



PARIS
2 ► 7
OCTOBER
2016 ► Pullman Bercy Hotel

INTERNATIONAL
RAILWAY SAFETY COUNCIL

Occurrence reporting in France

► A way to further improve the safety performance

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SUMMARY

- ▶ INTRODUCTION
- ▶ MORE EVENTS TO COLLECT
- ▶ MORE PRECISE INFORMATION
- ▶ A COMMON DATABASE
- ▶ PERSPECTIVES

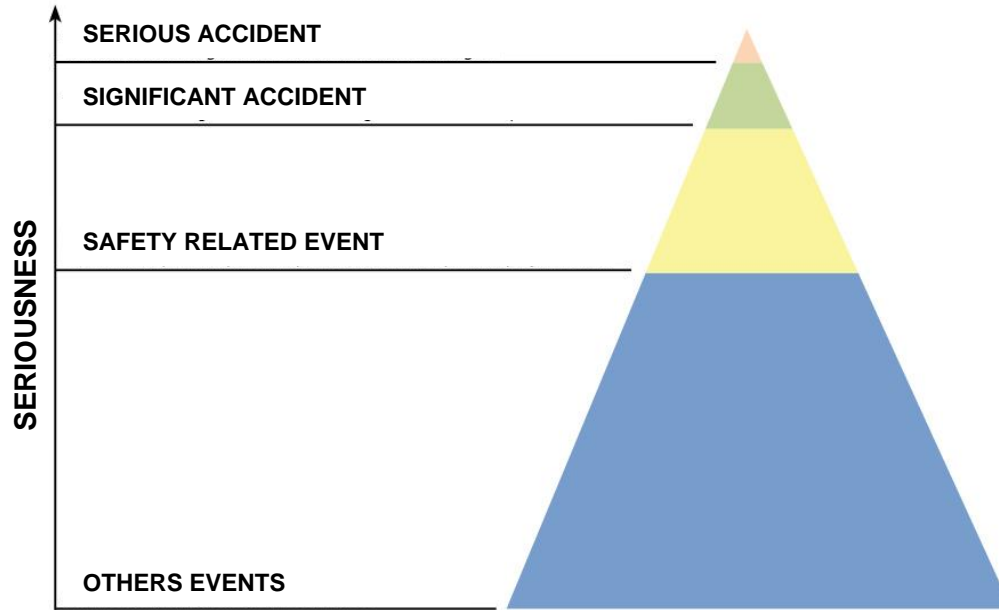
INTRODUCTION

Occurrence reporting improvement :

- ▶ A way to further improve the safety performance
- ▶ A way to face the challenges of tomorrow's society

Two improvement ways : More events, more details

MORE EVENTS TO COLLECT



Occurrence reporting scope before 2016

MORE EVENTS TO COLLECT

Occurrence structure evolution :

- ▶ Build with railway undertakings and infrastructure manager
- ▶ Based on european definition (accident/incident)

MORE EVENTS TO COLLECT

Occurrence structure

European
definitions

Accident	Collision
	Derailment
	Level crossing accident
	Accidents to persons
	Fires in rolling stock
	Others
Incident	Infrastructure
	Energy
	Command Control and Signalling
	Rolling stock
	Operation and Traffic Management

6 types
of accident

5 sub-systems

MORE EVENTS TO COLLECT

ANNEXE I

NOMENCLATURE DE CLASSIFICATION DES ÉVÉNEMENTS DE SÉCURITÉ FERROVIAIRE

NOMENCLATURE DES EVENEMENTS DE SECURITE	
1 - Accident	Événement indésirable non intentionnel ou un enchaînement particulier de cette nature, ayant des conséquences préjudiciables
1.1	Collision
1.1.1	Collision d'un train avec un véhicule
1.1.1.1	Nez à nez
1.1.1.2	Prise en écharpe
1.1.1.3	Rattrapage
1.1.1.4	Heurt d'un train croiseur
1.1.2	Collision d'un train avec un obstacle à l'intérieur du gabarit
1.1.2.1	Collision contre un élément de l'infrastructure engageant le gabarit
1.1.2.2	Enfoncement de heurtoir
1.1.2.3	Collision d'un train contre un animal sur la voie (hors Passage à Niveau)
1.1.2.4	Collision d'un train contre un obstacle sur la voie (hors Passage à Niveau)
1.1.2.5	Collision d'un train avec un matériel en stationnement
1.2	Déraillement
1.2.1	Déraillement de train engageant une voie principale
1.2.2	Déraillement de train sans engagement de la voie principale
1.3	Accident au passage à niveau
1.3.1	Collision (véhicule; piétons; obstacle; ...)
1.4	Accident de personnes hors passage à niveau impliquant du matériel roulant en mouvement à l'exception des suicides et des tentatives de suicide
1.4.1	Accident de personnes hors passage à niveau impliquant du matériel roulant en mouvement à l'exception des suicides et des tentatives de suicide
1.5	Incendie dans le matériel roulant

Annex 1 –
Ministerial order
06 January 2016
-
Reporting from each
company

MORE PRECISE INFORMATION

- ▶ A key question about occurrence reporting improvement concerns occurrence taxonomy
- ▶ A taxonomy is the data structure related to the description and the analysis of an occurrence
- ▶ Description : What ?, When ?, Where ?
- ▶ Analysis : What (+)?, Why ?

MORE PRECISE INFORMATION

- ▶ As for event structure, taxonomy need a common framework
- ▶ Description :
 - ▶ Common seriousness scale
 - ▶ localisation,
 - ▶ level of details concerning subsystems ...
- ▶ Analysis :
 - ▶ Organisational and Human factors
 - ▶ Link with safety management system ...

A COMMON DATABASE

- ▶ New tool is required to adapt to this increasing volume of data
 - ▶ 15 type of events to 66
 - ▶ around 5 000 events/year to 30 000 events/year
 - ▶ deeper description and analysis
- ▶ This new tool is a common database
- ▶ A French ministerial order published in January 2016 demand to EPSF to implement this database before the end of 2017

A COMMON DATABASE

- ▶ Key point for a common database :
 - ▶ common taxonomy (possibility of evolution)
 - ▶ several type of source
- ▶ In October 2015, common functional requirement document
- ▶ During 2016 :
 - ▶ choice work concerning technological solution
 - ▶ working group about taxonomy

PERSPECTIVES

- ▶ Risk model input (bow-tie, acceptability matrix ...)
- ▶ Learning process (reinforcement, new type of product)
- ▶ SMS assessment (link with performance matrix – IRSC 2015 presentation)
- ▶ Project in progress about the assessment of the SMS robustness (stress test)

Merci de votre attention !
Thank you for your attention !