International Railway Safety Council

Improved safety performance tool of railway operators

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Summary

- French railway safety authority
- The French railway context
- The origin of the project
- The safety performance assessment for railway operators
- Results after one year

French Railway Safety Authority (EPSF)

Legal framework

- EPSF is the **French national safety authority (NSA)** regulated by **European Directive (EU) 2016/798**

- It was established as a **public administration institution** (EPA) under **French Law 2006-10 of 5 January 2006**

- Its **mandate and operations** are specified **in Decree 2006-369 of 28 March 2006** and fall within the scope of **Decree 2019-525 of 27 May 2019** on **rail traffic safety and rail system interoperability** transposing European directives in the field of French national law.

Role and responsibilities (1/2)

EPSF ensures that regulations on rail transport safety and interoperability are complied with the French national rail system.

In this capacity, its main activities involve:

- **Issuing the authorisations** required to perform railway operations in France
- **Supervising compliance** with the conditions attached to authorisations issued by means of various checks (audits, inspections, etc.)

Role and responsibilities (2/2)

- **Monitoring safety levels and coordinating collective learning**

- **Supporting the Ministry of Transport** in developing and adapting the national regulatory framework in relation to railway safety and interoperability

- **Working with the European Union Agency for Railways** to develop actions for the railways (regulatory harmonisation) and **collaborating with other national safety authorities** (on joint monitoring activities, for example)

The French Railway Context

The French Railway context (1/2)

- The **opening up to competition of goods and people in the French rail sector.**

- **EPSF issues** 50 railway undertakings and **monitors** 15 infrastructure managers. These numbers are **in constant progression.**

- The number of railway operators generate a **significant amount of data** related to authorisation, supervisions and incidentology

The French Railway context (2/2)

This context generates :

- Creation of global **workgroup** concerning maturing level measure of railway system
- **Raw data create difficulties to supervise the global performance of railway operators**
- **Using this data (is key) to orientate any monitoring strategy**
- At the same time, creation of **railway operators performance assessment tool**

The origin of the project

Tool targets

- **Use all of the collected data** by various departments in EPSF
- **Quantify the performance** of each safety management system (SMS) regarding railway operators
- Support the **supervision planification**
- Make **communication** with railway operators more fluid
- Allow these operators to **identify strengths and weaknesses to improve safety level**

The different step of this project (1/3)

2015	2017 to Sept. 2018	Sept. 2018 to April 2019	April 2019 to May 2020	May 2020 to April 2021
« First performance matrix » **Developed to assess SMS**	Evolution of « performance matrix »	Performance matrix Assessment audit **Assess and challenge the tool**	Comparison with other models **Collective work on good practises and the maturing process (DGAC, EURA)**	Workgroup Performance matrix **Evolution of the tool**

Assessment test committee

June 2020

January 2021

Assessment Committee

June and September 2021

The different step of this project (2/3)

Sept. 2018 à April 2019

Performance matrix

First tool assessment to orientate the workgroup

- Wrong strategy to achieve the aim
- Difficulties to translate all the informal information
- Regulatory evolution dependancy
- Efficacity and compliance indicators are unrepresentative of performance level of a safety management system
- Redondency with the first tool developed by EPSF in 2015
- Variation in results accuracy (gaps in numbers depending on the auditor) and in maturing level (superficial approach) to be managed …
- Link events with complex processes

The different step of this project (3/3)

Sept. 2018 to April 2019

Comparison with other models

OFFICE OF RAIL AND ROAD

dgac DSAC

TraFi Finnish Transport Safety Agency

Best practices identification

- Develop a maturing level model
- Integrate the judgment of every inspector and not focus solely on quantitatives skills
- Assess together in order to obtain the most objective and partial vision
- Notundertaking focus the results on a unique quotation system in assessing the practices and the operators development
- Rely on maturing level assessment guide not to be dependant of regulatory evolution
- Set a specific organization with one or any local referent for the assessing tool use

Define appropriate needs

- Set the tool finalities / Draft specifications
- Integrate the qualitative dimension of the assessment
- Integrate the tool into EPSF processes

The safety performance assessment for railway operators

Workgroup « Performance Assessment »

April 2019 to Mai 2020

Workgroup

Evolution of the tool

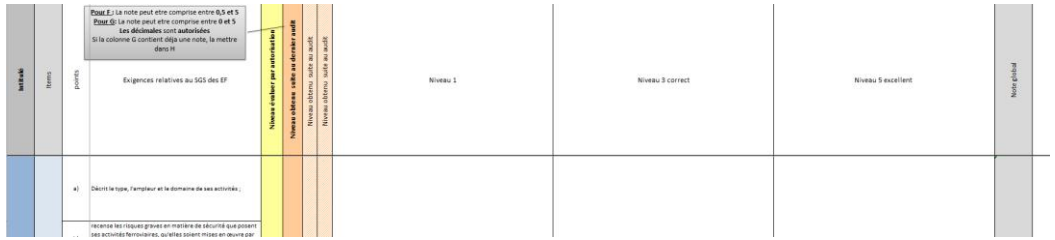
- **Workgroup** : 7 EPSF agents
- Workgroup throughout **technical committees**
- **Integration** in the project of every **department head** for the final tool
- Awareness of different progressing axes identified (**benchmark, external monitoring**, etc.)
- Presentation of project evolution to every department head throughout **supervision committees**
- **Support tool aim** :
  - Define a **Procedure**
  - Define an on-going assessment **method** of safety management systems maturing level (synthetic vision of operators maturing level, identification of strengths and weaknesses, using EPSF collected data)

Selected method (1/3)

1 Assess the performance of each railway operator (grade, trend, environnement)

1- Grade the SMS performance

Assessment of different regulatory **criteria** (according to European regulation 2018-762) in a chart with a grade between 0 and 5 (conform / correct / mastered application of SMS)



2- Grade the trend

Automatic gathering of criteria by theme to **assess** both thematic trend and general **trend**

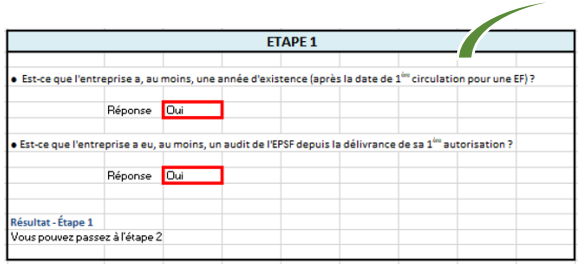
Etape 2 : Remplir la tendance pour chaque ligne. La tendance générale se remplit **automatiquement**

Étiquettes de lignes	Moyenne de niveau évaluer par autorisation	Moyenne de Niveau obtenu suite au dernier audit	Tendance
Domaines opérationnels	1,3	1,2	Positive
Gestion des compétences	1,0	0,8	Non-déterminée
Gestion documentaires et de l'informat	1,0	2,0	Négative
Gestiondes prestataires	1,0	2,0	Négative
Identification et Gestion des risques	1,0	0,0	Positive
Pilotage du SGS	1,2	1,5	Stable
REX	1,0	0,5	Négative
Surveillance	1,0	0,3	Stable
Total général	**1,1**	**1,2**	**Stable**

3- Grade environnement / context

3.1 Awareness of **railway operators history** (unchanged/stable environment, undefined, strong future evolution), of its incidentology (safe environment, undefined, concerning)

3.2 Assessment of **risk level** related to this **environment** (double-entry matrix axis incidentology / axis evolution)

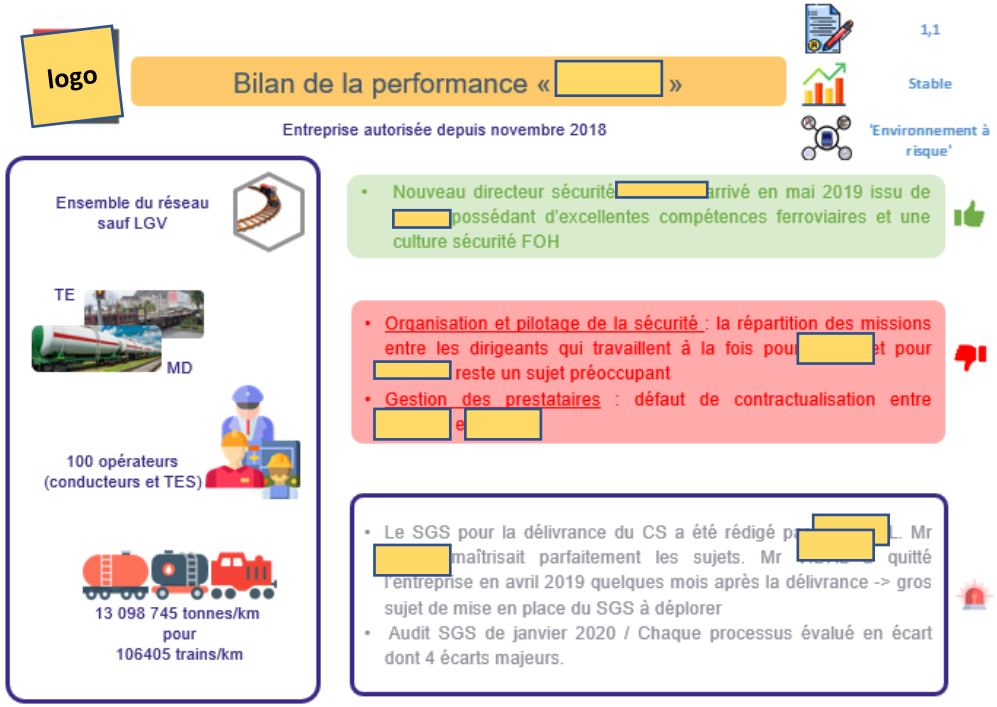


Evolution \ Incidentologie en fonction du trafic	Pas préoccupant	Non déterminé	Préoccupant
Pas d'évolution	A Environnement favorable	A Environnement favorable	B Environnement stable
Ne sait pas	A Environnement favorable	D Environnement non déterminé	C Environnement à risque
Evolution à venir forte	B Environnement stable	C Environnement à risque	C Environnement à risque

Selected method (2/3)

2 Summarize SMS (safety management system) performance assessment results

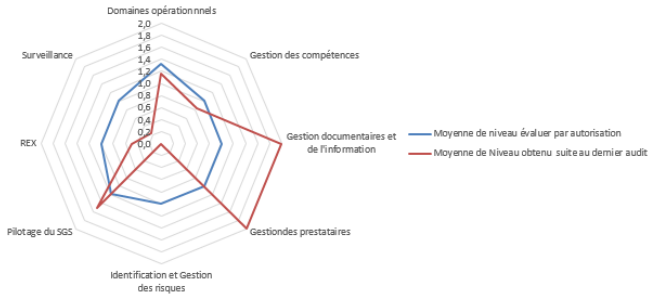
- **Summary** made by both auditor and assessor
- Highlighting of **essential data**
- Highlighting of **negative and positive aspects**
- Give auditors and assessors the opportunity to **express** their feeling or perceived information, in an **informal way**



Selected method (3/3)

3 Share results and exchange collectively during an assessment committee

- Composed of EPSF **technical department heads**
- Each **railway operators assessed** once a year



- 5-mn presentation of each **assessment summary**
- Delivery of final opinion to **define the maturing level and a trend** for each operators

- Use of software application to facilitate the commitee and **debates**

Results after one year

Results after one year (1/2)

After one year of experimentation, EPSF achieve successes as :

- **Elaborate the EPSF's supervision planification** (displayed in 2022) by the identification of **strengths and weaknesses** of each organization
- **Open-up the discussion** for the cycle authorisation to focus on the strengths and weaknesses
- **Dispose of an independent assessment** concerning each railway operators
- These successes accorded to the EPSF ambition are characterized by a main difference with the framework from CSM ASLP:
  - **EPSF method is based on his own assessment to measure the performance level about all regulatory criteria**
  - **EURA claimed to railway operators an auto-evaluation of specific criteria defined in the CSM ASLP**

		2021	2022
	Note	1,1	
	Tendance	→	
	Environnement	⊖	
	Note	1,4	
	Tendance	↑	
	Environnement	⊖	
	Note	1,7	
	Tendance	↓	
	Environnement	⊖	
	Note	1,6	
	Tendance	→	
	Environnement	✓	
	Note	2,4	
	Tendance	→	
	Environnement	✓	
	Note	1,9	
	Tendance	→	
	Environnement	✓	
	Note	2,3	
	Tendance	→	
	Environnement	✓	
	Note	1,9	
	Tendance	→	
	Environnement	✓	
	Note	2,1	
	Tendance	/	
	Environnement	✓	
	Note	2,4	
	Tendance	→	
	Environnement	✓	
	Note	2,9	
	Tendance	→	
	Environnement	✓	
	Note	3,6	
	Tendance	→	
	Environnement	✓	
	Note	2,5	
	Tendance	/	
	Environnement	✓	

Results after one year(2/2)

Next the first collective learning after firsts commitees:

- **EPSF would share these results** on a case-by-case with French railway sector in the short-term :
  - Provide to the railway operators **NSA vision** about their Safety Management System (downward communication in a first time)
  - Initiate a dialog about this NSA vision (throughout specific safety meetings for example, or throughout a monitor, or a certificate assessment).

- EPSF ambition is in the medium-term to:
  - **Issue this tool** to railway operators and allow them to auto-assess of their SMS with the tool
  - **Compare EPSF and railway operators assessment** to initiate a dialog and enable to **increase the railway safety system together** (top-down communication)
  - Develop software in order to industrialize this tool

Thank you.

Other thanks

In particular (workgroup members) :

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And each actor in EPSF who had contributed to the tool development