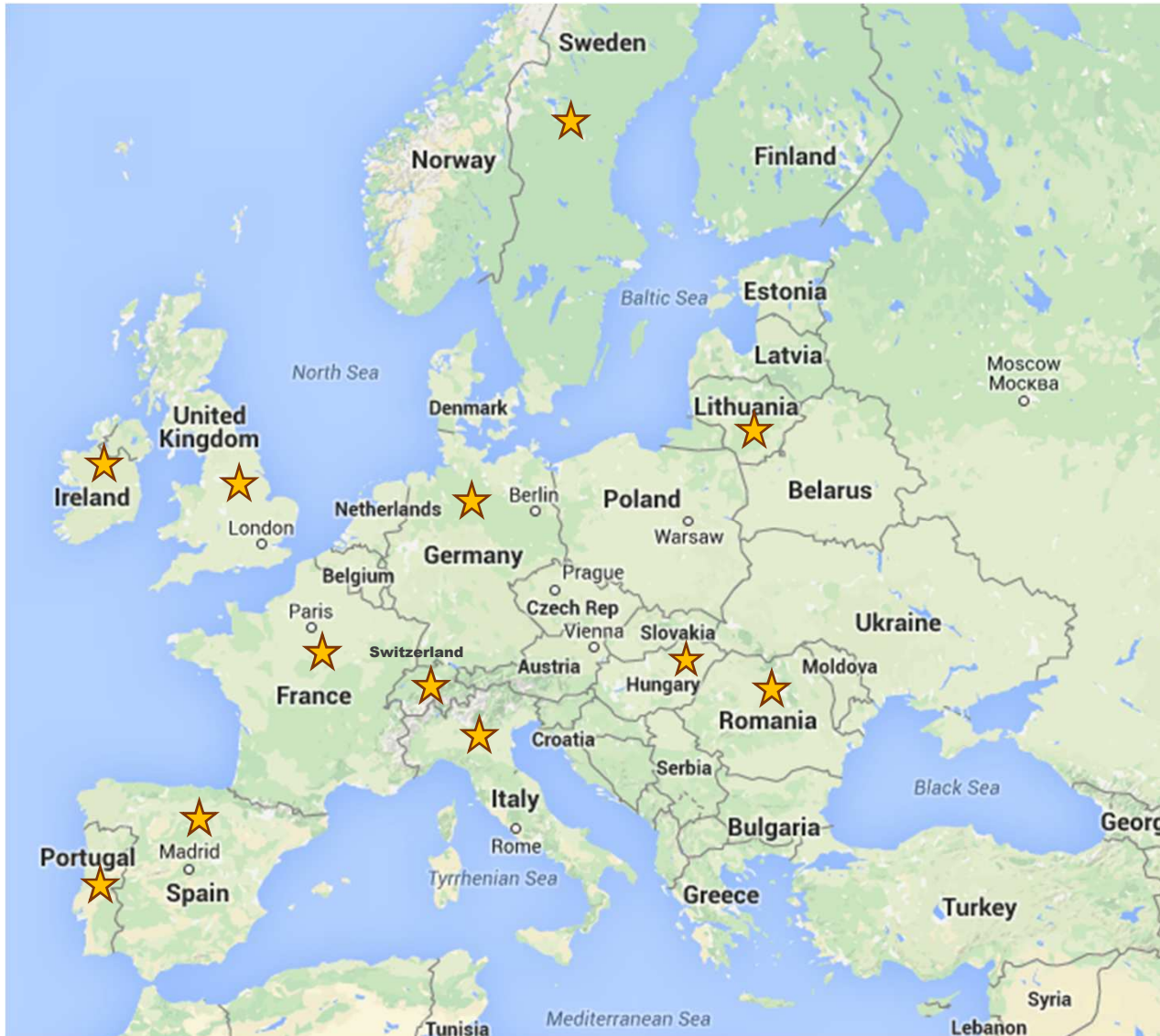# UNECE Level Crossing Expert Group – Enforcement Sub-group

Informal Document No. 7 (Enforcement) - Update

Fifth meeting of the expert group

Geneva, June 15th and 16th 2015

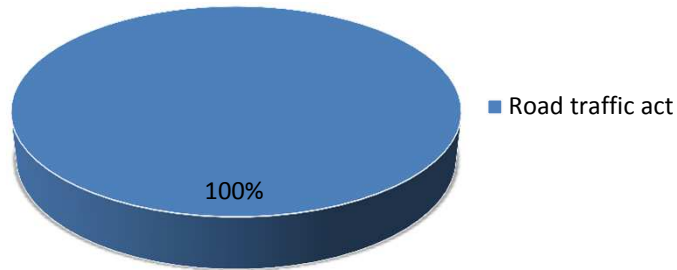12 member states responded to the second detailed questionnaire.
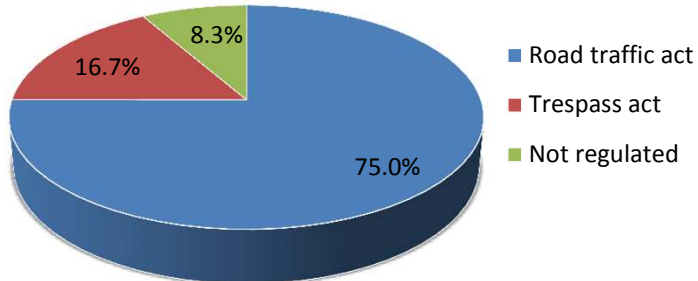
Thank you to all those who participated.

⭐ *Responses*

Legislation

Laws and regulations which enable agencies to enforce safe use of level crossings
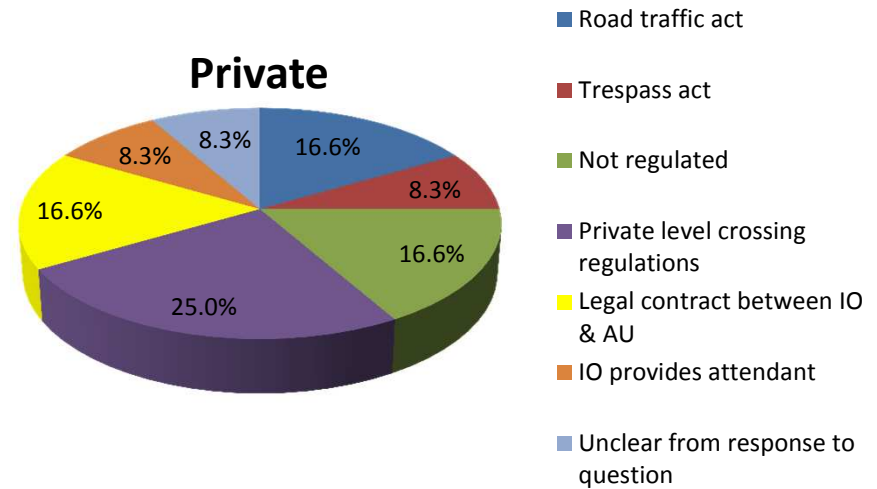
Public Road

- Road traffic act

100%

Pedestrian

8.3%

16.7%

75.0%

- Road traffic act
- Trespass act
- Not regulated

Private

8.3%   16.6%

8.3%

8.3%

16.6%

16.6%

25.0%

- Road traffic act
- Trespass act
- Not regulated
- Private level crossing regulations
- Legal contract between IO & AU
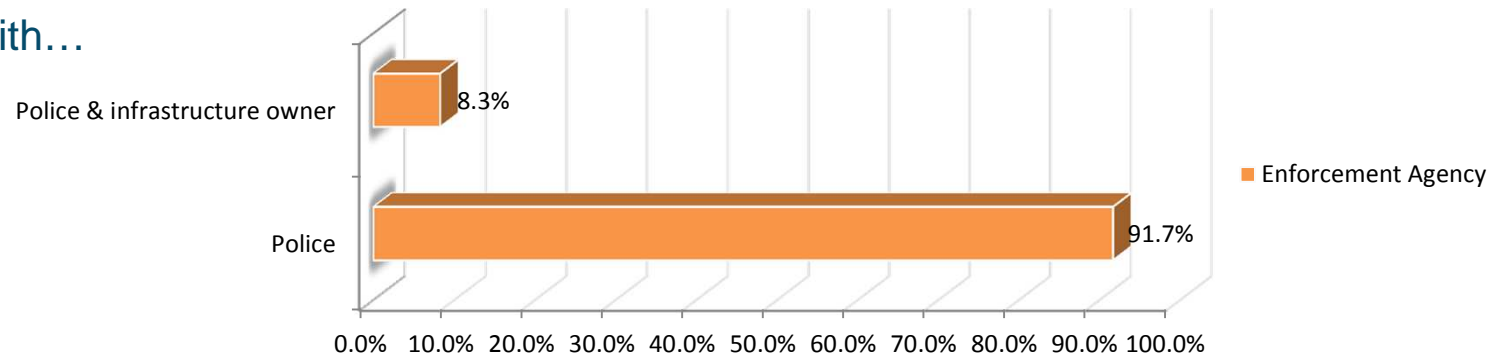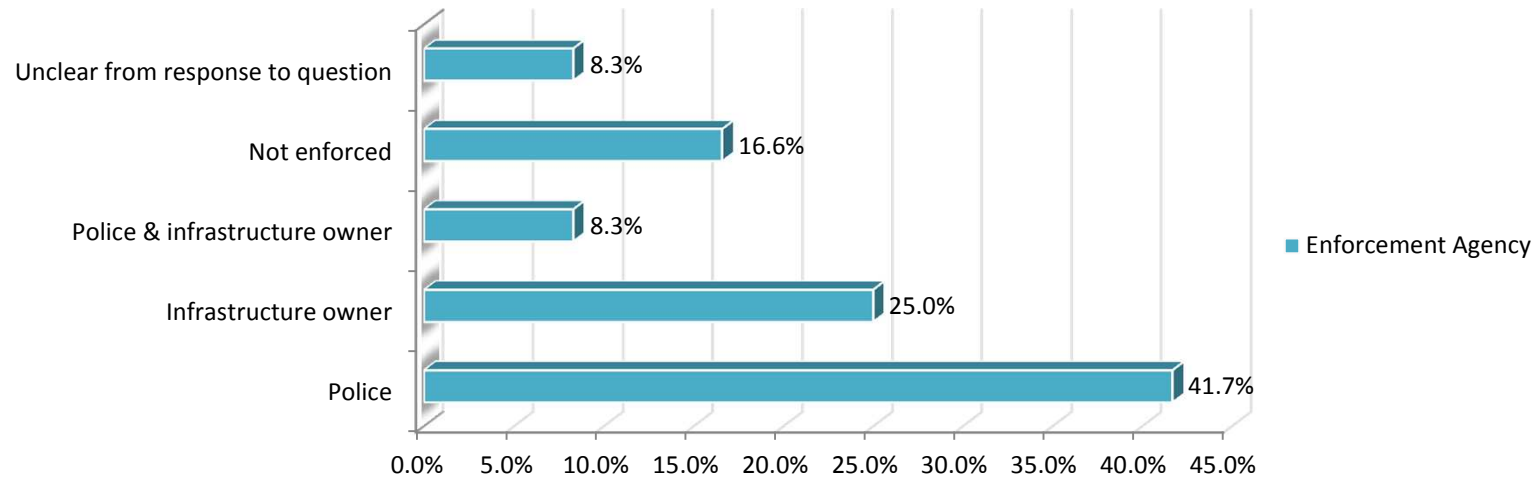- IO provides attendant
- Unclear from response to question

Enforcement Agencies

Responsibility for enforcement resides with…

Public Road / Pedestrian

- Police & infrastructure owner: 8.3%
- Police: 91.7%

Legend: ■ Enforcement Agency

(x-axis: 0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0% 90.0% 100.0%)

Private

- Unclear from response to question: 8.3%
- Not enforced: 16.6%
- Police & infrastructure owner: 8.3%
- Infrastructure owner: 25.0%
- Police: 41.7%

Legend: ■ Enforcement Agency

(x-axis: 0.0% 5.0% 10.0% 15.0% 20.0% 25.0% 30.0% 35.0% 40.0% 45.0%)

Detection Methods

Technology and processes used to detect user violations includes…

Public Road

- Enforcement cameras and/or police — 25.0%
- Police only — 50.0%
- Intelligence cameras and/or rail staff reports — 16.6%
- Question not answered — 8.3%

Pedestrian

- Enforcement cameras and/or police — 8.3%
- Police only — 75.0%
- No detection process — 8.3%
- Question not answered — 8.3%

Private

- Unclear from response to question — 8.3%
- Police only — 25.0%
- Intelligence cameras and/or rail staff reports — 16.6%
- Rail staff reports — 33.3%
- No detection process — 8.3%
- Question not answered — 8.3%

Technology

Dedicated detection cameras or intelligence gathering cameras are used in:

- ✓ UK
- ✓ France
- ✓ Republic of Ireland
- ✓ Hungary
- ✓ Lithuania

Of these, detection is achieved through…

Technology	Country	Status		Application		
		Fixed	Mobile	Public Road	Pedestrian	Private
Camera - video analytics	UK	✓	X	✓	X	X
Camera - no auto detection / continuous recording	UK	✓	✓	✓	X	X
	Rep. of Ireland	✓	X	✓	✓	✓
	Hungary	✓	X	✓	X	X
Speed camera (radar)	France	✓	X	✓	X	X
Ground induction loops (red light)	France	✓	X	✓	X	X
Motion sensors	Lithuania	✓	X	✓	X	X

Note: Only the UK have mobile safety vehicles

Note: Italy use CCTV, but this is not linked to the police authority

Technology – Approvals & Funding

3 countries responses specifically state Government authority is needed to support the deployment of auto detection enforcement cameras. These are:

- ✓ UK – Government (Home Office)
- ✓ France – Government (Ministry)
- ✓ Italy – Public Road Authority (Ministry of Transport)

Funding sources

Country	Funding Source
UK	Infrastructure owner
Rep. of Ireland	
Lithuania	
Hungary	
France	Government (Equipment) Infrastructure owner (Ground works)

Technology – *Reliability Analysis*

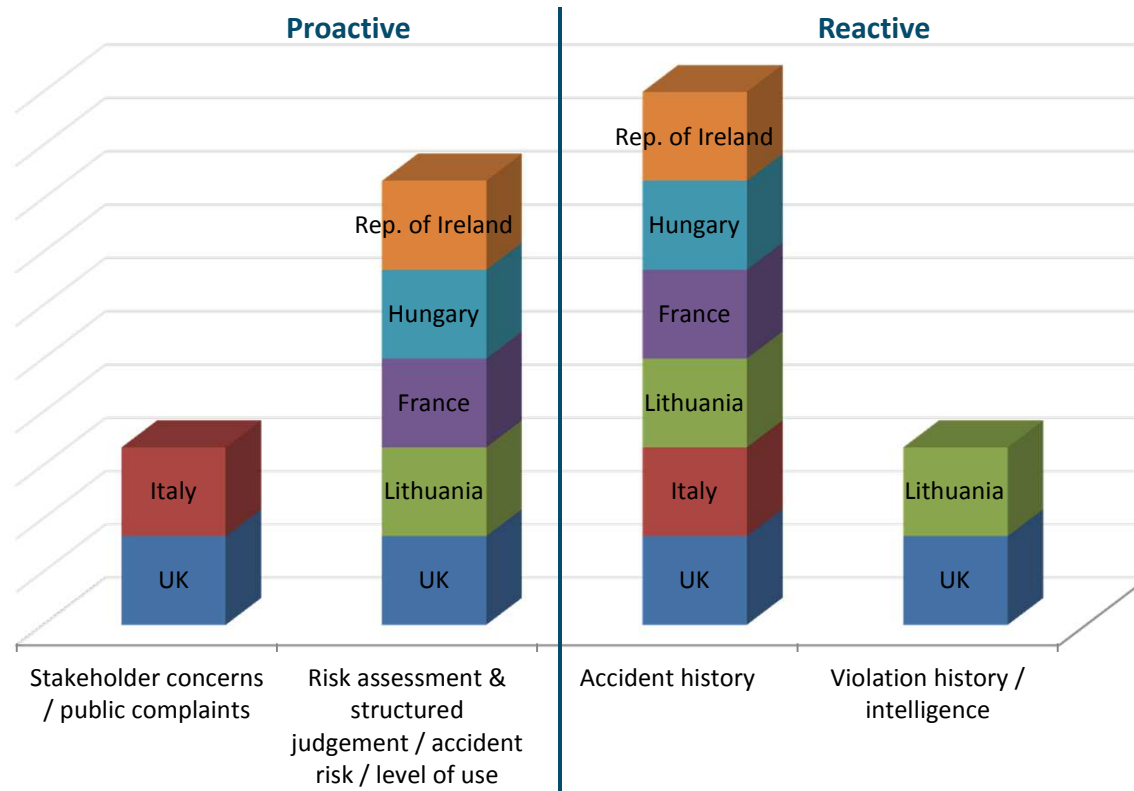Equal split amongst member states for reliability analysis of technology
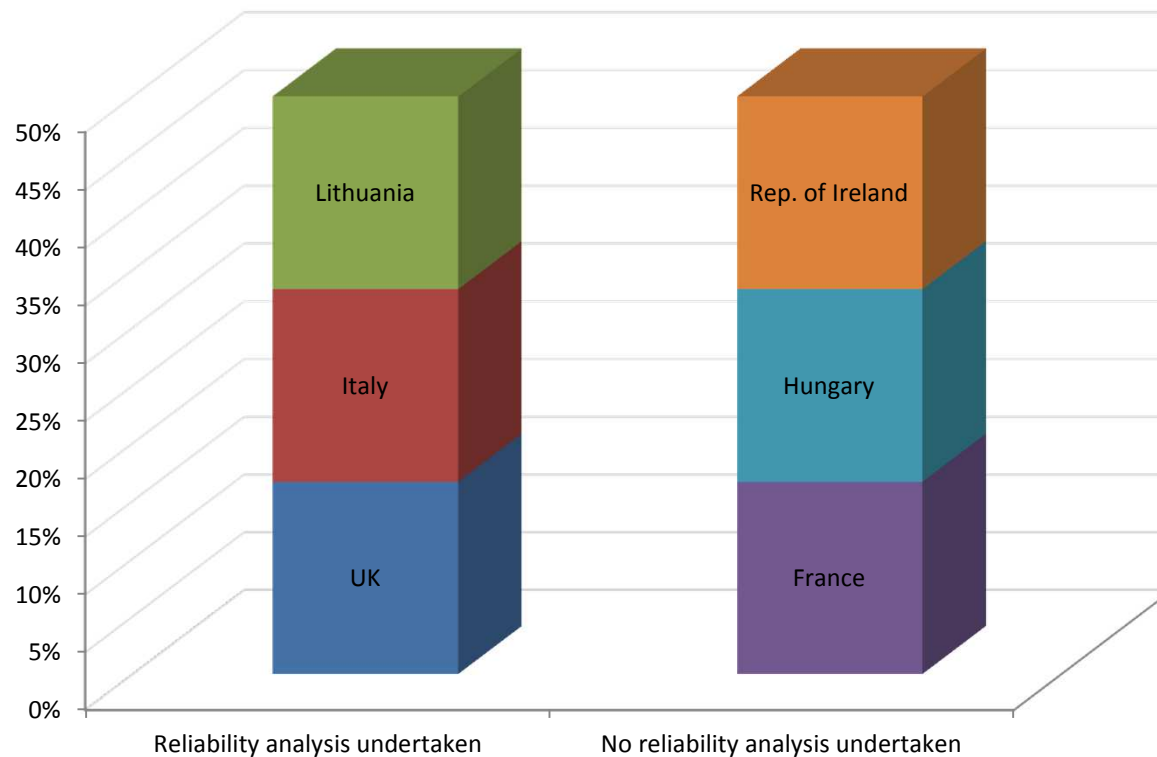
Important to have metrics around failure rates and reliability to support decisions on funding, procurement and service level agreements

Technology – *Site Selection*

Decisions supporting deployment of technology can be divided into proactive and reactive measures

UK; biggest driver is modelled / assessed risk. Members wanting to become more proactive could do so by adopting a risk based approach and method.
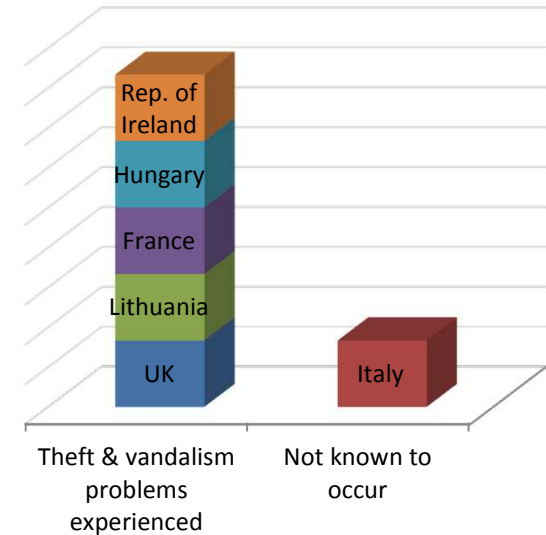
Technology – *Theft & Vandalism*
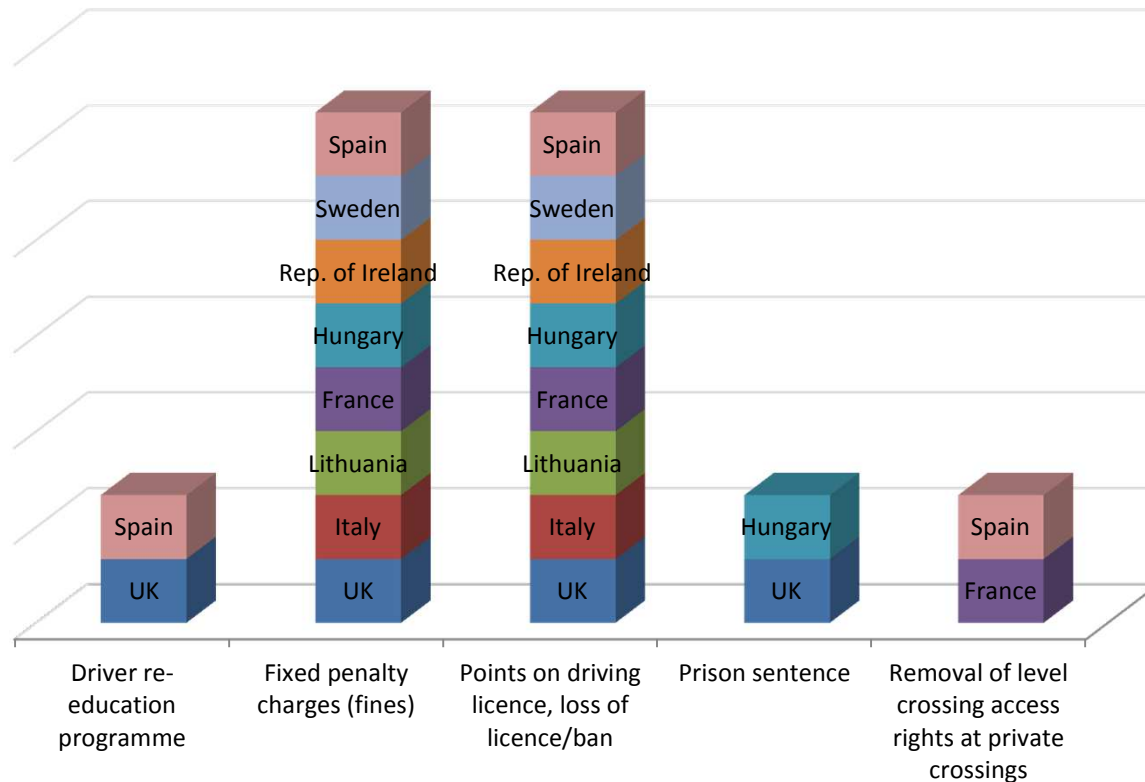
Method of alert to problems:

- ✓ Passive monitoring – Lithuania
- ✓ Active alert to control – France / UK
- ✓ No alert or alarm – Italy / Republic of Ireland / Hungary

Proactive measures to prevent theft and vandalism:

- ✓ Positioning of equipment / less accessible (or obvious for intelligence cameras)
- ✓ Additional visits – police and / or rail staff
- ✓ Covert cameras
- ✓ Locking and anti-tamper security mechanism
    - – Physical locking mechanisms
    - – Electronic encryption and data deletion capability

Chart bars (stacked, left to right): Rep. of Ireland, Hungary, France, Lithuania, UK — "Theft & vandalism problems experienced"; Italy — "Not known to occur"

Improving User Behaviour – Corrective Action

Consistent use of fines and penalty points, however, in some countries they are fixed, in others the severity of the offence will dictate the penalty

Improving User Behaviour – Measuring Success

Measuring the effectiveness of detections and their long term impact on user behaviour is undertaken by member states, but the analysis does not go deep enough.

Republic of Ireland, France, Hungary, Italy and Lithuania perform elements of before and after analysis, but this is typically driven by accident / incident / violation rates alone rather than also benchmarking behavioural patterns.

Recommendation 1

A consistent methodology for analysing human factors <u>pre</u> and <u>post</u> implementation of technology should be developed to fully measure success and sustained behavioural change.

Recommendation 2

This methodology should be agreed and adopted by member states seeking to deploy technologies.

Any questions?

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