Results of the D-rail EU research project
ERA perspective

D-Rail Final Seminar
Stockholm, 12 November 2014
Safety Unit
Background on ERA activities
(freight derailments)
Work achieved by ERA on freight train derailments

› Detailed examination of the freight train derailments risks

› Need for better controlling freight train derailment risks, in particular their economical impact for the sector

› Recommended the European Commission to use mechanical derailment detectors only on a voluntary basis, because
  › they may introduce a potential new risks (confirmed in 2011)
  › their cost-effectiveness is questionable
A changing context

- In an open market, Infrastructure Managers and Railway Undertakings are responsible for safe operations.
- National Safety Authorities supervise the safety performance of IM/RU at national level.
- Small / Isolated improvements may not suffice to deliver the white paper objectives on transport.
- Derailments have a negative impact on the rail market share.
- Railway freight catastrophes are not acceptable for EU citizens.
Background: 2010

EU – Policy
ERA - Safety & Interoperability developments

Achievement of White Paper Objectives

Current Situation
Target System (2050)
Future Situation (2020 – 2050)
ERA expressed key objectives for a research project

- Achieve breakthrough improvement in the reduction of freight derailment number
- Reduce freight train derailment impacts for the sector (human, environment, asset)
- Prepare future target railway system (2020-2050) reducing derailments
SST.2011.4.1-3.
Reducing the occurrences and impacts of freight train derailments

“Typically the expected benefit is to reach an absolute reduction of derailment impacts which would at least balance the mechanical effect of railway traffic increase on accident numbers.”
ERA perspective on D-Rail results
D-Rail provides for key inputs on:

› Future Train and Infrastructure condition monitoring

› Further harmonisation of safety data exchange

› Potential innovation on electronic derailment detection
Contribution to EU policy

- Expected benefits are achievable: up to - 50 % derailments
- Implementation of Monitoring / Maintenance / Supervision
- Improved collaboration between IM–RU–ECM is achievable
- Can be cost effective
- Feasible with existing technologies
ERA perspective on future developments
Promoting D-Rail results – further steps

Detailed system specifications

Cost-effective solutions are identified

- Sector
  - Collaborative approach is necessary

- UIC
  - Need to achieve a certain degree of harmonisation

- NIB
  - Prototypes/Ideas

- NSA
  - Large-scale demonstrators

- ERA

- EC / EU
  - Optimal integration with the EU legal framework

Investments will be necessary
Potential change to legal framework

Cost-effective solutions are identified

- Sector
- UIC
- NIB
- NSA
- ERA
- EC / EU

Collaborative approach is necessary

Need to achieve a certain degree of harmonisation

Prototypes/Ideas

Large-scale demonstrators

Optimal integration with the EU legal framework

Investments will be necessary
Investing for future benefits

- Cost-effective solutions are identified
- Collaborative approach is necessary
- Need to achieve a certain degree of harmonisation
- Prototypes/Ideas
- Large-scale demonstrators
- Optimal integration with the EU legal framework
- Investments will be necessary
Promoting D-Rail results – further steps

Everyone is concerned!

- Cost-effective solutions are identified
- Collaborative approach is necessary
- Need to achieve a certain degree of harmonisation
- Prototypes/Ideas
- Large-scale demonstrators
- Optimal integration with the EU legal framework
- Investments will be necessary
Current opportunities

› Input to Shift to Rail

› Input to Horizon 2020

› Connecting Europe Facilities

› Other EU funding?

Do not miss them!
ERA will continue to

› Examine D-Rail results in detail

› Inform other parties on D-Rail results

› Liaise with DG Move and DG R&I, when necessary

› Consider (future) full system specifications, if provided

› Consider (future) amendments to current legislation, when necessary
Making the railway system work better for society.

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