

RCA

Reference CCS Architecture

An initiative of the ERTMS users group and the EULYNX consortium



RCA Roadmap

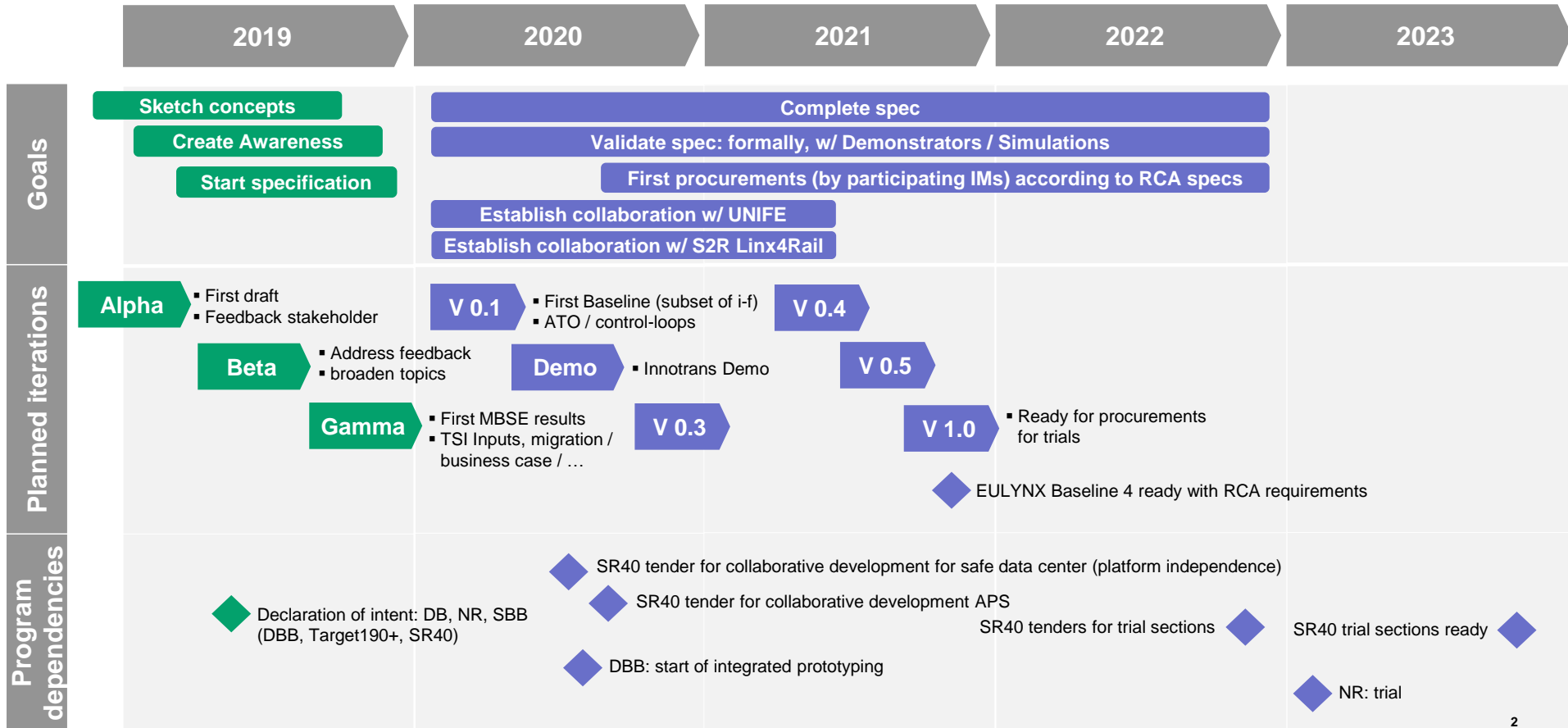
Document id: RCA.Doc.34

Version: Gamma.1

Date: 31.1.2020

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RCA Roadmap 2018-2022



RCA Roadmap 2019



August 2018

RCA Alpha

15.2.2019

- MoU EULYNX and EUG
- White-paper published

- Architecture overview
- Process overview
- FAQ
- Presentation / Workshop material

RCA Beta

23.8.2019

- Updated material of RCA Alpha (based on feedback Alpha)
- Concepts
 - Platform independence (draft)
 - Modular safety (draft)
 - architectural approach and system-of-systems (draft)
 - capacity effects (draft)
- Signed Declaration of Intent

RCA Gamma

31.1.2020

- RCA “overall concept documentation according” to CENELEC phase 1 “System Concept”.
- Concept documents ready for feedback:
 - Concept LSL: rationale for TSI CR
 - Modular safety (update)
 - Migration paths (several IM)
 - Degraded modes
 - Principles of the Safety Logic
 - Effects: business case
 - Operational plan (interface 1 to TMS)
 - Requirements on Localization (from LWG)
- Detailed catalog of change requests for TSI 2022
- Updated governance (RCA process overview)
- RCA Roadmap
- Starting March 2020: development snapshot of
 - CENELEC phase 2 “System definition”
 - Interface specifications (for i-f 1 to 5). Target level “ready to build simulation/prototype” for the RCA components.

RCA Roadmap 2020

RCA Gamma
31.1.2020

RCA Rel 0.1
Q2 2020

RCA Demonstrator
22.-27.9.2020

RCA Release 0.3
End 2020

- High-level functional requirements
- First release of functional model
- First release of domain knowledge
- Concepts for additions for GoA4
- Modelling & Tooling Guideline
- Concepts on supporting systems
- First concept on data modelling / data prep
- Opt. extended concept Platform Independence
- Opt. Communication requirements

- Innotrans Demonstrator
 - Scenarios on prototype implementation
 - Demonstrate migration step using EULYNX OC
 - Demonstrate exchangeability of components
- Start harmonisation of operational rules / requirements
- Interplay ATO and protection (CCS) “loop”
- Specification: first draft for all interfaces involved in main control loops incl. ATO.
- Specification: start to include NF aspects.
- Establish link (coverage/gap-analysis) to IM-specific models.
- First official feedback on industry cooperation

Details To be defined

Expected completeness and maturity (TRL)

- Progress on the specification can be distinguished on 3 dimensions
 - Architectural scope: which components / interfaces are specified?
 - Requirement scope: how complete are the requirements? How well validated (over several IMs) are the requirements?
 - Technical readiness (TRL): in what situation / environment has the specification been evaluated?
- At some later point, a more complete maturity model e.g. RIRL (Railway Industry Readiness Level) may be applied.

	Architectural scope	Req. Scope	TRL
Gamma	Selected components and interfaces	Simple scenarios («happy path»)	TRL3
V0.1	Components and interfaces of the control-loops ATO and CCS.	Simple scenarios («happy path»)	TRL3
Demo	Components and interfaces of the control-loops ATO and CCS.	Simple scenarios («happy path») + some degraded modes / exceptions	TRL4
V1.0	Components and interfaces for control-loops + data / configuration / monitoring	Simple scenarios («happy path») + degraded modes + exceptions	TRL4/5