



ERTMS - managed evolution



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Pio GUIDO, head of unit, ERTMS



ERTMS is a reality

- All over EU, in commercial service or being installed
- Significant experience, with the + and –
- Baseline 2 maintained stable since 2008
- Baseline 3 products and systems are on the market
- Baseline 3 Release 2 approved in RISC (10/2/2016): first time symmetric compatibility with B3MR1 and a functionally complete basis for long term stability

ERTMS Managed Evolution Key Principles

- Existing investments shall be protected
- ERTMS is a SW-based system and requires efficient maintenance processes
- ERTMS shall increase flexibility
- ERTMS shall open the supply market
- ERTMS shall provide technical and operational interoperability

**Document
drafted by
Sector
Rapporteurs,
endorsed by
EU Member
States**

- **Identify strategic challenges :**
Evolution of ERTMS specifications
roadmap (new functions)
- **Identify organisational challenges:**
possible improvement of
specification release procedures
- **Identify strategic planning/roadmap**

*Report on ERA WebPage

Stability

Protection of existing investments (trackside/on-board)

Cost reduction of ERTMS system

Managed evolution

Capacity increase

Cost reduction for the Railway system

Business-driven Game Changers:

ETCS L3,

ATO,

Braking Curves performance,

Future communication systems,

Satellite technology

TECHNICAL FRAMEWORK

- › **Coordination** between ERA – other programs (S2R,..)
- › **Manage increased complexity of the system**, by harmonised operation/engineering rules;
- › **Mitigate risk of early adopters** by validation/simulation + formalized agreements

FINANCIAL FRAMEWORK in case of evolution of ERTMS specifications/next ERTMS release

- › Financial framework to ensure a fair allocation of benefits, costs and risks between IMs and RUs in case the deployment of a new function/new release improves the railways business case;

Transform High Level approach into ERTMS Specifications Roadmap

- ERA opening statements on ERTMS Specifications Roadmap will be presented on 10th March 2016; discussion with sector
- Common view (ERA/Sector) to be presented in June 2016 (RISC);
- Adoption of ERTMS Specifications Roadmap within next ERA Multi-Annual Work Program
- Coordination actions progressively in place with actors (early adopters) and bodies (S2R, etc)

The present is shaping the future

intelligence

value

design authority

checking



onboard

software

manufacturer

3rd party

Domain

Market,
Regulation



Not only CCS:
Security
Radio Spectrum

EU - Worldwide
Non-EU Regulatory Agencies, ISO
Not only TSI

ERTMS
stable system
enabling
innovative approaches

Making the railway system work better for society.

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