

Legal and Railway Safety

What synergy ?

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TRANSPORT |

Control sheet

- Document scope

Objective of this document is to introduce railway safety

- Issue

Issue	Name	Title	Content	Date
1	Stéphane F. Romei	Ccn Railway Safety Leader	Creation	Marc. 08

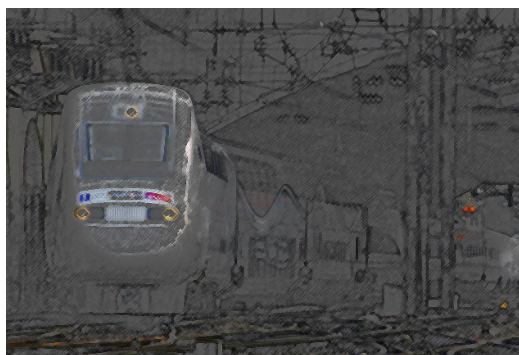
Agenda

1st topic Background

2nd topic Recent changes in the railway market

3rd topic A Responsible Industry

4th topic Conclusions



Background

- Performance of railways is generally high mostly in Europe, North America and Japan


TRANSPORTATION (EU)	Fatalities per 100 millions passengers.km		Fatalities per 100 millions passengers.h	
	1999	2001-2	1999	2001-2
Motorcycle	16	13,8	500	440
Pedestrian	7,5	6,4	90	75
Bicycle	6,3	5,4	30	25
Car	0,8	0,7	30	25
Ferry (boat)	0,33	0,25	36,5	16
Bus	0,08	0,07	10,5	8
Air (Civil aviation)	0,08	0,035	2	2
Train	0,04	0,035	2	2

Source: ETSC

Background

- But accident happens.

Although accidents are rare events they always significantly hurt people, employees and companies.

<p>COMMISSARIAT DE POLICE DE [REDACTED]</p> <p>SÛRETÉ DÉPARTEMENTALE Brigade Criminelle</p> <p>206 rue du Comté de Melgueil [REDACTED]</p> <p>Affaire [REDACTED]</p> <p>Nature de l'affaire : Blessures involontaires ayant entraîné une ITT supérieure à [REDACTED] par imprudence, négligence ou inobservation des règlements</p>	<p> Liberté • Égalité • Fraternité RÉPUBLIQUE FRANÇAISE</p> <p>DIRECTION GÉNÉRALE DE LA POLICE NATIONALE</p> <p>RÉQUISITION À PERSONNE</p> <p>Nous, [REDACTED] Brigadier-Major de Police, Officier de Police Judiciaire en résidence à [REDACTED], Agissant en vertu des dispositions de l'article 99-3 du Code de Procédure Pénale,</p> <p>Prions et au besoin requérons Monsieur le Président Directeur Général de ALSTOM TRANSPORT SA, sis 3 avenue André Malraux 92300 Levallois Perret</p> <p>A l'effet de procéder aux actes ci-après :</p> <p>Nous communiquer tous renseignements techniques concernant [REDACTED] [REDACTED]</p>
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Background

- Various responses from Legal systems:
 - Legal or Political
 - Company or employees can be suit
 - Civil or Criminal law
 - Transport Department and Legal Department
- But a few lessons from observations:
 - Country Managing Directors that sign the contract are on first call for investigation.
 - Liable for Error in Design, Implementation or Notices.
 - Evidences that safety has been considered in the decision-making process with reference to best practice can mitigate legal consequences.

Recent changes in the railway market

- Characteristics of railway systems:
 - Complexity of railway systems with integration of most recent technologies and services.
 - Open environment and significant influences by human factors.
 - Long-term lifetime.
- ⇒ Although safety records are excellent, there are accidents. Risk of accidents and their management have been inherently considered by railway systems.

Recent changes in the railway market

- New risks arises from recent changes in the railway market:
 - Competitive market with challenging QCD commitment.
 - Innovation with new Technologies, Services for always better performing rail systems (e.g. trip-time, headway, environment)
 - Visibility on the market
 - Change in regulatory regimes

Recent changes in the railway market

■ Changes in regulatory regimes

DIRECTIVE 2004/49/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 29 April 2004
on safety on the Community's railways and amending Council Directive 95/18/EC on the licensing of railway undertakings and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification
(Railway Safety Directive)

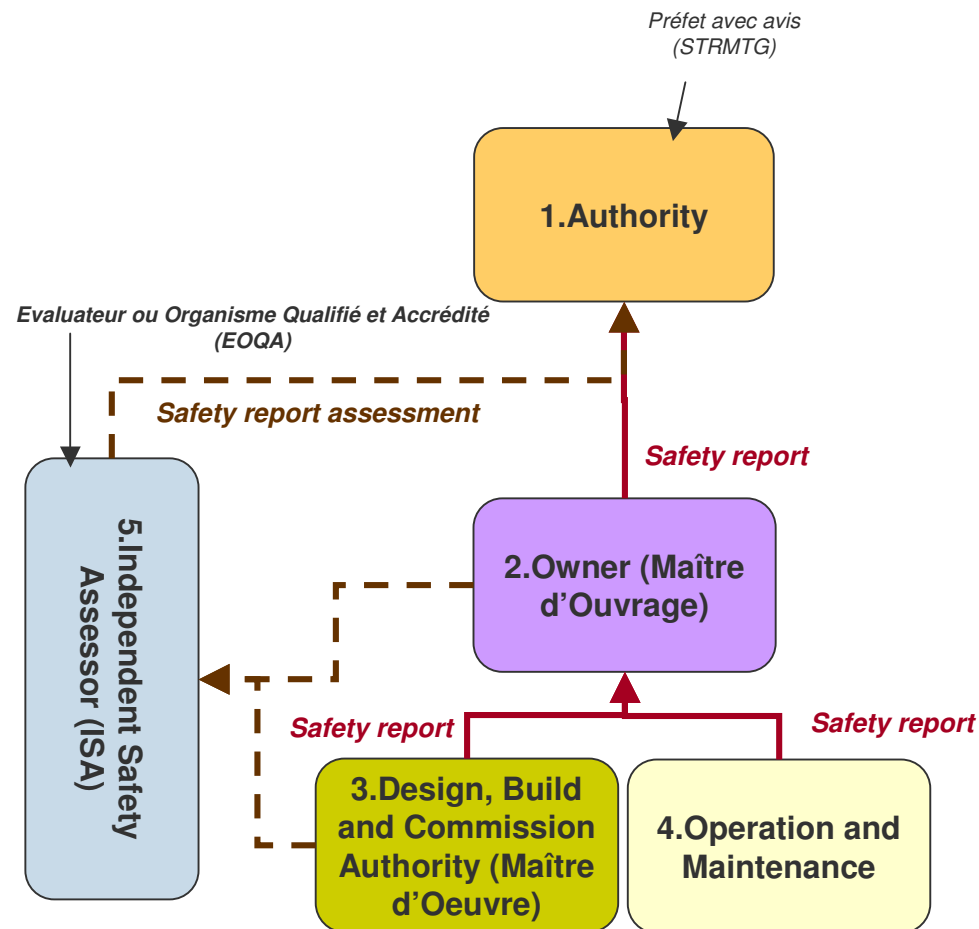


- (4) Safety levels in the Community rail system are generally high, in particular compared to road transport. It is important that safety is at the very least maintained during the current restructuring phase, which will separate functions of previously integrated railway companies and move the railway sector further from self-regulation to public regulation. In line with technical and scientific progress, safety should be further improved, when reasonably practicable and taking into account the competitiveness of the rail transport mode.

“If there is an Accident, the company is likely to face significant consequences as Brazil has no regulatory regime that defines the acceptable level for safety” from Metro Sao Paulo Safety Board, Aug. 2007

Recent changes in the railway market

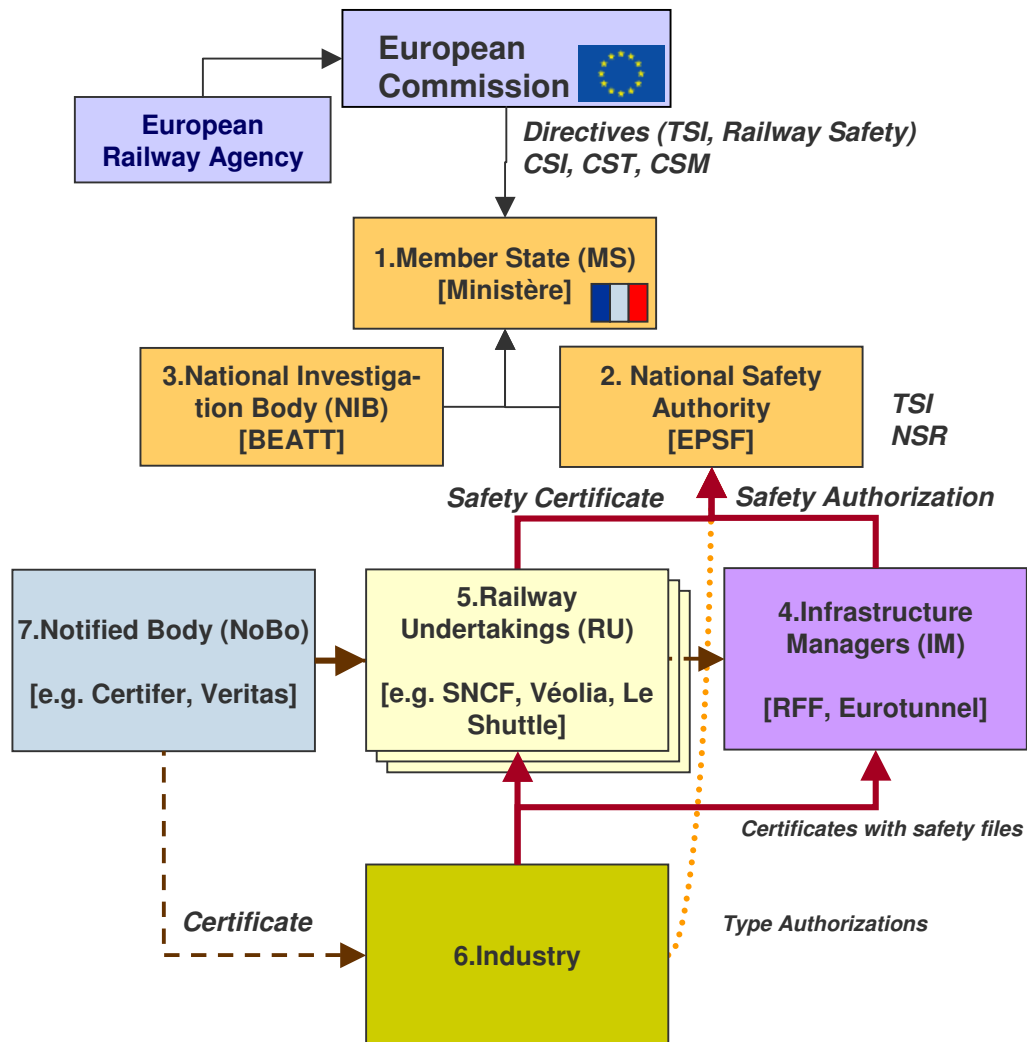
Generic regulatory framework for Mass Transit



1. **To regulate**, e.g. define acceptability, and establish the regulatory reference (e.g. National Safety Rules, Technical Specification for Interoperability, Safety Management System) and deliver Authorizations.
2. **To own** the railway and obtain necessary Safety Authorizations from the Authority: i.e. To establish the safety concept, plan and report.
3. **To design, build and commission** the railway system with evidence that it can be used and maintained to acceptable level of safety.
4. **To operate and maintain** the railway system with evidence that it (will) is used and maintained to acceptable level of safety.
5. **To independently assess safety**

Recent changes in the railway market

Generic regulatory framework for Main Line



1. **To regulate**, e.g. define acceptability
2. **To propose the regulatory reference** (e.g. National Safety Rules, Technical Specification for Interoperability, Safety Management System) and **deliver Authorizations**.
3. **To investigate** independently on accidents and quasi-accidents.
4. **To own and operate infrastructure** and obtain necessary Safety Authorizations from NSA (e.g. SMS)
5. **To operate trains** and obtain necessary Safety Certificates from NSA (e.g. SMS, TSI, NSR, Staff's certificates, Authorization to place in service RS).
6. **To develop and supply** Product, System or Service:
 - To obtain "Type Authorizations" from NSA.
 - To obtain "Certificates" with IM or RU.
7. **To independently provide Certificates**

Recent changes in the railway market

- Changes in regulatory regimes

Example of areas at risks for the Industry during this transition

- Exchange of information on Accident and Quasi-Accident for reactivity (recalls) and return of experience.
- Transfer of safety relevant information between the actors.
- Third party assessment (e.g. RATP inspectors on factory sites)
- Knowledge and competence

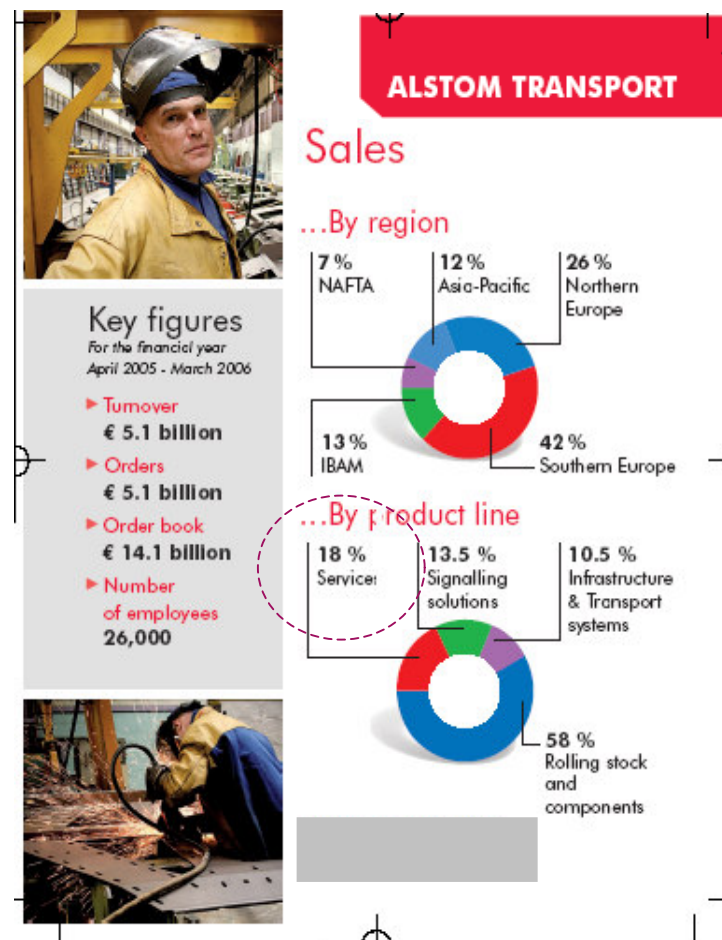
A Responsible Industry

A RESPONSIBLE INDUSTRY

- 26,000 employees
- 5 Product Lines



- More than 50 countries



A Responsible Industry

REGION

NORTHERN EUROPE
SOUTHERN EUROPE
ASIA-PACIFIC
IBAM
NAFTA

OPERATION

ROLLING STOCK
COMPONENTS
TRAIN LIFE SERVICES
INFORMATION SOLUTION
GLOBAL SOLUTION

SUPPORT

PUBLIC AFFAIRS
COMMUNICATION
FINANCE
LEGAL
PRODUCTS & STRATEGY
PROJECT MANAGEMENT
QUALITY
HUMAN RESOURCE
TECHNICAL

Regions

- ▶ One sole contact for each client
- ▶ Project management

Operations management

- ▶ Honouring orders, respecting costs, quality and deadlines
- ▶ Management of systems, services and product ranges

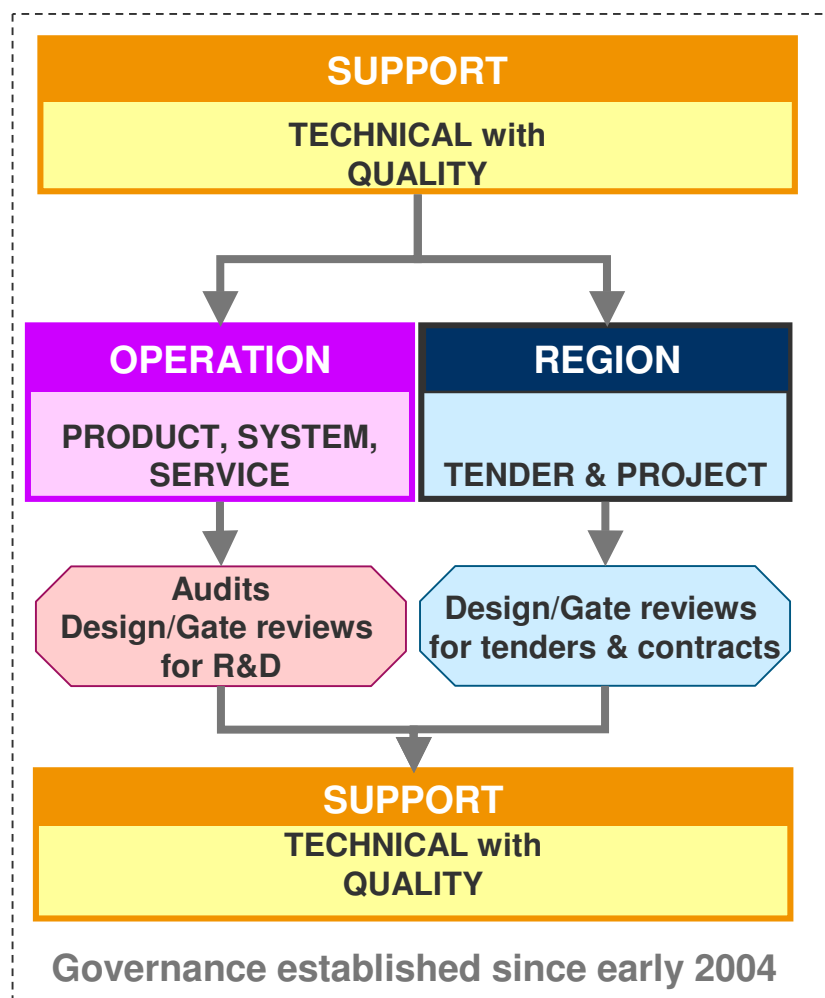
Support functions

- ▶ Serving regions and operations
- ▶ Definition of standard procedures and instruments

A Responsible Industry

- Alstom Transport policy for railway safety signed in 2005
 - ⇒ Ethics and values of Alstom Transport
 - ⇒ Responsible actor in the railway sector
 - ⇒ Protect Public, Employees and the Company
 - ⇒ Competitive advantage in a worldwide market

A Responsible Industry (Governance)

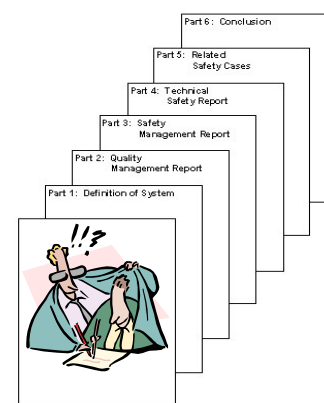


- ⇒ **RULES** defined and communicated by **TECHNICAL** in close cooperation with **QUALITY**.
TECHNICAL assisted by the CCN Railway Safety (network of experts) in this role.
- ⇒ **RESPONSIBILITY** of **OPERATION** and **REGION** is to organize their activities/processes accordingly to the **RULES** with competence.
- ⇒ **VERIFICATION** is implemented by **OPERATION** and **REGION** under the supervision of **TECHNICAL** (DfQ, Site Audits)
- ⇒ **CONTINUOUS IMPROVEMENT** and **NETWORKING** is managed by **TECHNICAL** with CCN Railway Safety.

A Responsible Industry (with two key processes)

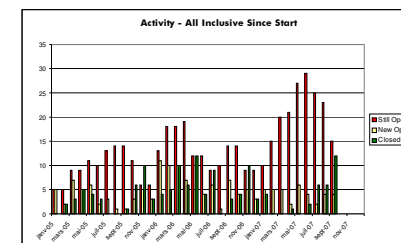
■ Safety assessment & demonstration

- ⇒ Compliance with Regulations and “GAME”.
- ⇒ Safety policy and evidence of its implementation for each contract.
- ⇒ Transfer of safety relevant information.

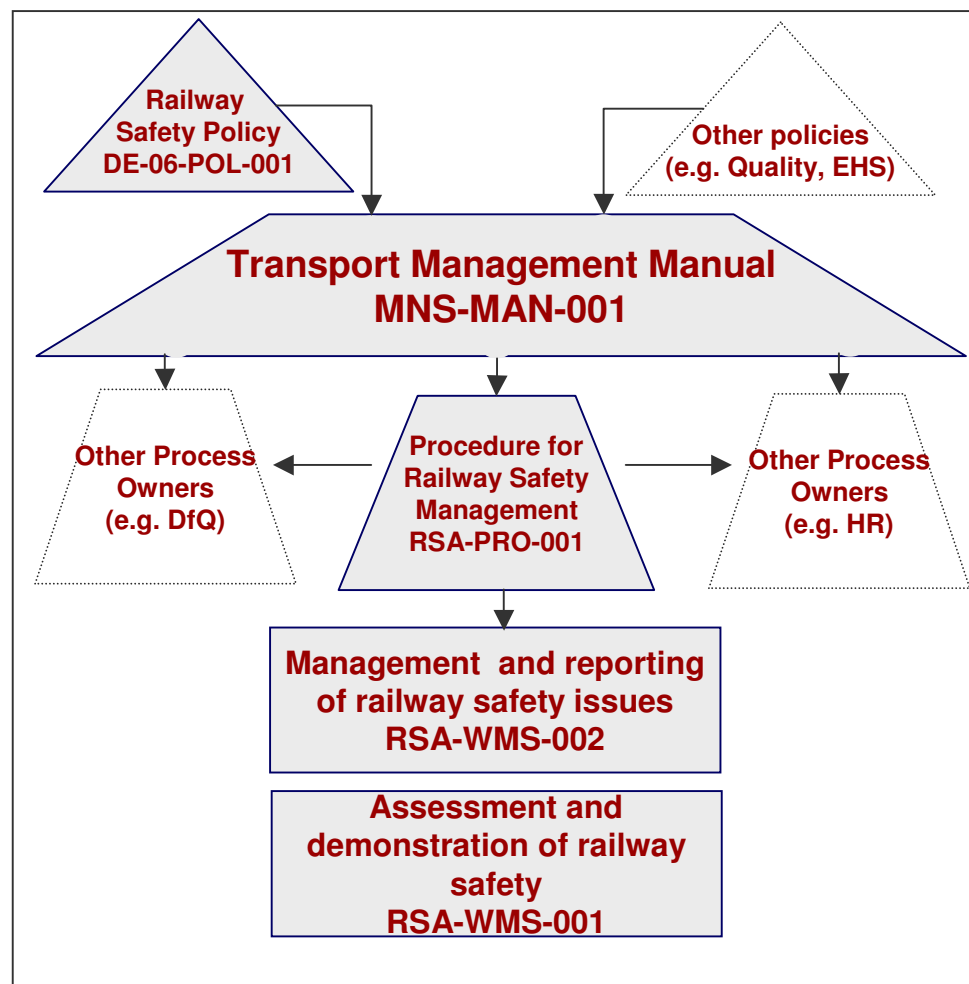
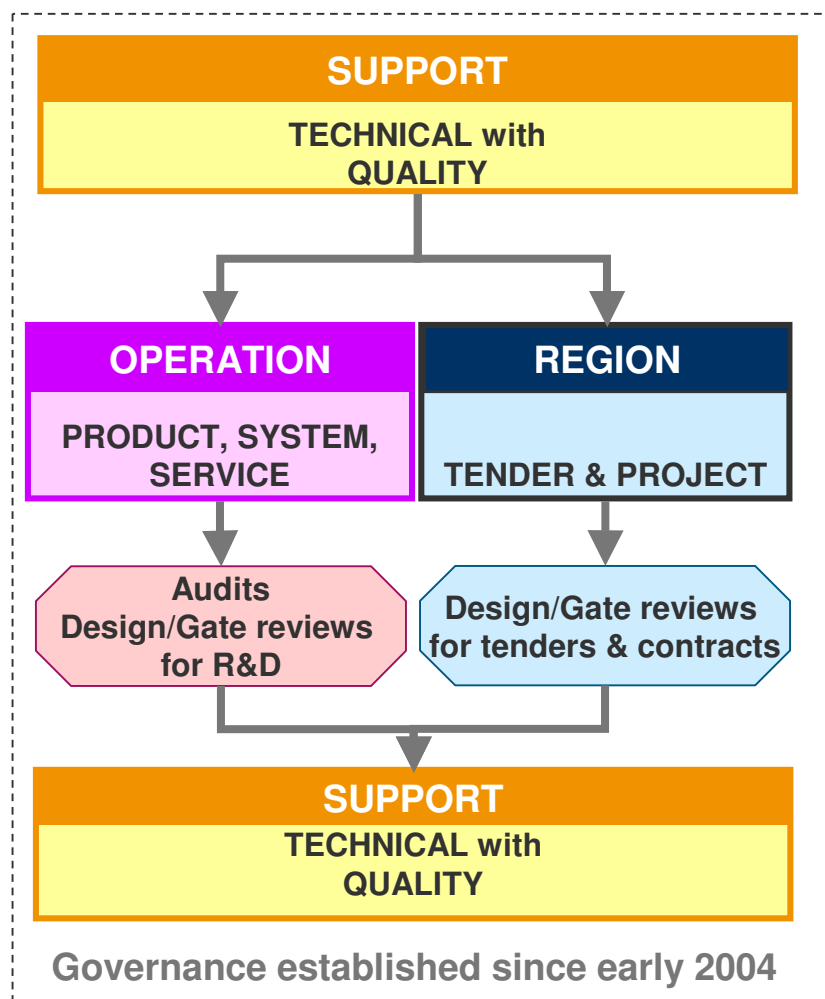


■ Manage & report on safety issues, i.e. Accident, Quasi-Accident, Operation Hazards

- ⇒ To identify priorities to Managements
- ⇒ To bring issues under control with reactivity
- ⇒ For crisis management and supervision
- ⇒ To kill “Generic” issues
- ⇒ And to develop performance of Products, Systems, Services and People business (RoE)



A Responsible Industry (integration into the Management System of Alstom Transport)



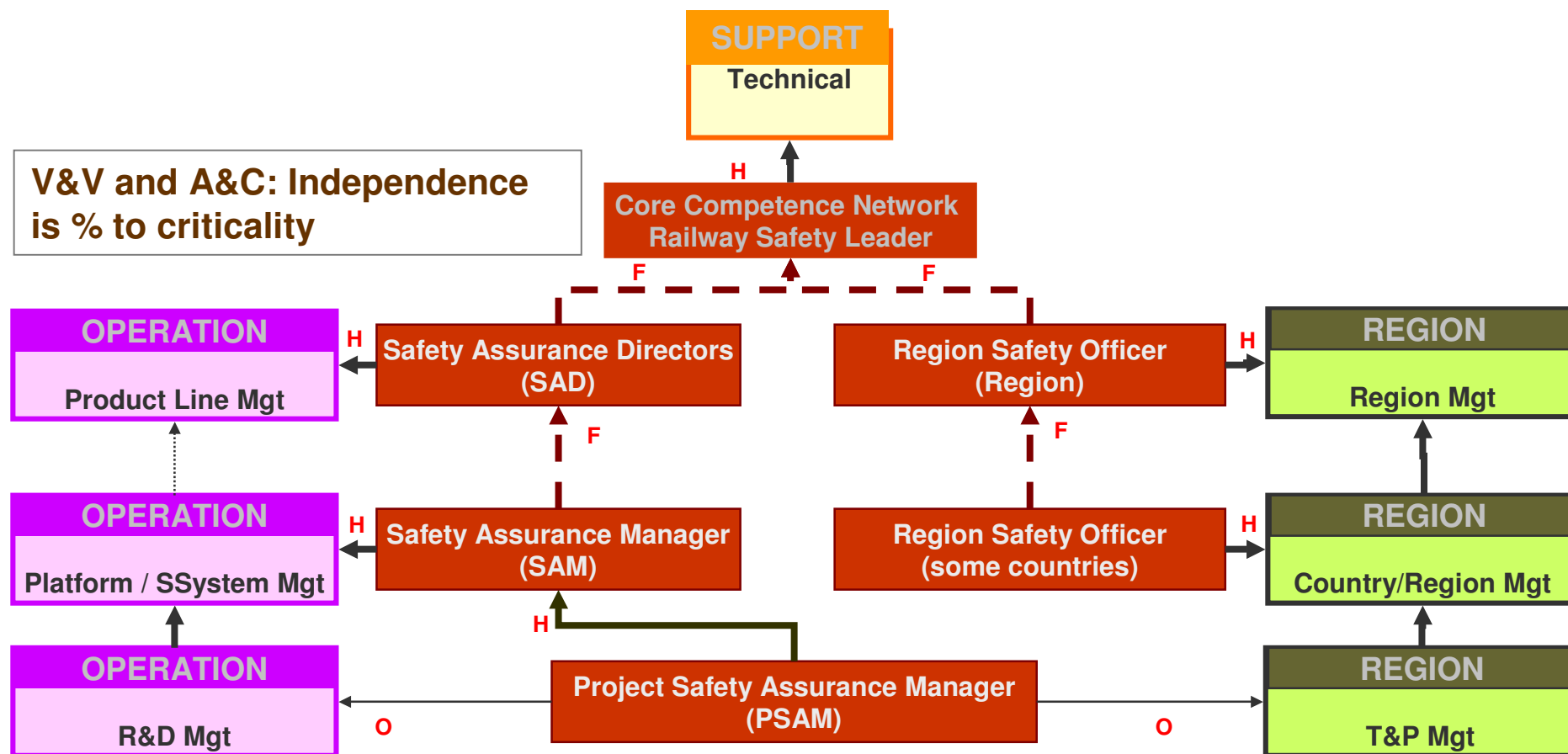
A Responsible Industry (9 sections of rules)

9 sections:

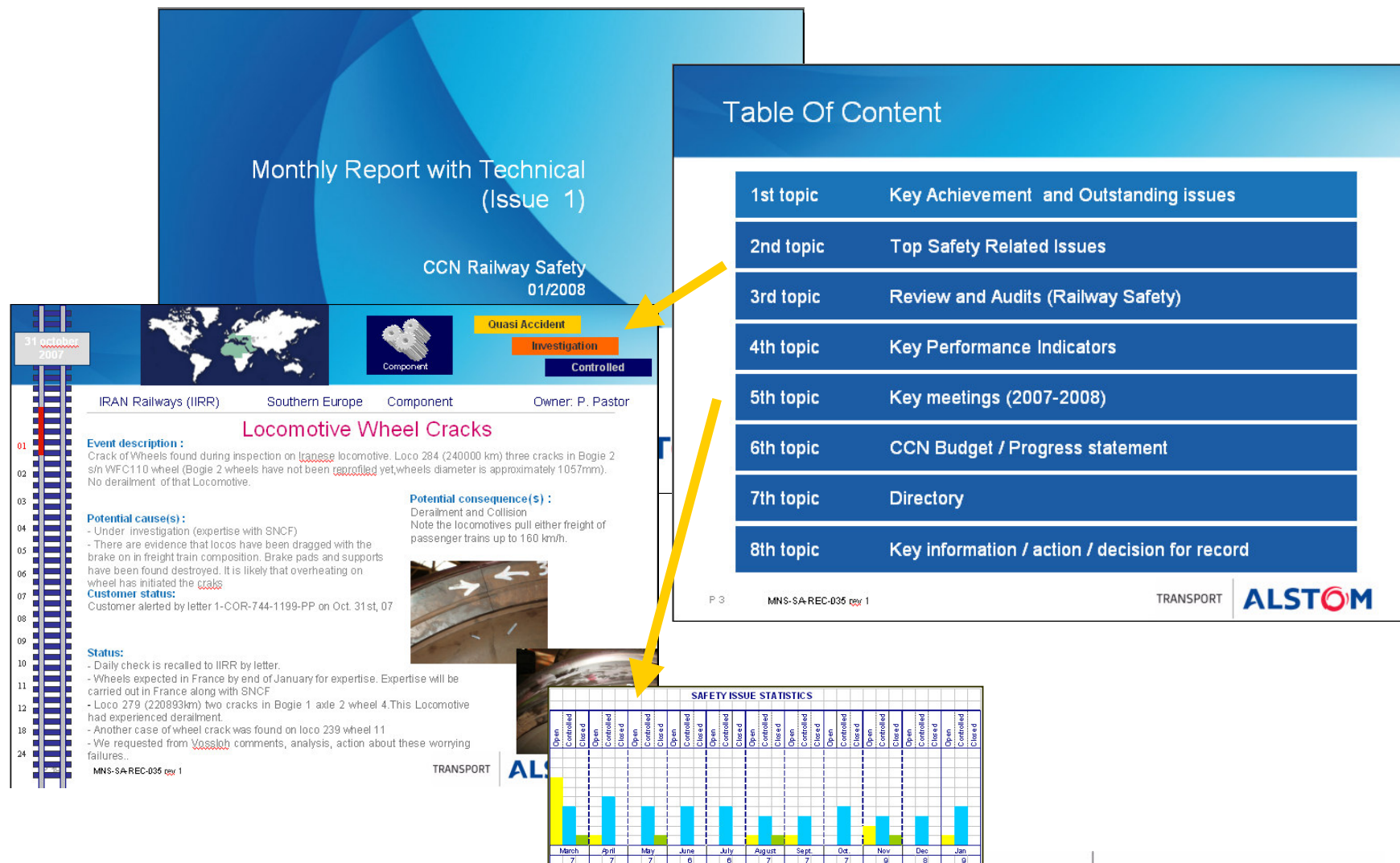
1. Railway safety policy
2. Railway safety management targets
3. Organization and responsibility
4. Skill, competence, training & awareness
5. Documentation
6. Process for assessment and demonstration of safety
7. Process for management and reporting of safety issues
8. Verifying
9. Continuous development and networking

A Responsible Industry (With an organization)

- More than 40 management positions



A Responsible Industry (Example of deliverable)



Conclusions

- Synergies with Legal:
 - Terms and conditions
 - To capture legal requirements
 - To clarify responsibility in interfacing with Clients, Partners and Contractors (e.g. JV, Consortium agreement, Technology Transfer Agreement)
 - Governance
 - From a “delegation” system to an Alstom Transport Integrated Management System with Job Descriptions and Nomination notes.

Conclusions

- Synergies with Legal:
 - Evidences that safety has been considered in the decision-making process with reference to best practice can mitigate legal consequences.
 - Experience demonstrates that being a responsible person and company, that is acting as a professional person generally goes along with:
 - Safety performance
 - Reputation and competitiveness
 - Mitigating legal consequences of accidents

Any question ?

3 APRIL 2007
WORLD RAIL
SPEED RECORD

574,8 KM/H



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