

# CCRCC 2019 - ERTMS conference

## *ERTMS – the Engine for the Digital Future*

*#ERTMS2019 Conference*  
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**Valenciennes**

**Takeaways from Workshops 1A and 1B on ERTMS Deployment** (15.10.2019)

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## Conclusions from workshops 1A and 1B

### 1. National vs European

- Too many national systems are still hampering the correct ERTMS deployment
  - Trainborne: impact of class B Systems
  - Trackside: impact of IXL (translating operational rules)
- Consequences:
  - Monopolistic situation or
  - Long and difficult learning curve for the new comers
  - Increase of costs and delays on each of the project phases



#### **Proposed measures:**

- Acceleration of decommissioning of Class B systems
- More trackside standardization (from operational rules to interfaces, data model)

### 2. Issues within the ERTMS Projects phases

#### ▪ Trainborne projects

- ❑ Key issues affecting the life cycle:
  - Funding
  - Variety of rolling stocks
  - Poor documentation
  - Last minute bugs to be solved
  - Confusion about TSI version to be applied
- ❑ Most critical phases of the projects:
  - Pre-tendering: lack of knowledge and experience on customer side
  - Designing: surveys reveal the real situation
  - Certification: very time-consuming
  - System integration: TRK/train, STM, interfaces



#### **Proposed measures:**

- Remove the need for class b systems.
- More modularization and standardization (both signaling systems and rolling stock)
- Create an ERTMS catalogue
- More clarity on TSI changes

#### ▪ Track-side projects

- ❑ Key issues affecting the life cycle:
  - Responsibility for the integration, for TRK and OB
  - The loss of performance
  - Lack of maturity of specs
  - Complexity of 2 systems being installed together
- ❑ Most critical phases of the projects:
  - Pre-tendering: knowledge of ETCS and IXL is needed
  - Designing: suppliers products need to fit the national rules
  - Testing: some issues are detected at this stage = delays (loops in the process)
  - Certification: before getting to this phase the TSI might have been updated



#### **Proposed measures:**

- Describe and better define the responsibilities
- Better allocation of resources
- Harmonization of operational rules
- Maintenance: on-line monitoring is needed

### 3. Need for standardization

#### Current situation:

- Wide variety at all levels of the ERTMS projects phases (from pre-tendering to maintenance) Rolling stocks, rules, tools, data model, products

#### Consequences:

- Slowing down the ERTMS deployment
- High level of complexity leading to unexpected issues to be solved
- Increase of costs and delays on the project phases (loops in the process)



#### **Proposed measures:**

- More transparency in the TSI and the specs (what are the reasons for the changes)
- More harmonization (engineering rules, ERTMS System Compatibility Test – ESC, Maintenance tools)

### 4. Planning of HR resources

#### ☐ Main issues:

- There is a shortage of skilled resources due to lack of sufficient trainings
- Lack of sharing the return of experience



#### ☐ **Proposed Recommendations:**

- Develop a system approach: help resources understand the entire system
- Provide on-side trainings in the Universities
- Provide as-hoc ERTMS trainings for both suppliers and operators
- Promote internal mobility
- Stop the ‘tack-and-grab’ tendency
- Shorten the life cycle of the projects
- Provide facilities for continuous learning process
- Safety culture
- Provide ad-hoc trainings (both internal and external) and E-learning
- Propose attractive work conditions

### 5. CCS TSI Evolutions

❑ For the update of the TSI, which is likely to be released in 2022, two approaches have been identified:



○ Conservative approach:

- Keep ERTMS level 1 as viable option
- Protect the B2 investments
- Keep B2 in the specs for the life cycle of the lines equipped with it



○ Innovative approach:

- ATO specs (mature enough) should be included
- Migration strategy to FRMCS as depicted in EIM position paper (18.07.19)

❑ As regarding the TSI Version Management, there is a common agreement on

- Making the difference with previous versions more visible
- Ensuring a BCA is done before issuing the new TSI version at sector level and not within individual projects

## 6. Deployment & Funding of ERTMS

### Main issues affecting ERTMS deployment:

- Lack of synchronization between OB and TRK deployment (coordination via a timeline with milestones is needed)
- Need for more cooperation (especially across the border)
- Need of a global overview of the needs
- Retrofit is extremely costly

### Funding – highly fragmented situation at EU level leading to 2 situations:

#### Member States significantly depending on EU financial support:

- HR relied on Cohesion Funds for 85% of the TRK investments

#### Member States which can afford the investment at national level:

- In UK most of the TRK and OB investments are financed with national R&D funding
- In FR it is up to IM to find the resources needed for the investments (EU funding is not enough)



### **Proposed solutions:**

- Decommissioning of Class B systems (e.g. in AT no more class b systems by 2020)
- Unit costs need to decrease significantly
- Need for more public funding
- Stop monopolistic situations regarding the equipment
- Better use of alternative source of financing (e.g. PPP schemes, PSO)