://www.era.europa.eu/sites/default/files/library/docs/command\\_and\\_control\\_en.pdf](https://www.era.europa.eu/sites/default/files/library/docs/command_and_control_en.pdf)

## 4. Feedback for RCA

Feedback for RCA is welcome! If you would like to attend a workshop or give feedback, please contact [rca@eulynx.eu](mailto:rca@eulynx.eu).

RCA will inform if and how feedback is integrated in future work. RCA will continue to provide regular updates in the form of new releases.

## **5. Authors and Reviewers of RCA**

The RCA initiative is initiated and supported by EUG and EULYNX.