

Interfaces and the 4th Railway Package

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Interface

- Interface?
 - **English** Dictionary definition is:

a situation, way, or place where two things come together and affect each other.

- Or Interfaces are a point in space or time when a relationship or communication takes place between one thing and another.



European Union Agency for Railways

- **ERA**

- An Agency of the European Commission which is attempting to harmonise and open up the railway system and the railway market across Europe;
- Traditionally Countries have their own rules for running railways and these are often very different to those of their neighbours;
- ERA is about managing interfaces at an EU level.
- Employs people from all over Europe looking at Safety issues, technical issues, interoperability issues and market issues.
- Produces regulations and guidance. Under the 4th RP has a wider role in monitoring NSA and industry performance and becomes an authorising body (Vehicles), an issuing body, (Safety Certificates) and a system authority (ERTMS).

EU Interfaces



Interfaces

- So why are interfaces important – because in simple terms interfaces are places where things can go badly wrong or cause significant delay.
- The history of many accidents or incidents is littered with problems of communication at interface points between people, between people and machines, between machines, organisations, systems and so on.
- There are two real solutions to this:
 - Eliminate the interface: A classic railway example is to replace jointed rail with welded rail. Each joint is an interface between two rails which needs to be managed over time.
 - Manage the interface better: For example upgrading a level crossing from lights only protection to lights, barriers and obstacle detection.

At Company Level

- Interfaces between companies eg RU and IM
- Interfaces within companies eg between rolling stock engineers and operational planners
- Interfaces with contractors/suppliers/partners
- Interfaces with the public
- Interfaces with 3rd Parties eg emergency services, police
- Interfaces between employees.



Common Interface Problems

- The interface does not work in the way intended
- Not realising that there is an interface which needs to be managed,
- Making assumptions - either someone has done something or will do something on which you are dependent – just because you think it should be the case it does not mean it is the case,
- Structural inertia or blocking
- Procedures which conflict
- Incomplete information



3rd Railway Package



- Part A and Part B Certificates
- NSAs conduct Assessment of Applications for Safety Certificate (A and B) or Safety Authorisation and Supervision of Safety Management System's
- NSAs coordinate/cooperate with other NSAs on Part B Certificate assessment
- Vehicle Authorisation done through TSI compliance and National Rules checks carried out by NOBOs and NSAs checking that this has been done.

PROBLEMS

Variation in type and quality of Assessments of applications between NSAs

Variation in how VA process carried out by NSAs

Variation in how Supervision conducted

Variation in how NSAs cooperate and coordinate with each other

Seamless Interfaces?

- Lack of understanding
- Protectionism by companies and Member States
- Lack of competence
- Internal Member State Rules/Regulations
- Different approaches to managing tasks in different Member States.

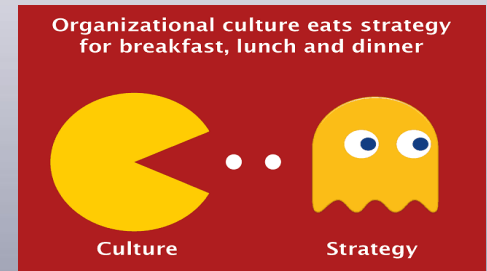


4th Railway Package

- One Single Safety Certificate – (for International operations one assessment body The Agency in co-ordination with NSAs for assessing national requirements);
- One authorising entity for vehicles to be authorised simultaneously in several MS – the Agency;
- A stronger set of Safety Management System Requirements;
- A means to test SMS performance during Supervision (Maturity Model)
- Better cooperation/coordination agreements between NSAs and between NSAs themselves
- ERA acting as system authority for ERTMS
- Creation of the One Stop Shop

Safety Culture and Interfaces

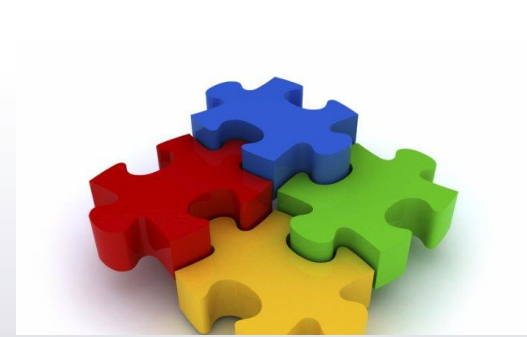
- A recognition that the Safety Culture of an organisation is the glue that keeps the SMS functioning as it should.
 - It needs to be nurtured and maintained over time.
- Safety Culture often breaks down at Interfaces.
- The Agency and National Safety Authorities have to look at this in Supervision and Assessment. The Agency has to report on the state of Safety Culture in the Railway Sector after 5 years (2024).



Interfaces

How Do we Manage Interfaces?

- The Safety Management System is the **key** tool for addressing this.
- It is the opportunity to sit down and analyse where your interfaces are and to put in place measures which address them so that you can run your business effectively.



SMS

- Holders of a Safety Certificate are required to put in place arrangements for managing the business, contractors, suppliers and others so as to ensure safety.
- There should be a disciplined approach to this. If you have to make assumptions be very clear that these are assumptions and check regularly that they are still valid. This is the PDCA Cycle – **Plan, Do, Check, Act**
- Be aware of interface creep.

Safety Management System Elements

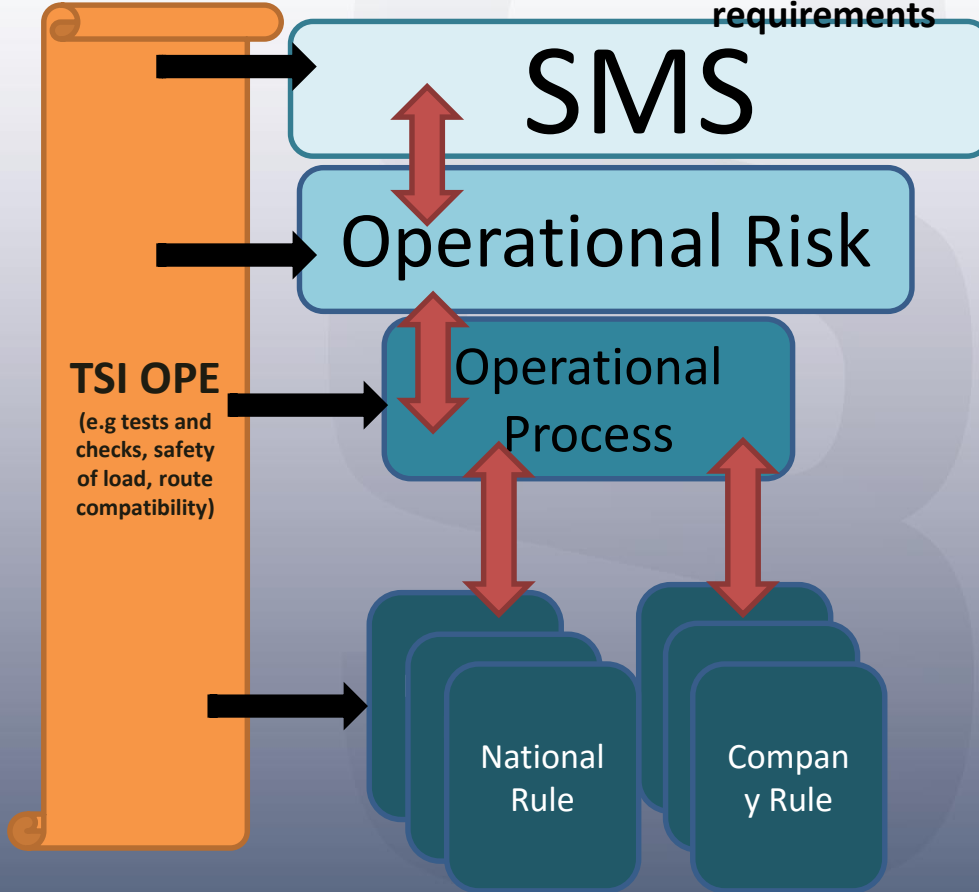
- Context of the Organisation
- Leadership
- Planning
- Support
- Operation
- Performance Evaluation
- Improvement



ERA Guidance

- We will have by the end of 2017 or the beginning 2018 a complete suite of guidance covering:
- How to apply for a safety certificate
- SMS requirements
- Maturity Model for assessing SMS Performance
- Guide on a Common Approach to Supervision
- Guide on how to manage Enforcement in a transparent and proportionate manner
- A Guide on a Competence Management Framework
- A Guide on How to manage Common Approaches to Supervision for cross-border Operations

Links between the TSI OPE and SMS operational requirements





Applicant submits request for an ERTMS trackside project approval
With requested documentation
Evidence that issues are controlled and will be resolved



Agency issues a decision on approval
Within 1 month it will inform applicant of completeness
When complete, or at the agreed deadline, the Agency will make decision



NSA authorizes the project including the ERTMS trackside subsystem
Approval is a precondition for the authorization by the National Safety Authority

Summary

- ERA attempts to harmonise equipment and processes to enable the seamless flow of goods and services across Europe by reducing interfaces

The Key for ERA is:

- **Standardization of key signalling and electrification.**
- **Standardization of processes for authorisation of vehicles,**
- **Standardization of operating principles (TSI-OPE)**
- **The use of Safety Management Systems by all actors with safety responsibility to control risk**
- **Taken together this is a comprehensive approach to manage interfaces**

- Thank you
- Questions?