

# Best Practice & Lessons Learnt Product Approval

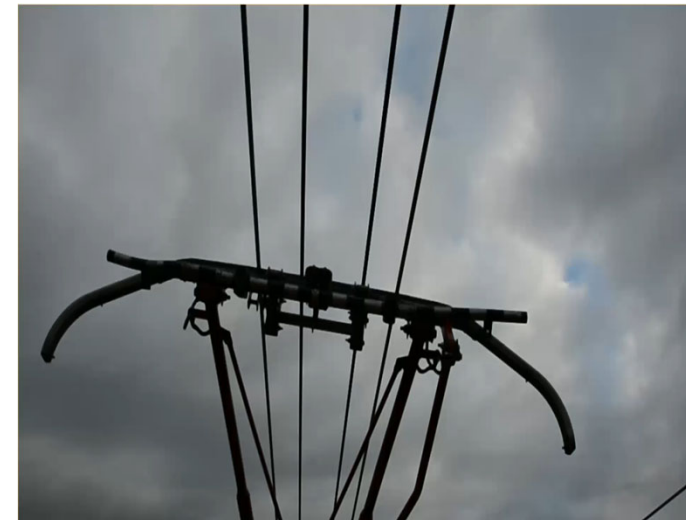
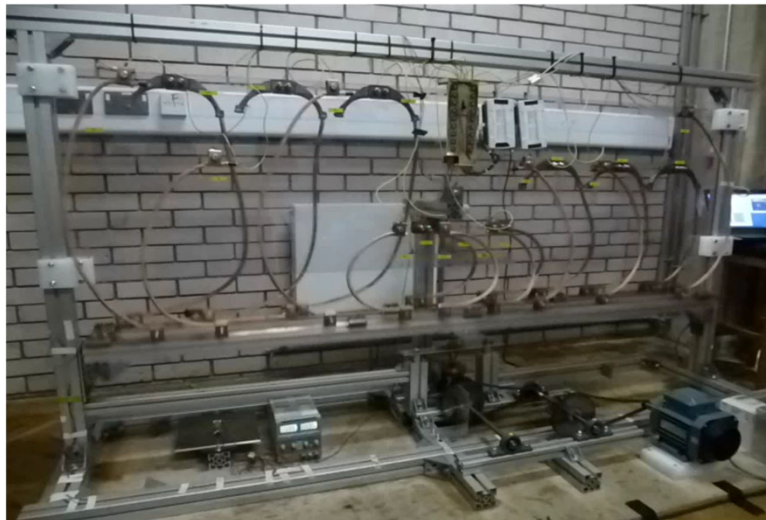
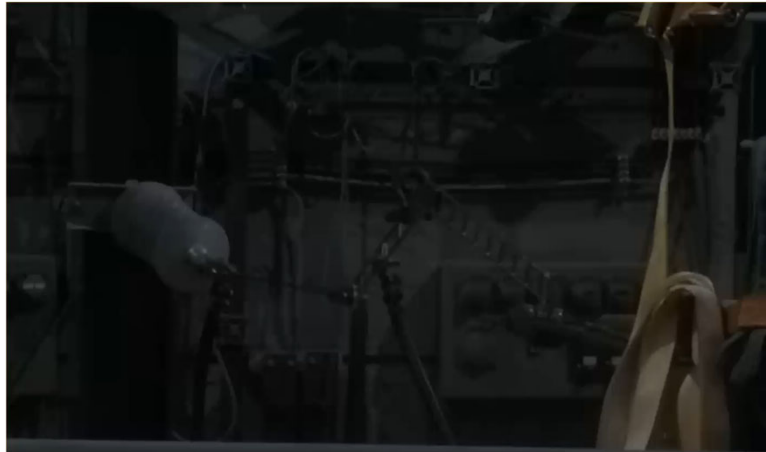
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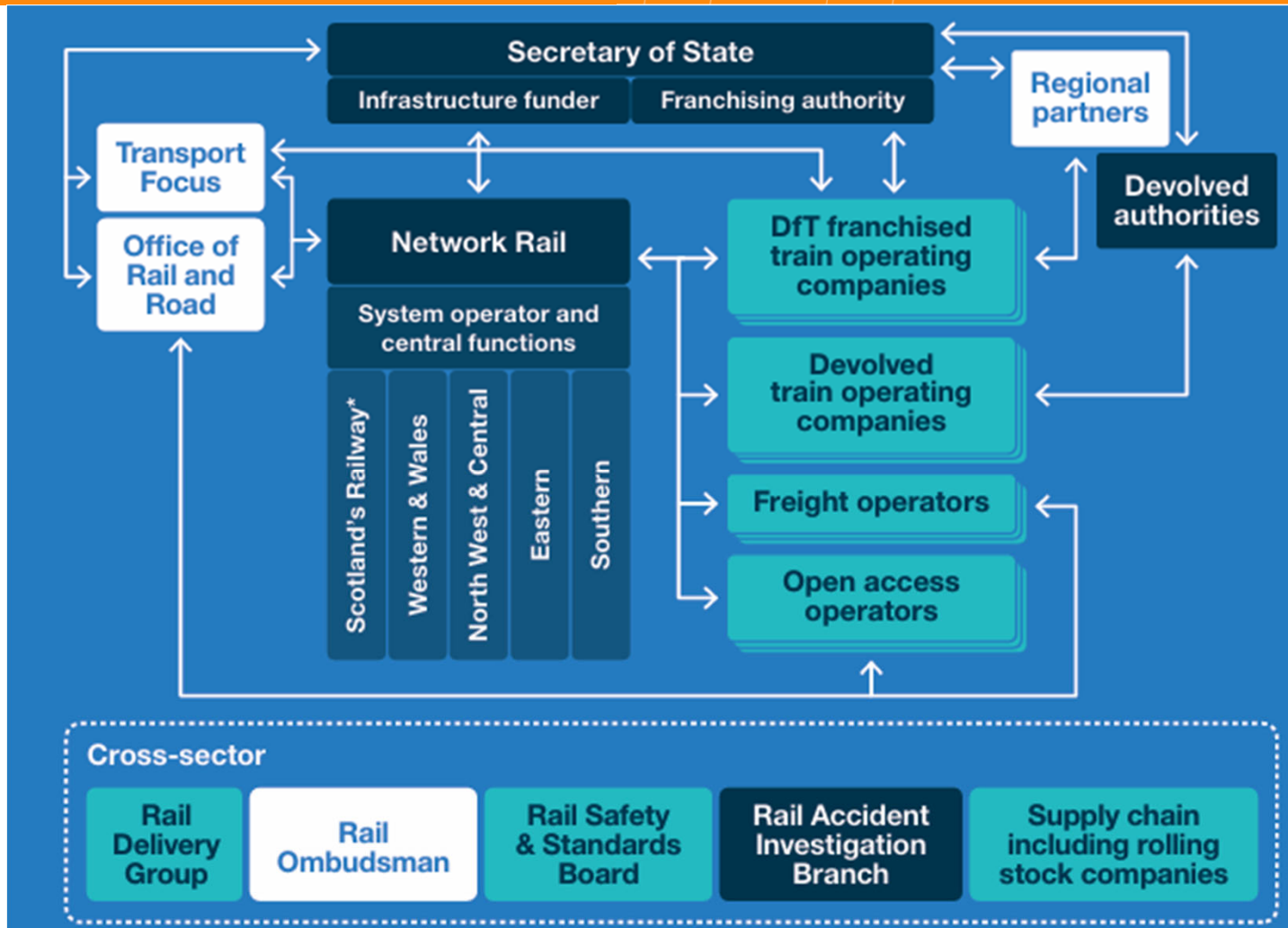
# My background



# Agenda

- + Introduction
- + UK Rail Sector Overview
- + Scope and Objectives
- + UK Process and Issues
- + Culture
- + European Comparators
- + Findings
- + What can we all take away

# UK Rail Sector



Credit:  
William  
Shapps Plan  
for Rail

# Scope

- + Nomenclature: Product Approval, Product Acceptance, Homologation....
- + Infrastructure products – not vehicles
- + Mainline rail – not regional railways or metros
- + Meeting ORR's strategic Objectives: A safer railway, better railway, value for money + Preparation for 2028 Periodic Review
- + Specific Objectives: Efficiency, responsiveness to innovation, burden on suppliers
- + Compare UK to broader European best practice

# UK Product Acceptance Process

1. Identify if a Product in Scope of Product Acceptance (Controlled, Controlled – Limited Criticality, Uncontrolled, not in scope)
2. Identify a Sponsor
3. Design For Reliability
4. Application Submission
5. Initial Review
6. Risk Assessment & Criticality Review
7. Lead Reviewer Assessment
8. System Review Panels
9. Trials
10. Certification

Separately become an approved supplier through RISQS (Rail Industry Supplier Qualification Scheme)

# Existing UK Issues

## Existing Feedback:

- + Unclear criteria
- + Inconsistent interpretation
- + Changing requirements
- + Lack of proportionality
- + Staff turnover
- + Hidden costs
- + Limited supply chain awareness
- + Value perception

How do we separate “feelings” from “facts”!



# Culture (1/3)

**Do they say clearly what they think?**

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**Unclear**

**Clear**

Credit: John Mole – Managing Business Cultures in Europe

# Culture (2/3)

## Are they flexible or do they stick to procedures?

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**Flexible**

**Procedures**

Credit: John Mole – Managing Business Cultures in Europe

# Culture (3/3)

**Relationships: Are good personal relationships essential to do business?**

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**Ukraine Italy Portugal Estonia UK Netherlands**  
**Bulgaria Greece France Czechia Finland Denmark**  
**Türkiye Spain Austria Switzerland Sweden**  
**Romania Slovakia Poland Germany**  
**Hungary Belgium Cyprus Ireland Norway**

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**Yes**

**No**

Credit: John Mole – Managing Business Cultures in Europe

# Report Process

- + Interviews UK applicants, trade bodies, standards bodies, technical authorities
- + Review 4 international comparators: Italy, Switzerland, France and Germany
  - + Compare processes with feedback from suppliers
- + Review UK processes & feedback v comparator processes & feedback
- + Make recommendations for current and future UK rail structure

# UK Feedback 20+ Interviews

- + Feedback covered a wide spectrum – positive to negative
- + Infrastructure Manager is more embedded in the process than other comparators
- + Sponsorship role – critical in the UK process

Significant comments on:

- + System Review Panels
- + Testing and Evidence requirements
- + Design for Reliability
- + Transferability of proven products from EU or other industries

# EU Regulations

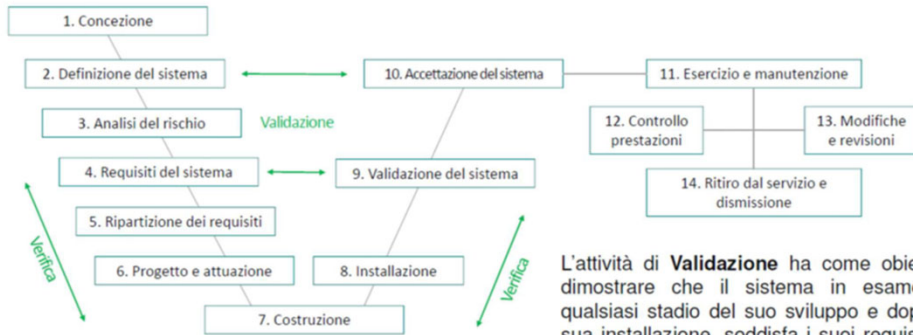


# Divergence Between France, Italy, Switzerland and Germany

- + Qualitative interviews are always impacted by culture & individuals
- + The level they had moved to EU homologation
- + Level they overlaid local standards
- + Ability to implement innovative products
- + Transferability of products, without repackaging documentation
- + Bespoke testing requirements
- + Level of involvement of the Infrastructure Manager
- + Supplier qualification

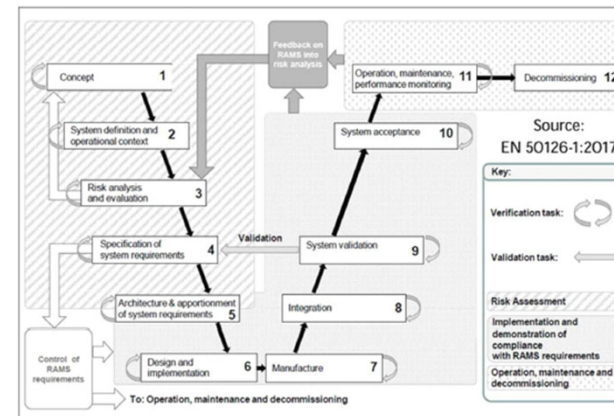
# RAMS v DfR

## L'attività di validazione

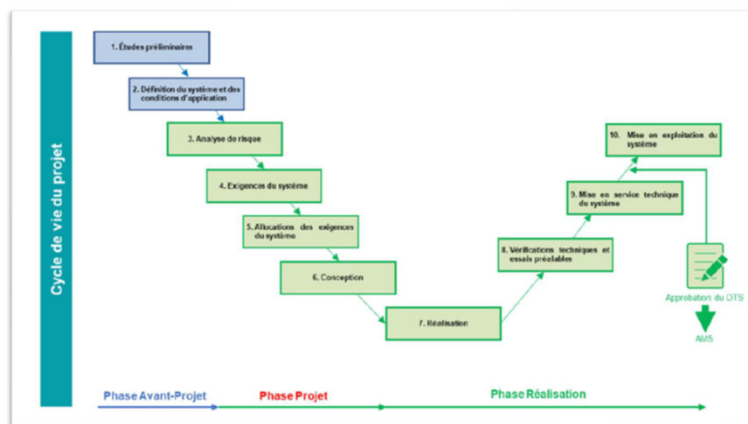


L'attività di **Validazione** ha come obiettivo dimostrare che il sistema in esame, a qualsiasi stadio del suo sviluppo e dopo la sua installazione, soddisfa i suoi requisiti in tutti gli aspetti (punto 5.2.9 Cenelec 50126)

## The systems engineering approach for railway RAMS The V-cycle representation for validation & verification (V&V) tasks



"Verification ensures you built the system right.  
Validation ensures you built the right system."



# Recommendations

- + Who should be assessing a technical file?
- + How do we define the definition of done?
- + How do we manage change control?
- + How do we make it easier for proven products to be accepted
- + How do we reduce the dependence on individuals and individual roles?
- + KPIs that measure outcomes
- + How do we allow for innovation?
- + How do we engage with the supply chain?

# Report



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