Group of Analysts/Joint Network: sector level analysis

IPA Training | 12.09.2023 | Belgrade, Serbia

EUROPEAN UNION AGENCY FOR RAILWAYS

Photo: Adobe Stock / by Tarasylo

EUROPEAN UNION AGENCY FOR RAILWAYS

- Aim of this part of the presentation
  - Explain the functioning and the recent Joint Network Secretariat procedures
  - Show examples of outcomes
  - Explain the future rule of the Group of Analysts

EUROPEAN UNION AGENCY FOR RAILWAYS

2. Roles and Responsibilities after Incidents and Accidents

- **Railway Undertaking (RU)** and **Infrastructure Manager (IM)** are responsible for safe operation. In case of incidents and accidents RU and IM shall define together with all further parties involved (e.g. **ECMs, keepers and loaders**) measures immediately preventing any related danger.

EUROPEAN UNION AGENCY FOR RAILWAYS

2. Roles and Responsibilities after Incidents and Accidents

- After incidents and accidents the **NSA investigates** aiming at assessing whether the measures immediately taken by the companies involved sufficiently prevent any related danger (at European level). If not the NSA shall intervene. These immediate measures might be costly as well as limited to the Member State concerned and therefore harm interoperability.

- In parallel the **NIB investigates** the incident or accident with the objective to find the causes and to give recommendations to the different actors involved within one year.

EUROPEAN UNION AGENCY FOR RAILWAYS

2. Roles and Responsibilities after Incidents and Accidents

- In case of an incident or accident any actor involved in the event (preferably the competent NSA) might notify an **JNS urgent procedure**. The objective of the respective urgent procedure task force is to
  - keep or improve the safety level,
  - define European-wide harmonised short-term risk mitigation measures in order to maintain interoperability and
  - reduce the costs for the sector as far as possible at this stage.

EUROPEAN UNION AGENCY FOR RAILWAYS

2. Roles and Responsibilities after Incidents and Accidents

- Usually the **urgent procedure task force** does the following:
  - defining the risk which requires European-wide harmonised urgent mitigation measures based on the findings of the NSA and NIB involved
  - Searching for same and similar incidents and accidents in Europe and beyond and the measures taken Definition of the European-wide short-term risk mitigation measures
  - development of short-term European-wide harmonised risk mitigation measures
  - Collecting items to be discussed within a JNS normal procedure, if any
- Due to the tight timeframe research cannot be subject of the discussions.

EUROPEAN UNION AGENCY FOR RAILWAYS

2. Roles and Responsibilities after Incidents and Accidents

- The **JNS normal procedure** usually follows the JNS urgent procedure. The respective normal procedure task force aims at finding mid-term and long-term measures to sustainably solve the issue. Objective is again to
  - keep or improve the safety level,
  - ensure interoperability and
  - reach back the original or even a lower level of related costs.
  - The work of the experts might lead to the identification of research needs.

- Related **Research** could be done by S2R, UIC, actors involved,…

EUROPEAN UNION AGENCY FOR RAILWAYS

2. Overview of ongoing JNS procedures

Ongoing Task Force:

- Normal Procedure “Consequences of unintended brake applications with LL blocks”

Concluded but continuation in smaller groups:

- Normal Procedure “Great Belt Accident/Incident”

- Normal Procedure “Broken Wheels”

EUROPEAN UNION AGENCY FOR RAILWAYS

2. Overview of recently concluded JNS procedures

- Urgent Procedure “Great Belt Accident”
  - Followed by “Great Belt Incident”
- Urgent Procedure “Extreme effects of thermal overload in special cases of freight operation”
- Normal Procedure “Consequences of unintended brake applications with LL blocks”
- Urgent Procedure “Ukrainian Grain”

EUROPEAN UNION AGENCY FOR RAILWAYS

- Explain the functioning and the recent Joint Network Secretariat procedures
- Show examples of outcomes
- Explain the future rule of the Group of Analysts

EUROPEAN UNION AGENCY FOR RAILWAYS

Great Belt Accident & Incident

EUROPEAN UNION AGENCY FOR RAILWAYS

Overall timeline JNS procedures on the Great Belt bridge

Urgent Procedure

- Development short term RCM[1]–: action plan 2019 (hitch FW 6170)
- Immediate measures NSA DK lifted
- Topics for Normal Procedure

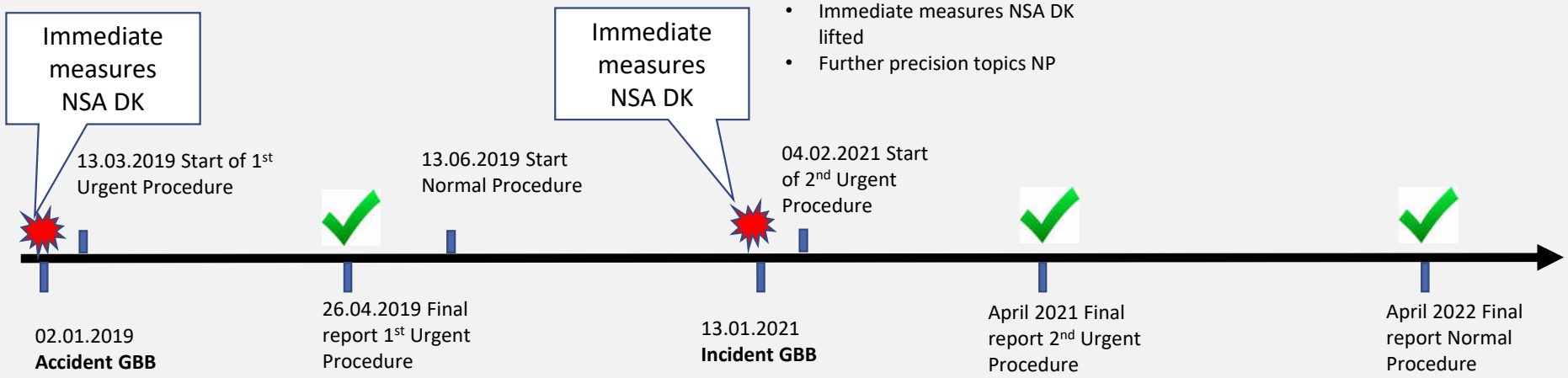
Normal Procedure on hold

Normal Procedure

- Development medium to long term RCM: extended action plan
- Topics for further long-term developments

Urgent Procedure

- Measures to address incident
- Immediate measures NSA DK lifted
- Further precision topics NP



1) Risk Control Measure

EUROPEAN UNION AGENCY FOR RAILWAYS

- In both these events, semi-trailers transported on pocket wagons over the Great Belt bridge were moved outside of the gauge, caused by cross-wind. Both events were investigated by the Danish National Investigation Body. The respective final reports including the description of the accident resp. incident are to be found under Forside (havarikommissionen.dk)
- The risk to be treated within this Normal Procedure

Semi-trailers on pocket wagons move outside the gauge during transport

EUROPEAN UNION AGENCY FOR RAILWAYS

Organisation of the Task Force

- A dedicated Task Force, consisting of experts from NSAs and Representative Bodies met in total 13 times (see next slide)
- Dedicated sub-group meetings were created to work on particular topics:
  - Cluster I : Secure loading
    Subgroup Ia. Update of Action Plan 2019
    Subgroup Ib. Communication and training related to hitches
  - Cluster II: Cross-wind safety
    Subgroup IIa. Cross-wind stability of rolling stock
    Subgroup IIb. Measures at infrastructure side
  - Cluster III: Reliable king-pin locking
    Subgroup IIIa. Hitch sensors
    Subgroup IIIb. Locking force

EUROPEAN UNION AGENCY FOR RAILWAYS

Normal Procedure Task Force meetings overview

Date	Main topics discussed	Attendance stakeholders									
		NSA	UIRR	UIP	ERFA	CER	EIM	MAN [1)]	UIC	UNIFE	EC
13.06.2019	Setting up & Action Plan	4	1	1	-	2	2	2	1	-	-
01.10.2019	Update Action Plan & site visit Hamburg	5	3	3	1	2	3	2	1	-	-
29.11.2019	Update Action Plan	3	4	-	1	2	3	2	1	-	-
06.02.2020	Discuss NIB report (accident 2019) & Action Plan	4	3	2	1	3	3	2	1	-	-
01.04.2020	*Cancelled due to COVID'19 pandemic*	-	-	-	-	-	-	-	-	-	-
08.10.2020	Update Action Plan & review Urgent Measures	4	4	1	1	3	3	2	1	-	-
27.11.2020	Update Action Plan & review Urgent Measures	3	3	2	1	4	3	2	1	-	-
04.02.2021	Discuss incident 13.01.2021 (see UP 2021)	10	4	3	1	4	3	4	1	1	-
05.05.2021	Reorganisation Action Plan after UP Incident 13.01.2021	5	5	3	1	3	4	3	2	-	-
29.06.2021	Discuss progress of sub groups	6	3	3	1	4	3	1	2	1	-
30.09.2021	Discuss progress of sub groups and draft report	5	5	2	1	8	3	-	1	1	-
25.11.2021	Discuss progress of sub groups and draft report	3	5	1	-	6	2	1	2	1	1
04.02.2022	Discuss NIB report incident 2021 and draft report	6	5	2	1	3	4	2	2	-	1
31.03.2022	Discuss final report & comments	7	3	2	3	5	2	1	2	-	2

1) Manufactors of hitches involved in accident (SAF Holland - manufacturer of hitch type FW6170) and incident (MAZ – manufacturer of hitch type MAZ80800)

EUROPEAN UNION AGENCY FOR RAILWAYS

Publication and dissemination of the final report

1. After conclusion by the JNS Task Force, the JNS secretariat informs the JNS Panel to verify whether the procedure was correctly applied and the initial objectives are met

2. The dissemination of the outcome was agreed among the Task Force members.
   The final report containing among others the risk control measures will be disseminated by the JNS Secretariat as follows:

   – to ERA for publication on the its website and for distribution to ECM certification bodies;
   – to the Group of Representative Bodies (GRB) for the distribution to its members;
   – to the official entities (OTIF, NIB Network, NSA Network, OSJD[1)]) for the distribution to their members;
   – to UIC for the distribution to its members.

1) Suspended at the time of the publication of this report. Distribution pending political developments.

EUROPEAN UNION AGENCY FOR RAILWAYS

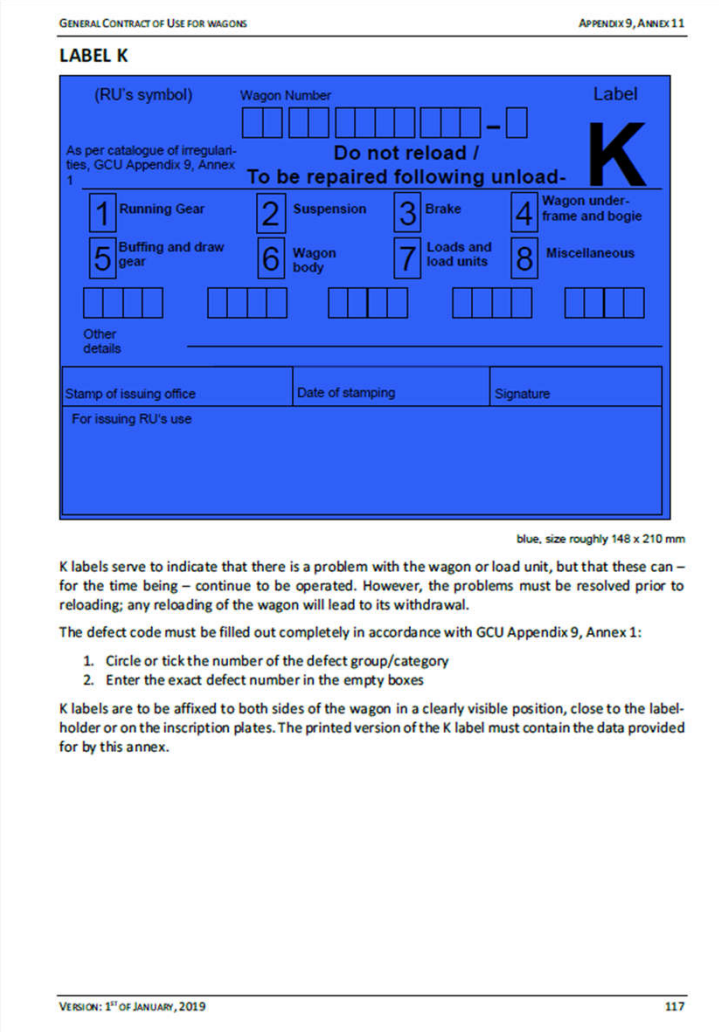
Example outcome : subgroup 1a
RCM for pocket wagons equipped with any hitch types

When	Who	Actions, tools and resources	Consequences	Documentation
0) Maintenance	ECM (see footnote 1)	The Entity in Charge of Maintenance (ECM) plays an important safety role in the European railway system by ensuring that the vehicles for which it is in charge are in a safe state of running by means of a system of maintenance. This European system of certification for ECMs has been set up in Regulation 2019/779. Manufacturer of wagons are responsible of the production and the correct development of maintenance manuals. ECMs in charge of pocket wagons are responsible for the correct management of these vehicles by applying/managing these maintenance manuals of the pocket wagons including the hitches. *Tools* - *ECM Regulation* - *Guidelines on Communication and Staff Competences (see note 7)*	Manufacturer shall set up/develop maintenance manuals for their produced wagons. ECM shall manage these maintenance manuals according to the manufacturers' instructions and/or based on their return of experiences with such vehicles.	ECM maintenance plans The next hitch maintenance date shall be preferably indicated on both sides of the pocket wagon. As a second option, it might be made available by the ECM/keeper to the RU by other means (for example through the RSRD).
1) Optional: At arrival, after removing the semi-trailer or container from the pocket wagon (unloading).	RU, Terminal or third-party on behalf of RU (see footnote 1)	Visual checks in the terminal that… a. …the handles or any other locking mechanism both sides are in their correct position; b. …the hitch is free of damages, and c. …the wagon is not marked with a K-label (note 2). *Tools:* • *appropriate lighting.* • *red tape.* • *K-label (RU or the terminal operator or any other third party contracted by the RU)* • *GCU contract (K label processes)*	If the checks a) and b) returns a negative result • red tape and/or K label shall be affixed on the wagon on both sides; • pocket wagon shall not be used for the transport of semi-trailers, and • wagon keeper/ECM shall be informed. In case of a presence of a K-label (related to check c), the GCU processes have to be followed.	Traceability of checks shall be assured. Documentation from RU to the wagon keeper/ECM. If the terminal acts on behalf of the RU, the information shall be communicated to the responsible RU.

EUROPEAN UNION AGENCY FOR RAILWAYS

Example of outcome
Note 2: GCU label

GCU Label K shall be applied to the pocket wagon, indicating that it may not be loaded or reloaded with a semi-trailer:



GENERAL CONTRACT OF USE FOR WAGONS — APPENDIX 9, ANNEX 11

LABEL K

(RU's symbol) Wagon Number ☐☐ ☐☐ ☐☐☐☐ ☐☐☐ – ☐ Label

As per catalogue of irregularities, GCU Appendix 9, Annex 1

Do not reload / To be repaired following unload- **K**

1 Running Gear	2 Suspension	3 Brake	4 Wagon underframe and bogie
5 Buffing and draw gear	6 Wagon body	7 Loads and load units	8 Miscellaneous

☐☐☐☐ ☐☐☐☐ ☐☐☐ ☐☐☐☐ ☐☐☐

Other details

Stamp of issuing office	Date of stamping	Signature
For issuing RU's use		

blue, size roughly 148 x 210 mm

K labels serve to indicate that there is a problem with the wagon or load unit, but that these can – for the time being – continue to be operated. However, the problems must be resolved prior to reloading; any reloading of the wagon will lead to its withdrawal.

The defect code must be filled out completely in accordance with GCU Appendix 9, Annex 1:

1. Circle or tick the number of the defect group/category
2. Enter the exact defect number in the empty boxes

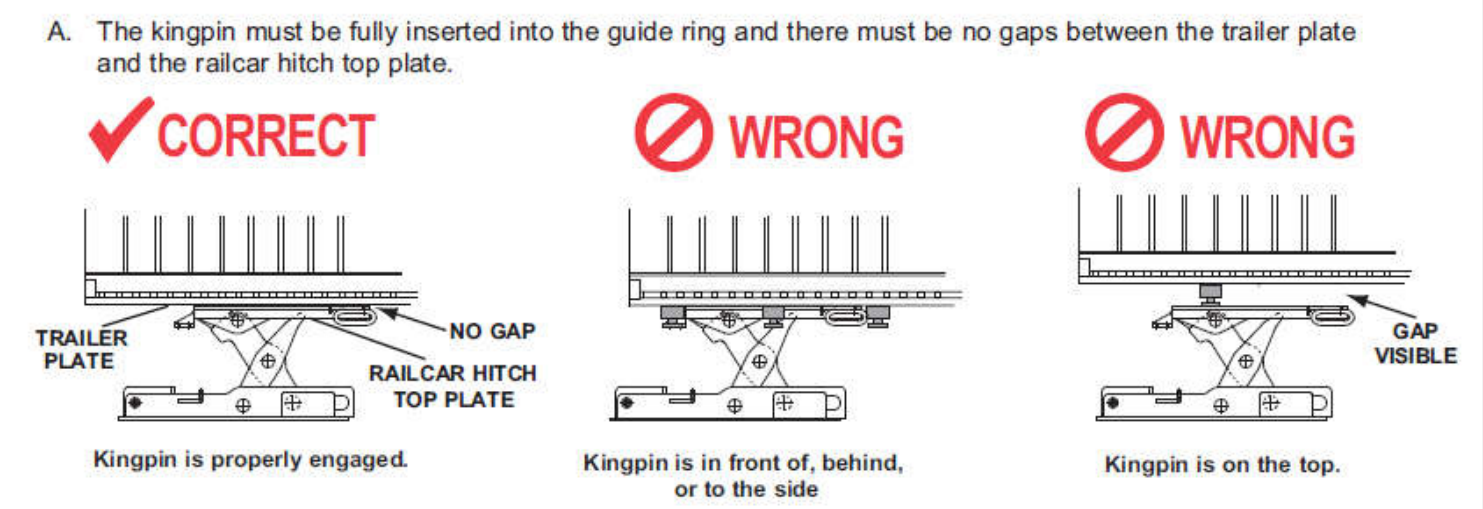
K labels are to be affixed to both sides of the wagon in a clearly visible position, close to the label-holder or on the inscription plates. The printed version of the K label must contain the data provided for by this annex.

VERSION: 1ST OF JANUARY, 2019 — 117

EUROPEAN UNION AGENCY FOR RAILWAYS

Example of outcome
Note 4

Visually check that the semi-trailer is loaded correctly and the king-pin is in the right position inserted into the guide ring



EUROPEAN UNION AGENCY FOR RAILWAYS

Example of outcome
subgroup IIIa - hitch sensors : one set of requirements

Basic Prerequisits

- **Compatibility:** no negative interference with the hitch mechanics (e.g. king pin locking or the height adjustment) and other indications/signals during operation
- **Reliability:** Full resistance against all operational conditions (snow, rain, hail, dirt, …) and possibility to easily check the correct function of the system (e.g. through a restart)
- **Fail Safe:** in case of defects (e.g. broken cable, short circuit, reverse polarity) no positive signaling

Functional Requirements

- **Clear indication of the right king pin position**
  yes / no
- **Clear indication of the king pin locking**
  yes / no

Interface standards

- ITSS2 (between sensor and telematic / transmission device)
- ITSS1 (between telematic / transmission device and user)

Minimum Information to be transmitted to Data Systems

- Status of king pin position
- Status of king pin locking
- Time stamp of the transferred information

The information / indication on the wagon shall be mandatory and unambiguous. It is not possible to define one solution, because both functional requirements can be met by either two separate indications or by one single summarising indication:
Transport allowed when both criteria, the right king pin position and the king pin locking, are indicated as fulfilled.
Transport forbidden when at least one of the two criteria is indicated as not fulfilled.

Red (=not ok) and blue (=ok) as color of the indication light seem sufficiently different from other indications/signals during operation. An unfiltered / unmodified green light* (=ok), should not used due to the existence of small green ground signals in the terminals.

To avoid confusion with other indications/signals during operation the indication light should be off during the transport of the wagons. However, whenever needed during operation, the indication shall be available e.g. automatically during loading/unloading and by temporary activating the indication manually.

* To avoid that the green light is seen by Loco-driver and interpreted as operational relevant signalization, other measures like using green light with polarization filter or other technical solution, after a specific risk assessment, could be possible.

EUROPEAN UNION AGENCY FOR RAILWAYS

Broken Wheels

EUROPEAN UNION AGENCY FOR RAILWAYS

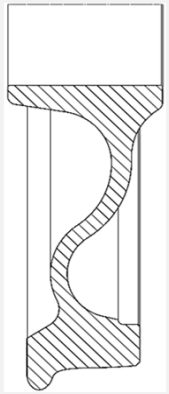
Broken Wheels : background

In 2016/2017 broken and cracked wheels BA 314 / ZDB29 (with a slope under the wheel flange) and BA004 in some applications in the European rail freight business occurred. To mitigate the risk on 28th July 2017 short term measures in operation, wagon maintenance and off vehicle wheelset maintenance were disseminated.

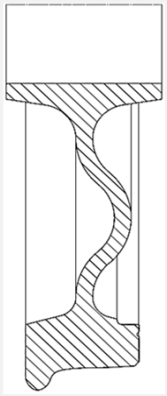
In the second phase the Joint Network Secretariat Task Force “Broken wheels”– normal procedure performed in-depth analysis.

The present document replace and updates the “Short term mitigation measures” and defines long-term measures and proposal for updating the standards, regulations and contractual arrangements.

crack in the web
BA314 / ZDB29 (with a slope under the wheel flange)



crack in the rim
BA 004



Background information of the JSG analysis are summarized in “JNS-NP-TF-Broken wheels-Final backup.pdf” and shared insight the JNS “Broken wheels”.

EUROPEAN UNION AGENCY FOR RAILWAYS

Broken Wheels : outcome

Operation and wagon maintenance – BA 004 and BA 314/ZDB 29

Measure	Visual inspection of the wheels before departure	Inspection of the wheels during change of brake blocks (in and outside of workshop)	
To apply	**All** RU	**All** affected ECM in case of order repairs	In case of GCU repairs.
Scope	• Tread braked wagons • all wheel types (even wheels with white stripe) • limited to visible parts of the wheel	• Tread braked wagons • wheel design BA 314 / ZDB29 (with a slope under the wheel flange) and BA004 • limited to visible parts of the wheel	• Tread braked wagons • Wheels without white stripes • limited to visible parts of the wheel
Criteria	Visual inspection: • single cracks on the wheel tread* • Cracks in rim and web (Annex 9 GCU) • any indication of thermal overload of the wheel (Annex 9 GCU)** • Check release of the handbrake	Visual inspection: • single cracks on the wheel tread* • Cracks in rim and web • any indication of thermal overload of the wheel** • Sound checks of the wheel *** • Optional: White stripe suppression (depending on environmental conditions)	Visual inspection: • single cracks on the wheel tread • Cracks in rim and web • any indication of thermal overload of the wheel
Measures on findings:	• dispatch wagon to workshop • Off vehicle wheelset maintenance **(ECM)**	• dispatch wagon to workshop • Off vehicle wheelset maintenance **(ECM)**	• dispatch wagon to workshop • Off vehicle wheelset maintenance **(ECM)**
Status 11/2019	• Already implemented in GCU for all brake block types - only reminder	• individual	• See proposal amendment GCU

* single cracks on the wheel tread (“isolated transverse cracking” cf. EN 15313 §C.2.6 and 6.2.3.4) – Criteria: see slide 39
** any indication of thermal overload of the wheel (burnt paint, excessive wheel deformation, cf. EN 15313 §C.3.2.2 and 6.2.4.3) – Criteria: see slides 40, 41
*** sound test: see slides 42, 43

Amendments to the short term mitigation measures from 2017 highlighted in yellow

EUROPEAN UNION AGENCY FOR RAILWAYS

Urgent Procedure “Extreme effects of thermal overload in special cases of freight operation”

&

Normal Procedure “Consequences of unintended brake applications with LL blocks”

EUROPEAN UNION AGENCY FOR RAILWAYS

Unintended brakes with LL blocks
Urgent Procedure: Risks identified and Outcome

December 2021

February 2022

Collection cases (NSA Italy) → Collection cases (JNS UP TF) → Collection cases (JNS NP TF)

Risk!

Outcomes:
- National measures
- Notification JNS UP

Risks to be treated:
Unintended brake application of freight wagons equipped with LL IB 116* brake blocks that might lead to :

- **Fires**:
  flaming brake blocks

- **Derailments**:
  severe wheel tread damages

Outcomes:
- Fire risk not higher than with cast iron brake blocks
  ➔Normal Procedure

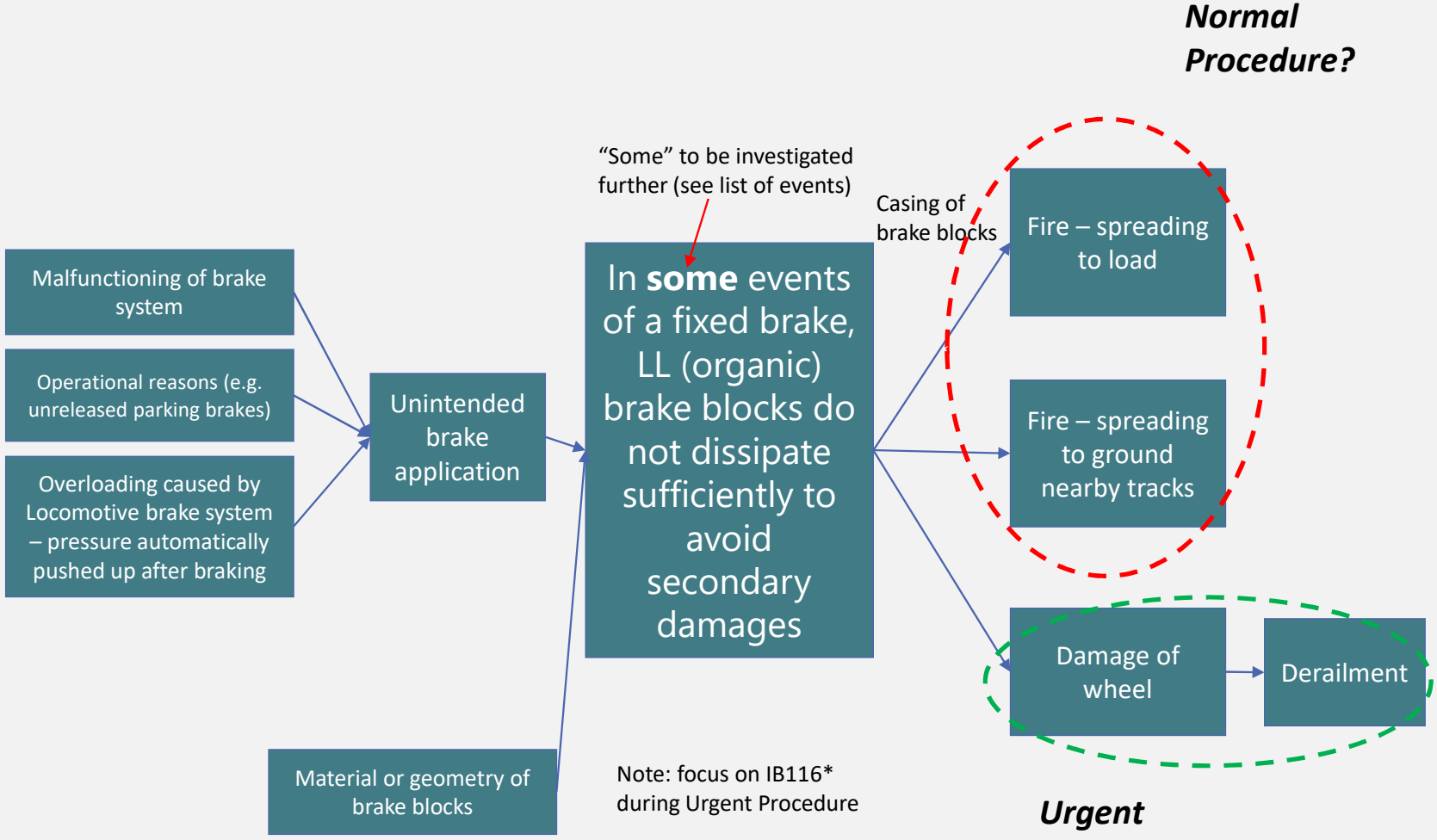
- Short-term risk control measures
  - Avoid fixed brakes
  - Detect fixed brakes
  - Detect existing wheel tread damages

- Tasks for Normal Procedure (see next slide)

NSA monitoring | JNS Urgent Procedure (UP) | Normal Procedure (NP)

EUROPEAN UNION AGENCY FOR RAILWAYS

Unintended brakes with LL blocks
Urgent Procedure: Risks identified and Outcome



EUROPEAN UNION AGENCY FOR RAILWAYS

Unintended brakes with LL blocks
Urgent Procedure: Risks identified and Outcome

1. Summary

JNS URGENT PROCEDURE EXTREME EFFECTS OF THERMAL OVERLOAD IN SPECIAL CASES OF FREIGHT OPERATION

Background:

In 2021 there was a cluster of incidents with burning LL brake blocks after fixed brakes in Italy. In some events of a fixed brake, LL (organic) brake blocks did not dissipate sufficiently to avoid secondary damages.

As a reaction immediate measures to LL-equipped wagons (06. August 2021) from ANSFISA (NSA Italy) were imposed. On 02.11.2021: The measures were complemented by speed restrictions for freight train operated with IB 116*.

On 30.11.2021 the JNS Urgent Procedure was started to analyze the incidents and to define short-term risk control measures as a replacement for the Italian measures.

Result of the analysis:

Two types of secondary damages were identified that were further considered in the analysis, namely fire and wheel damage. Note that the latter can, in specific cases, lead to derailment.

The analysis has shown that the risk of fire for vehicles equipped with LL - blocks is not higher than with cast iron. The negative effects of occasional cases of severe tread deformation due to fixed brakes can be further reduced by the short-term risk control measures, which represent the best practices and most common measures and technologies used all over Member States.

Solution: Short term risk control measures

Introduction short-term risk control measures in operation and wagon maintenance as set out in the following slides.

Slide 3

EUROPEAN UNION AGENCY FOR RAILWAYS

Unintended brakes with LL blocks
Urgent Procedure: short term risk control meaures

2. Short-term risk control measures

OVERVIEW

The following short term risk control measures are the result JNS task force:

2.1 Measures to avoid fixed brakes

- 2.1.1 General use of overcharge/assimilation function in accordance with the description in UIC 541-03, 2nd edition August 2015, clauses 2.1.12 and 2.1.13 or EN 14198
- 2.1.2 Start up test for freight trains
- 2.1.3 Start up test performing after emergency braking
- 2.1.4 Appropriate use of overcharge/assimilation function in accordance with the description in UIC 541-03 2nd edition August 2015, clauses 2.1.12 and 2.1.13 or EN 14198 Appendix E.
- **2.1.5** Use the automatic traction and braking system (e. g. AFB) after reaching the regular train speed to get feedback about the behavior of the train

2.2 Detection of fixed brake

- 2.2.1 Use of the hot wheel detection systems with appropriate alarm levels (warm and hot) to detect hot wheels or fixed brakes
- 2.2.2 Use of the hot axle box detection system, in case of alarm also check of the wheel
- 2.2.3 Alert the train driver in case of fixed brakes or flaming brake blocks
- 2.2.4 Detection of consequences of fixed brakes by indicators on the brake blocks

2.3 Check the wheels for extraordinary tread wear / wheel tread deformation

EUROPEAN UNION AGENCY FOR RAILWAYS

Unintended brakes with LL blocks
Normal procedure: list of tasks allocated to mid- and long-term measures

REMINDER : agreed 07.02.2023 TF meeting

Monitoring & Analysis

Mid-term measures
improving existing solutions, applicable results after the JNS NP

Long-term measures
research needs, more resources needed after the JNS

Basis: Suggestions from Urgent Procedure (final report UP, part 2)
in order of priority

1. Continuous collection of relevant cases from all over Europe (past and new cases).
2. Further analysis of the cases collected.
3. Review the limits and conditions of use taking into account current requirements (TSI, EN, UIC) for the application of composite brake blocks (Type LL).
4. Possible harmonization of requirements for hot axle box and hot wheel detection systems.
5. Definition of test bench tests for further analyses, under which conditions the blocks will be flamed and / or plastic deformation of the wheel tread.
6. Further fire propagation evaluation.
7. Investigate statistics of cases with regards to possible differences in quality of LL brake blocks produced in different batches/locations (link with Sector project “Brake block wheel interaction”).
8. Investigate possible solutions to improve the braking system technologies and its operations (e.g. using FTA)
9. Analysis of influence of automatic speed control and braking systems (e.g. AFB, ATO).
10. Investigate technical solutions to detect directly on the loco braking system abnormalities (e. g. hot wheels, etc.).
11. …

➔ Development of sustainable long-term risk control measures replacing the short-term risk control measures from the urgent procedure.

➔ Proposals for amendments in regulation, standards, sector/UIC documents.

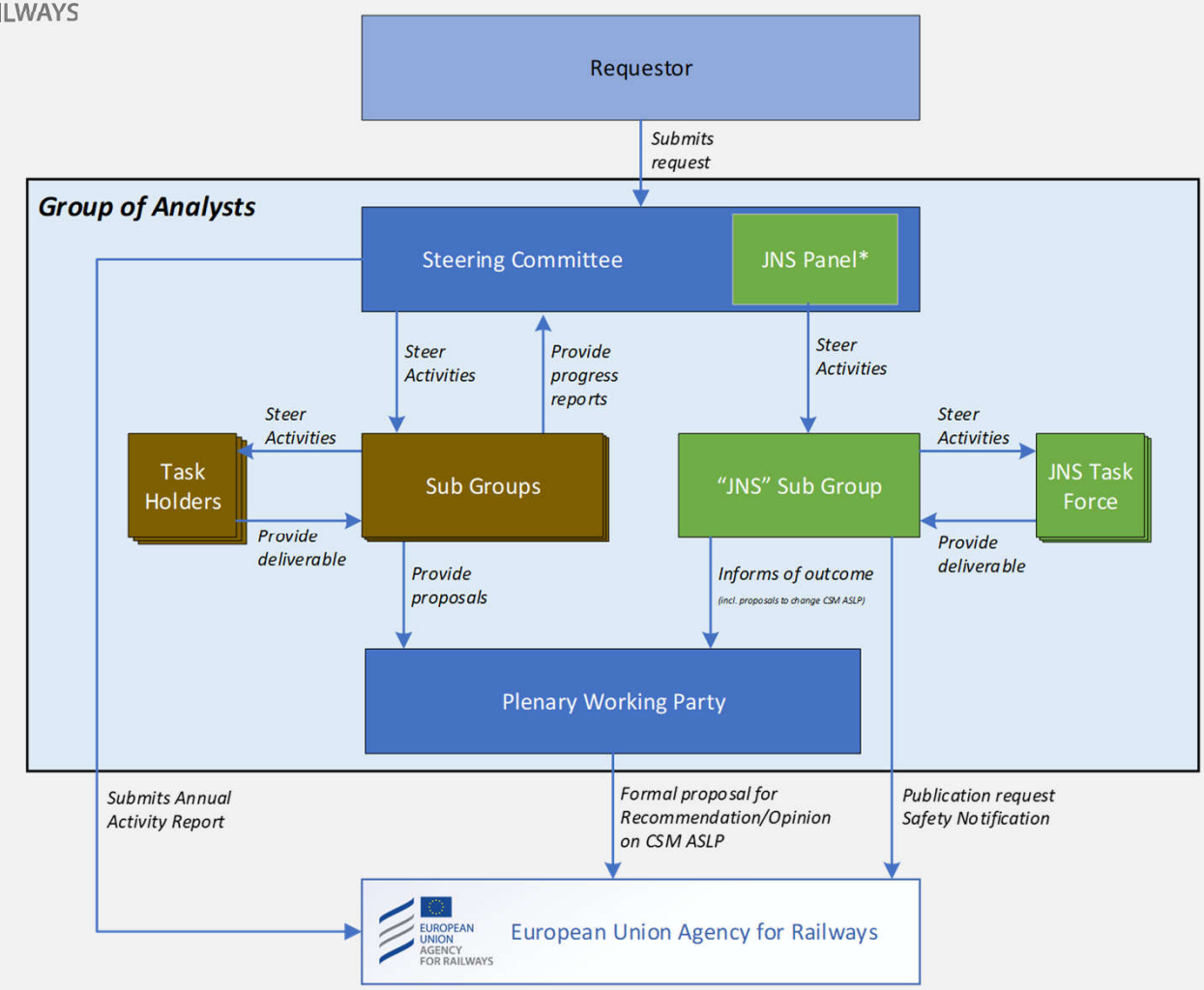
➔ Identification of research needs.

EUROPEAN UNION AGENCY FOR RAILWAYS

- Explain the functioning and the recent Joint Network Secretariat procedures
- Show examples of outcomes
- Explain the future rule of the Group of Analysts

EUROPEAN UNION AGENCY FOR RAILWAYS

Future Group of Analysts



*) JNS in current form will function within GoA until future Analysis Function is defined (see CSM ASLP, Annex VII (2) / GoA Annex)

EUROPEAN UNION AGENCY FOR RAILWAYS

Sub groups

- **Sub-group "A"**: this sub-group is responsible for developing proposals that concern the methods for reporting of occurrences and occurrence scenarios including the taxonomies of event types and of risk control measures. This sub-group covers Appendices A and B, part B 2.2 " of Commission Regulation (EU) xxxx/xxx .

- **Sub-group "B"**: this sub-group is responsible for developing proposals that concern the railway operators' self-estimation of safety performance.
  This sub-group covers Appendix B (excluding section 2.2) of Commission Regulation (EU) xxxx/xxx.

- **Sub-group "C"**: this sub-group is responsible for developing the methods for the assessment of safety levels and safety performance of railway operators and performing statistical safety analyses using the collected data to support GoA activities.
  This sub-group covers Appendix C of Commission Regulation (EU) xxxx/xxx..

- **Sub-group "D"**: this sub-group is responsible for developing proposals that concern the Information Sharing System (ISS). It includes its set of available functions, design (initial and future developments), operation and maintenance, as well as the establishment of assistance to ISS users.
  This sub-group covers the potential CSM amendments relating to the ISS, including Appendix D of Commission Regulation (EU) xxxx/xxx

EUROPEAN UNION AGENCY FOR RAILWAYS

Group of Analysts - activities

- Any GoA activity starts upon the submission of an activity request :
  - Resolve an issue with the CSM ASLP Regulation text
  - Develop a new data assessment module (improvement of the analysis function toolbox)
  - Carry out a statistical safety analysis using the data collected
  - Improve the functioning of the Information Sharing System
  - Develop a safety issue solution

- Steering Committee shall pre-analyse and prioritize requests
  - Safety issue solution requests are assessed by the JNS Panel and may be considered ‘fast track’ (and will then be immediately treated by a dedicated JNS Task Force)

- Plenary Working Party shall assign the prioritised activity requests to the relevant sub-group(s) and shall evaluate the solution proposals developed

- Outcomes of the GoA are proposals to the Agency (basis for possible non-binding safety information or opinions/recommendations)

EUROPEAN UNION AGENCY FOR RAILWAYS

Future Group of Analysts

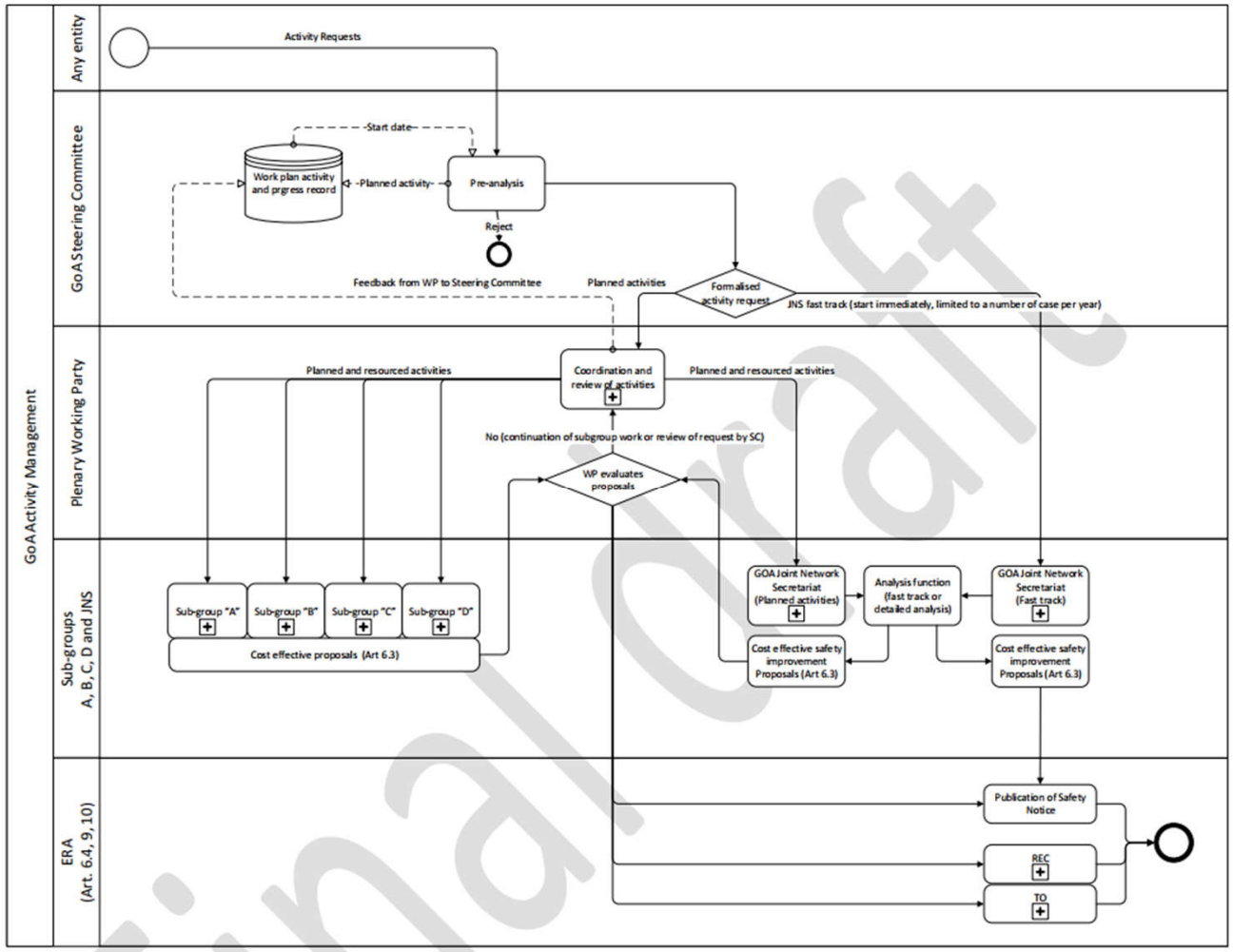


Figure 2: Workflow of Group of Analy'ts' activities.

EUROPEAN UNION AGENCY FOR RAILWAYS

Collective learning in GoA setting (schematic)

Start **Reporting & Data analysis** **Prioritisation** **Organisation** **Solution development** **Outcomes**

Events

Self assessment Safety performance

Change Request to CSM ALSP

JNS Notification

Sub Group C

Steering Committee

JNS Panel

Plenary Working Party

Sub Group JNS with Normal Track Task Force of experts

Sub Groups A, B, and D

Sub Group JNS with Fast Track Task Force of experts

Report
- Long Term RCM
- CR to legal framework
- Standardization requests
- Research needs

Improvement in safety legal framework

Action Plan
- Short Term RCM
- Topics for Normal Track procedure

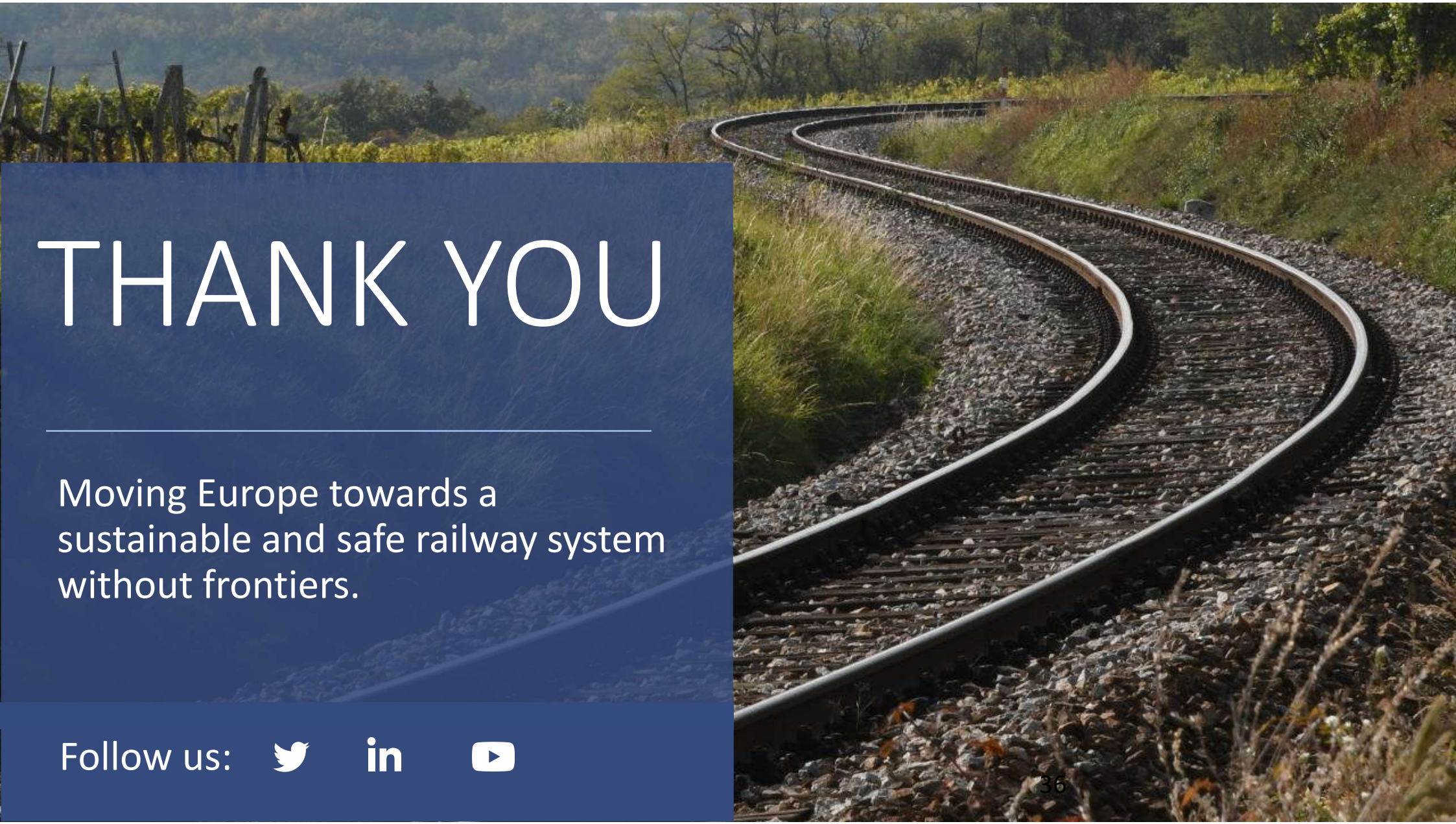
Safety Notification

OPI / REC

Safety Notification

Detect developments/trends, e.g.
- Increased frequency of certain event types;
- Decrease of effectiveness of certain risk control measures;
- Correlation between climate change and safety;
- ..

Possible notification 'normal' procedure


THANK YOU
Moving Europe towards a sustainable and safe railway system without frontiers.
Follow us: