ANNUAL REPORT ON TRAIN OPERATIONS AND RAILWAY SAFETY

2007

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PART A - GENERAL INFORMATION

A.1 Scope of the report

This report has been drawn up in line with Article 18 of Directive 2004/49/EC, implemented in Italy by Legislative Decree 162/2007, and with Infrastructure Operator's Instruction 13/2001.

The report describes progress in the safety of Italy's rail system. That system consists of the national railway infrastructure, which Rete Ferroviaria Italiana SpA (RFI) was licensed to operate by Transport Ministry Decree 138-T of 31/10/2000 (the Concession), and of the rail transport service provided on it by the Railway Undertakings, which hold safety certificates.

The report omits the detail of the island and mainland regional networks involved in freight traffic, named in Article 1(2) of Legislative Decree 188/2003. The reason for the omission is that Article 27(4) of Legislative Decree 162/2007 postpones application of Decree 188/2003 for three years. The exceptions are the Safety Indicators as per points 1.1 and 1.2 of Annex I of Legislative Decree 162/2007. These are listed in Annex C.1 of this report.

The *Agenzia Nazionale per la Sicurezza delle Ferrovie* [the Italian National Railway Safety Agency] was set up by Legislative Decree 162 of 10/8/2007 "implementing Directives 2004/49/EC and 2004/51/EC on the safety and development of the Community's railways." The Decree entered into force on 10 October 2007, and Article 3(1)(g) names the Agency as the national body designated to act as [National] Safety Authority (NSA) for the Italian rail system, as per Chapter IV of Directive 2004/49/EC.

Pending full implementation of Legislative Decree 162/2007, the National Railway Safety Agency took on some of its tasks, by Executive Decree 2043 of the Ministry of Infrastructure and Transport, of 10/6/2008.

RFI's Technical Directorate ensured the continuity of railway safety work during 2007, based on the regulations in force.

PART B - INTRODUCTION

B.1 Introduction to the report

This report outlines the state of train operations and railway safety on the national rail Infrastructure operated by RFI during 2007. It seeks to identify priority areas of intervention and to set targets for the continuous maintenance and enhancement of safety. This is based on the work of supervision, analysis, monitoring and auditing conducted on the Infrastructure Operator (IO) and Railway Undertakings (RU) regarding:

- the status of implementation and improvement of the Train Operations and Railway Safety Management System;
- accident statistics and key events;
- safety inspections; and
- the progress of activities forming part of safety plans.

This report is published on the website of the Italian National Railway Safety Agency www.ansf.it.

The contents of the report are laid out following the guidelines given in the documents "Template on the structure and content of the NSA Annual Report" (Version 12) and "Guidelines for the use of the template - structure and content of the NSA Annual Report" (Version 8), both issued by ERA.

B.1.2 Definitions

Term	Definition
Inspections	Direct field inspection to check correct implementation of operations involving train operations and railway safety. This results in the immediate correction of detected non-conformities and the adoption of restrictive measures (targeting persons, rolling stock or installations)
Audit	Checking the compliance and efficacy of processes and procedures concerning train operations and railway safety. This results in the reviewing of non-compliant processes and procedures and the possible withdrawal of the safety certificate (or, in future, the safety authorisation)
UIC accident	Accidents are classed as "UIC" (International Union of Railways) because they are included in the statistics produced by UIC, if they have the following consequences: 1. fatalities (any person killed immediately or dying within 30 days as a result of the accident) or serious injuries (any person who was hospitalised for more than 24 hours), excluding suicides or attempted suicides and deaths due to crime or to natural causes; 2. significant damage to rolling stock, infrastructure or installations (damage greater than or equal to EUR 150 000) or serious disruption to traffic (main line blocked for more than six hours,

Term	Definition
	diversion or transfer of passengers from one train to another). UIC accidents do not include accidents on stretches of line blocked to train traffic.
Typical accidents	The following UIC accidents are classified as "typical:" ▪ collisions between rolling stock or of rolling stock and an obstacle, excluding accidents at level crossings; ▪ derailments (of trains or isolated locomotives, during shunting or otherwise); ▪ level crossing accidents involving collisions between rail and road vehicles; ▪ fires on rolling stock during use.
Atypical accidents	"Atypical" accidents are defined as accidents caused by rolling stock in motion to persons who: ▪ are taking part in shunting or coupling of vehicles; ▪ are standing or walking beside the railway; ▪ are hit by an obstacle or vehicle while being transported by a railway vehicle; ▪ fall from a moving railway vehicle; or ▪ are knocked down at a level crossing; etc.
Monitoring	Constant checking of safety performance using appropriate indicators from different sources (safety databases (SDB), inspections, audits etc.). This leads to identification of critical situations and planning of the actions needed to eliminate or reduce them.
Critical situation	An element of the national railway system that presents, or might present, risks for traffic safety. This is identified by monitoring the railway system.
Macro-target	One to be pursued in order to improve the safety performance of the system.
Target	The target refers to applying macro-targets in detail in a specific area of intervention (critical situation or areas of intervention identified by the individual organisation). It may be set in qualitative or quantitative terms, with various levels of detail.
Projects	Planned activities to attain set targets.

B.2 Railway structure information

B.2.1 Network map

The national railway infrastructure map in Annex A.1 is also available on the website www.rfi.it (in the "*Territorio e progetti: La rete oggi*" section [territory and projects: the network today].

B.2.2 Infrastructure Operator

Rete Ferroviaria Italiana S.p.A., of Piazza della Croce Rossa 1, 00161 Rome, Italy, is licensed to operate the national railway infrastructure. Key data on the Infrastructure Operator (IO) can be found in Annex A.2.

The various types of headway control system used on the Italian railway infrastructure as at 31/12/2007 are given in the following table.

	ERTMS	BAB/ cc	BAB/ cf	BA/ cc	BA/ cf	Bca	BcaB	BEM	BT	others	total
km	302.3	4280.7	140.2	829.4	470.6	8379.9	508.0	738.1	107.1	579.2	16335.4
%	1.9	26.2	0.9	5.1	2.9	51.3	3.1	4.5	0.7	3.5	100

Total automated track length (ERTMS + BAB + BA + Bca + BcaB) = 14 911.0 km (91.3%).

	SCMT	SSC + SCMT	SSC	total
km	10 279.8	181.8	3212.2	13 673.8
%	62.9	1.1	19.7	83.7

B.2.3 List of railway undertakings

The table in Annex A.2 lists the RUs holding safety certificates as at 31/12/2007 which are, therefore, licensed to carry freight and/or passengers on the national infrastructure. The Annex gives the following information:

- Details of the safety certificates issued in accordance with Directive 2001/14/EC. Given that no safety certificates in accordance with Directive 2004/49/EC (parts A and B) had yet been issued in 2007, the relevant column is omitted from the table.
- Date of commencement of trading.
- Types of service authorised.
- Status of rolling stock used. Concerning hauled stock for freight, it is emphasised that only the Railway Undertaking Trenitalia S.p.A. has stock registered in its own park. The other certified RUs carry freight using hauled stock which is registered to the parks of other RUs and authorised, as necessary, to circulate on the Italian rail Infrastructure.
- Status of staff handling safety functions (driving, crewing, and train make-up and checking).

- The scale of the services provided, in train-kilometres (passenger and goods).

B.3 Summary and analysis of the general trend in rail safety

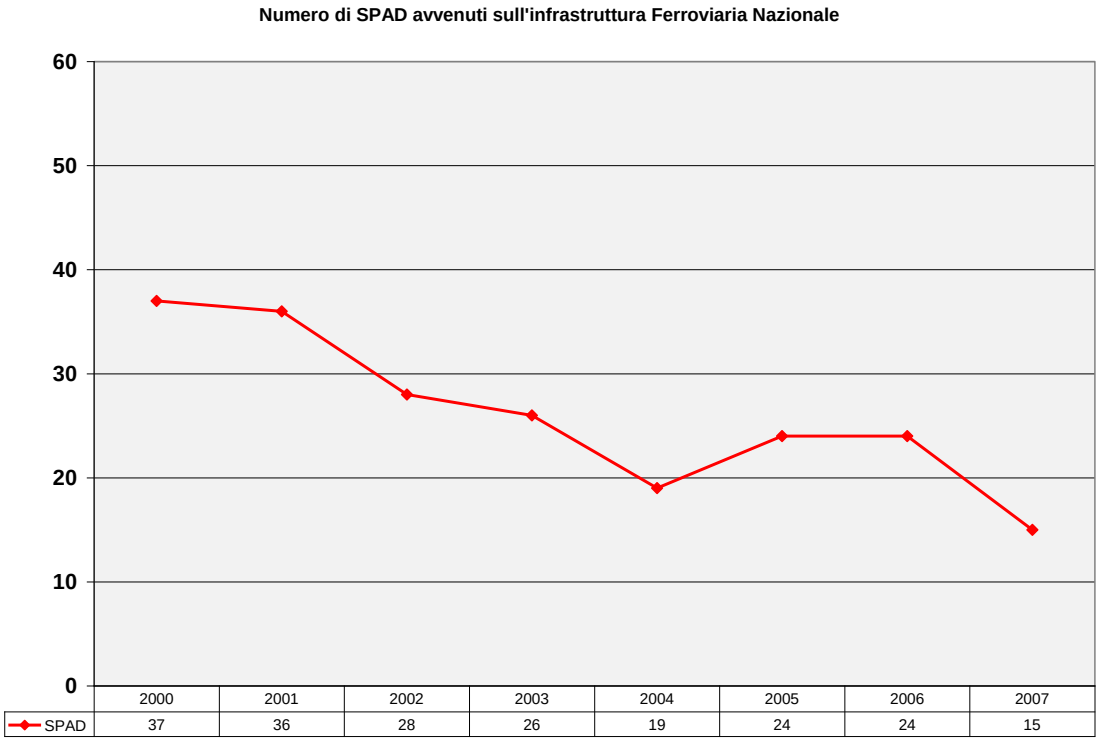
In 2007 a slight fall was recorded in traffic volumes on the national infrastructure. Therefore some accident rate indicators, such as numbers of collisions and fires on rolling stock, show an increase in relation to traffic volume in the two years 2006-07. However, these indicators remain constant in absolute terms.

Annex C.3 contains the tables of year-on-year trends in accident indicators collected by UIC. These are compared with the available data from other European railway networks (the data are from UIC unless marked with an asterisk, where the source is the SDB).

Analysis of the trend shows a fall in the accident rate over the period in question. Comparison with data from other networks confirms that the Italian railway system is outstanding in the European context.

The graph below shows the steady fall in numbers of recorded SPADs (signals passed at danger by trains) in the period 2000 to 2007.

Number of SPADs on the national rail Infrastructure



The fall in the rate of accidents and SPAD numbers is attributable to the care taken in training staff. Above all, it reflects the system-wide effort to

equip the network to the most advanced standards of technology and constantly improve traffic safety.

Prominent in this regard is the programme to fit train protection systems (TPS) on the ground and on board (a train movement control system - SCMT/ETCS/a train driving support system - SSC). The programme aims to reduce the number and seriousness of accidents and incidents on the national rail infrastructure.

The programme to fit train protection systems (SCMT/ETCS/SSC) to the ground network was completed in 2007. The programmes to equip the rolling stock have made further significant strides. This is especially due to Trenitalia, which has equipped about 70% of its rolling stock (as shown in the table below). Despite this progress, the RUs have not achieved their target of full equipment of their trains with On-Board Sub-Systems with a view to completing the train protection systems by the deadline of 30 June 2008.

Railway Undertaking	Vehicles equipped with TPS at 31.12.2007			Total No of vehicles	% of vehicles equipped
	SCMT	ETCS	SSC		
Trenitalia	2471	13	57	3373	75
LeNord	2	0	0	130	2
NordCargo	0	0	0	15	0
Rail Traction C	0	0	0	24	0
Del Fungo Giera	0	0	0	15	0
GTT	0	0	0	17	0
Serfer	0	0	0	19	0
Hupac	0	0	0	2	0
F Emilia Romagna[1]	2	0	0	33	6
TFT[1]	8	0	0	11	73
Ferr A. Sangritana	4	0	0	14	29
Sistemi Territoriali	0	0	0	5	0
Railion	1	0	0	10	10
SBB	3	0	0	42	not given
ACT - R Emilia	0	0	0	7	0%
Metrocampania Nord Est[1]	1	0	0	19	5%
Ferr C. Umbre	0	0	0	11	0%
Rail One	0	0	0	2	0%
ATCM	0	0	0	2	0%
ATC - Bologna	0	0	0	4	0%
SNCF - Fret Italia	0	0	0	11	0%
SAD[1]	12	0	0	12	100%
Linea Ferroviaria	0	0	0	1	0%
	2504	13	57	3779	68.11%

Note[1]:trains equipped with SCMT pending approval of production first-off.

The Ministry of Transport noted a widespread delay in meeting the fitting plans submitted by the RUs (a delay already forecast in the 2006 Annual Safety Report). The Ministry therefore granted the RUs an appropriate extension (see Ministerial Directive 81/T of 19 March 2008, forwarded by RFI with its own Order 1572 of 8 April 2008). This extension allows trains to run on the national rail Infrastructure without SCMT/ETCS/SSC fitted. The proviso is that the RUs must finish fitting the on-board sub-systems by 30 June 2009. (Another reason for the delay was that suppliers lacked capacity to meet the demands of designing, upgrading, developing and installing the required software and apparatus).

Ferrovie dello Stato (FS) provides one example of the economic efforts made to fit train protection systems. In recent years FS has spent about 25% of its total investment on this equipment. It budgeted for, and invested, EUR 4.4 billion, broken down as follows:

- EUR 1 935 million to install SCMT on the 11 470 km of network with the heaviest traffic
- EUR 250 million to install SSC on another 5000 km of network with lighter traffic
- EUR 350 million for ETCS on the High Speed/High Capacity (AV/AC) lines (295 km of which are already in service)
- EUR 450 million for GSM-R coverage of 7500 km of network
- and EUR 1415 million for on-board equipment, including EUR 1334 million to fit 4157 trains with SCMT.

PART C - ORGANISATION

Legislative Decree 162, of 10 August 2007, "implementing Directives 2004/49/EC and 2004/51/EC on the safety and development of the Community's railways" entered into force on 23 October 2007. The Decree set up the National Railway Safety Agency (ANSF), responsible for guaranteeing the safety of the national rail system.

When the Decree came into force, ANSF initially assumed some of its responsibilities, by Executive Decree 2043 of the Ministry of Infrastructure and Transport, of 10 June 2008. Therefore Italian rail system safety in 2007 was structurally no different from that described in the Annual Safety Report for 2006. Specifically:

- the Ministry of Transport is the body that defines safety standards and regulations, following proposals made by the Infrastructure Operator, and controls their application. It grants licences to those RUs which apply for them, provided they meet the necessary requirements. It monitors the entire railway system. It holds enquiries into particularly serious accidents.
- The Infrastructure Operator, which is responsible for the construction, start-up, management and maintenance of the

national railway infrastructure, as well as management of the control and safety systems connected to train services, is the body that tables amendments to standards and safety regulations before the Ministry and issues implementing requirements and arrangements on rail traffic safety. It undertakes certification and type-approval work for rolling stock and components required by the national infrastructure for safety and traffic purposes. It also issues safety certificates to RUs that meet the necessary requirements, regularly checks their compliance with them, and has the power to revoke the certificate fully or in part. In addition, it holds enquiries after accidents and incidents. The Infrastructure Operator is also responsible for checking that the RUs comply with safety standards and with its own requirements and arrangements.

- RUs holding railway licences issued by the Ministry and safety certificates issued by the IO provide transport on the national network. In order to obtain a safety certificate, RUs must demonstrate that staff have the necessary training and knowledge to comply with safety and traffic regulations and that rolling stock has been duly approved and registered. The RUs must apply the safety standards and regulations defined by the Ministry, as well as all the IO's safety requirements and arrangements.

The interaction between the parties involved in the safety of the rail system is shown in the chart in Annex B.

PART D - DEVELOPMENT OF RAIL SAFETY

D.1 Initiatives to maintain and improve safety performance

There were 1899 accidents and incidents in 2007, of which 451 led to investigations. In 41 cases the investigation is not yet closed, or the evaluation process not yet completed.

Of the accidents which occurred in 2007, 23 were UIC typical. All were investigated.

During 2007, new candidates for listing on the Roll of Investigating Commissions completed training courses. Personnel already entered on the Roll also attended these courses, to ensure uniform application of Instructions 55/03 and 42/05.

The post-accident investigation work included identification of measures to prevent repeat events. This paragraph outlines the main action identified and taken following accident investigations in 2007. The main accidents/incidents of 2007 are described briefly below.

Place and date	Description	Main causes	Action taken
Spresiano 3/5/07	Dangerous collision between trains	The Station Inspector pressed the button automatically releasing the axle count stop without making sure that the track concerned was actually clear.	Targeted projects to maintain the skills of staff handling tasks relating to operating safety
Tarvisio Boscoverde 18/5/07	Runaway ÖBB locomotive during shunting led to derailment on Austrian side	Shunting staff started the shunting engine pushing the locomotive without checking that the crew were on board. One reason why this event was possible was that the crew had improperly left the driver's cab unattended after switching it from master to slave mode. Malpractice by the staff involved, and poor language skills were to blame.	Service Order 603.04 on FS/ÖBB border traffic was amended to eliminate any misunderstandings
Riva Trigoso 6/6/07	Collision between two works trains on a blocked stretch of line	Failure to check that the line was clear for use caused this accident. The make-up of the colliding train obstructed a clear view of the line. It was also found that the colliding train had been travelling at high speed during moving operations.	An awareness-raising initiative was carried out, to highlight methods of moving the train
Piadena – Bozzolo 2/10/2007	Train hit motor vehicle on level crossing	The electrical equipment linesman at the level crossing failed to close the barriers. The road driver died in the crash.	Projects to guarantee maintenance of skills of staff handling operational safety tasks
Valmadrera 15/11/07	Collision between two trains carrying materials	Failure to check that the line was clear for the train to pass caused this accident. Contributory factors were mismanagement of the movements of the two trains and inadequate planning and written specification of the works to be carried out.	Projects to guarantee maintenance of the skills of staff handling operational safety tasks and to train staff responsible for works planning and specification.

D.2 Detailed analysis of progress on Common Safety Indicators

The table in Annex C.1 lists the main Common Safety Indicators (CSI) for 2007, specified by Directive 2004/49/EC.

The data used to compile the indicators is currently available on the existing databases. Data not fully available on the existing databases appears on the first page of the Annex, and in the definitions field in the "Description" section.

No data is now available on accident consequences.

This paragraph analyses the accidents on the national rail infrastructure operated by RFI, reported in Annex C.2.

Directive 2004/49/EC requires information on the safety-critical areas which the IO identified when preparing its safety plans for 2008. In order to gather and supply this information, a requirement was added that all structures concerned (RFI and RUs) should establish indicator systems to

gauge the effectiveness of the safety management systems in place, and to allow calculation of the indicators required by Directive 2004/49/EC.

The following two tables show the accident trends used to prepare the Common Safety Indicators in the period 2005 - 2007.

	2005		2006		2007	
ACCIDENTS	**Unit count**	**per billion train-km**	**Unit count**	**per billion train-km**	**Unit count**	**per billion train-km**
Collisions involving trains	**5**	**14.771**	**4**	**11.564**	**4**	**11.672**
Collisions between trains and obstacles	3	8.862	3	8673	4	11.672
Collisions between trains	2	5.908	1	289	0	0
Derailments of trains	**6**	**17.725**	**11**	**31.802**	**8**	**23.344**
Accidents at level crossings	**25**	**73.853**	**32**	**92.515**	**19**	**55.441**
Accidents to people caused by rolling stock in motion (ignoring suicides)	**90**	**265.87**	**76**	**219.723**	**83**	**242.191**
Fires on rolling stock	**4**	**11.816**	**4**	**11.564**	**4**	**11.672**
Other	**4**	**11.816**	**5**	**14.45**	**3**	**8.754**
TOTAL	**134**	**395.851**	**132**	**381.625**	**121**	**353.073**

	2005					*2006*					*2007*					TOTAL 2005/2007				
	Accidents	Deaths + serious injuries				Accidents	Deaths + serious injuries				Accidents	Deaths + serious injuries				Accidents	Deaths + serious injuries			
		Pax	Staff	Outsiders	Total		Pax	Staff	Outsiders	Total		Pax	Staff	Outsiders	Total		Pax	Staff	Outsiders	Total
Collisions between trains	5	53	4	1	58	4	0	2	0	2	4	0	1	1	2	13	53	7	2	62
Derailments of trains	6	17	5	0	22	11	0	0	0	0	8	0	0	0	0	25	17	5	0	22
Accidents on level crossings	25	0	0	23	23	32	0	0	31	31	19	0	0	18	18	76	0	0	72	72
Accidents to persons from rolling stock in motion	90	18	6	68	92	76	19	8	53	80	83	14	5	64	83	249	51	19	185	255
Fires on board rolling stock	4	0	1	0	1	4	0	0	0	0	4	0	0	0	0	12	0	1	0	1
Others	4	0	6	0	6	5	0	4	0	4	3	0	1	0	1	12	0	11	0	11
TOTAL	134	88	22	92	202	132	19	14	84	117	121	14	7	83	104	387	121	43	259	423

Analysis of the information from these indicators shows a decline in the number of accidents and of the seriousness of their consequences. This is partly attributable to the technology now being implemented.

On the other hand "Accidents to persons from rolling stock in motion" in 2007 showed a rise on 2006. The main cause was a rise in people knocked down while crossing the railway line in the wrong place, or ignoring warning signs.

It must be remembered that the figure for this phenomenon was actually higher in 2005 than in 2007 (90 accidents compared with 83). Incorrect crossings of the line have to be tackled by setting a long-term target. Meanwhile, work continues to discourage crossings of railway lines in the wrong place, or ignoring signs. One way of doing this is to fence off the most common crossing points.

Wrong behaviour by passengers is a strong contributory factor in accidents where passengers fall from moving trains. IO Instruction 30 of 18/07/2007 requires RUs to draw up plans to modify passenger coach doors. Work on this began in 2008.

There was a recorded fall in accidents on level crossings during 2007, both in numbers and accidents to persons. The level crossing closure project continues: 478 were closed during 2007, reducing the total from 6732 in 2006 to 6254 in 2007.

The table below summarises action taken, or to be taken, for each accident type:

Accident type	**Action taken**	**Problems still pending but with remedial project launched**
Train collisions	Fit SCMT and SSC	Finish fitting ground and on-board systems Incorrect pressing of emergency buttons on central equipment
Train derailments	Eliminate single points	See table below
Accidents at level crossings	Level crossing closure programme	Rusty rail running surfaces
Accidents to persons from moving rolling stock	Audio announcements at stations Modification of carriage door opening and closing systems	Programme to identify and mitigate/eliminate the crossing points most used by outsiders. Full modification of doors on passenger stock in circulation
Others	Safety at work sites (agreed specifications, site protection,	Specifications and standard documentation not site and process-specific.

Accident type	Action taken	Problems still pending but with remedial project launched
	contractor performance monitoring, checks of works trains) GSM-R at work sites	Unsafe conditions during work (works and shunting sites). The monitoring of qualification systems currently required falls outside the scope of the integrated safety management system and is oriented towards tender simplification. Suppliers of works train maintenance services to Central Infrastructure Managers are not qualified.

The next table shows the main causes of derailments in the period 2005 - 2007 and remedial action taken.

Main cause	Tot -al	2005	2006	2007	Action taken
Defects of wheel arrangement (axle box, wheel etc.) and of suspension	9	1	3	5	Remind RUs about staff training. The RFI Technical Directorate audit checked: – correct application of technical specifications for axle box maintenance; and – compliance with intervals specified for maintenance work on rolling stock.
Defects of mechanical components of rolling stock other than wheel arrangement (engine)	2	1	0	0	N/a
Permanent way defects (track, points)	6	0	3	3	Extraordinary check of maintenance status of points on straight lines. The Technical Directorate's audit covered compliance with intervals specified for infrastructure maintenance activities. RFI's Maintenance Directorate has projects aimed at mitigating the effects of errors attributable to human factors.
Breach of orders (itinerary checking)	2	1	1	0	N/A
Hydro-geological instability	2	1	1	0	N/A
Loose screw couplings + features of	2	1	1	0	N/A

Main cause	Tot -al	2005	2006	2007	Action taken
line					
Failure to remove chocks	1	0	1	0	N/A
Breaking speed limit	1	1	0	0	N/A: but see fitting of ground and on-board ATP
SPAD	1	0	1	0	
Total	**25**	**6**	**11**	**8**	

D.3 Findings and recommendations of the investigating body

The Investigating Body was set up by Ministerial Decree 62T of 4 March 2008. Hence no investigation was carried out in 2007.

In 2007 the Transport Ministry did open a commission of inquiry into a collision between an Intercity train and a derailed wagon at Terni on 16/4/2007. The accident caused minor injuries to five people. The cause was incorrect methods of parking of the line of wagons.

The commission of inquiry drew attention to a chain of safety-critical aspects concerning:

- braking equipment;
- action of shunting staff; and
- rules on parking of rolling stock.

Specifically, it suggested reviewing the standards on rolling stock parking, especially the procedure for checking compliance with these standards by the relevant staff.

As a result of the ministerial commission of inquiry's findings, an analysis was undertaken of the adequacy of the rules on parking trains. No safety-critical factors were found.

The manager of the regional RU launched a specific training course for all staff of the workshop concerned. The course reiterated the need to apply the background regulations correctly, especially Article 28(3) of the Shunter Service Standards. The IO's auditing panel also identified a problem of correct handling of devices for immobilising stationary trains. This finding led to further remedial action: raising staff awareness and targeted checking of correct application of the operating rules in this matter. By examining a sample of wagon immobilisation activities at the workshop in August 2007, the audit panel found that this action had been effective.

PART E - IMPORTANT CHANGES IN LAWS AND REGULATIONS

The main changes to the statutory framework of reference for train operations and railway safety are shown in the table in Annex D, which indicates:

- the topic
- the title of the law or regulation
- the date it came into force
- whether it is new or an update of existing provisions
- and a brief description.

The full regulatory framework can be consulted on the website www.rfi.it, under the heading "Quadro normativo" [regulatory framework].

In the national legislation, the following are highlighted as acts of special importance:

- ✓ Legislative Decree 162 of 10 August 2007, "implementing Directives 2004/49/EC and 2004/51/EC on the safety and development of the Community's railways," which establishes the National Railway Safety Agency; and
- ✓ Legislative Decree 163 of 10 August 2007 "implementing Directives 2004/50/EC and 2001/16/EC on the interoperability of the trans-European railway system".

Special attention is also drawn to the following acts of the Ministry of Infrastructure and Transport:

- ✓ Managerial Decree 0002683/03-08-2007-D.G.4-DIV.5 approving the amendments to the Regulation on the Operation of Trains and the Regulation on Signals for the operation of the Rome-Naples and Turin-Novara high-speed/high-capacity lines; and
- ✓ Ministerial Directive 169/T of 31 October 2007 defining safety roles and responsibilities and confirming those of RFI, pending implementation of Legislative Decree 162/07.

Special attention is drawn to the regulatory activities of the IO, by virtue of the powers granted to it, as the holder of the rail services concession, by Ministerial Decree 138/T of 31 October 2000, Ministerial Order 247/VIG.3 of 22 May 2000 and Legislative Decree 188 of 8 July 2003. These have included the following specific action:

- ✓ fitting the network and rolling stock with train protection systems, pursuant also to ministerial directives 13/2006/Div.5 of 9 March 2006 and 0044725/2006/Div.5 of 20 October 2006;
- ✓ activation, management and control of SSC systems;
- ✓ start-up of high-speed/high-capacity stretches of line;
- ✓ amendments to Regulations on train operation and signals (in force since 1/7/08), especially with regard to driving by one driver alone and to train rescue rules;

- ✓ amendments to the instructions to locomotive drivers (IPCL) with special regard to use of the "Vigilante" warning device and to vehicle immobilisation;
- ✓ amendments to the Instruction on the Train Crew Service (ISPAT) (in force since 1/7/2008) with special reference to driving by one authorised driver alone, and use of the GSM-R for emergency calls;
- ✓ amendments to the Instruction on the Pointsmen's Service (ISD) (in force since 1/7/08), rearranging the procedures with a view to minimising overriding of the SCMT and SSC in case of maintenance or repair works;
- ✓ amendments to the Working Hours Preface (PGOS), the Standards on the Operation of Electric Traction Equipment concerning Relations between Movement, Electrical Equipment and Train Staff (NEITE) and ISPAT (in force since 1/7/08) on the handling of operating irregularities;
- ✓ assignment of tasks and definition of responsibilities for the monitoring of operations and of trackside equipment of sidings connected to the national rail infrastructure;
- ✓ amendments to the Instruction on Work Site Protection with reference to communications on switching off the live electric contact line;
- ✓ rules on operating axle box temperature measuring gauges;
- ✓ amendments to the specific standards on the carriage of dangerous goods;
- ✓ implementation of the Ministerial Decree on rail tunnel safety standards, of 28 October 2005;
- ✓ checking rolling stock compliance with the requirements of RFI Instruction 1/2003, as amended by RFI Instruction 30/2007, containing standards, rules and technical requirements for rolling stock to meet for service on the Italian rail network;
- ✓ amendments to PGOS concerning immobilisation of locomotives and the control of door opening/closing systems, and others;
- ✓ training and mental/physical fitness screening of staff whose jobs relate to railway operating safety;
- ✓ a system for the professional qualification of staff working in the rail infrastructure maintenance sector;
- ✓ professional qualification of designers and design revisers of RFI signalling equipment;
- ✓ setting targets in relation to safety and to safety-critical areas identified by the IO for the purpose of selecting projects and activities to include in the train operation and railway safety plans for 2008;
- ✓ gathering the indicators required by Directive 49/04/EC;
- ✓ identifying working tools for investigations following accidents and operating incidents;
- ✓ rules on emergency calls on lines covered by GSM-R; and

- ✓ development of an integrated system for medical attendance on the line, by signing appropriate intervention agreements with the competent authorities and health institutions.

The detailed list of main measures appears in Annex D.

PART F - THE DEVELOPMENT OF SAFETY CERTIFICATION AND AUTHORISATION

F.1 National legislation – start dates - availability

F.1.1 n/a

F.1.2 n/a

F.1.3 Availability of national safety standards or other national laws for the Infrastructure Operator and for the Railway Undertakings

The background regulations and main information on the issue of safety certificates during 2007 were available at the website www.rfi.it under the heading "*Quadro normativo*" [regulatory framework].

F.2 Quantitative and qualitative data on the Italian rail system

Again, the IO has handled the work of certifying the RUs as per Legislative Decree 188 of 8/7/2003 "implementing Directives 2001/12/EC, 2001/13/EC and 2001/14/EC with regard to the railways".

No certificates or authorisations were issued under Directive 2004/49/EC, transposed by Legislative Decree 162 of 10/8/2007 "implementing Directives 2004/49/EC and 2004/51/EC on the safety and development of the Community's railways."

At 31/12/2007 there were 26 RUs certified to use the national infrastructure (one of which, Metronapoli SpA, has ceased trading and no longer provides services on the national rail infrastructure, though it still holds a safety certificate).

The following were issued in 2007:

- Three new safety certificates (Nos 103, issued to Ferrovie Udine Cividale Srl on 9/7/2007, 106 to Linea Srl on 26/7/2007 and 114 to Ferrotranviaria SpA on 14/12/2007);
- and 22 certificate extensions.

Details of RU certification status are given in Annex E.

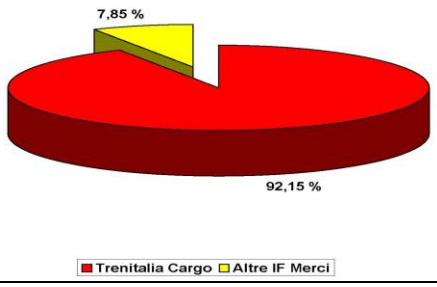
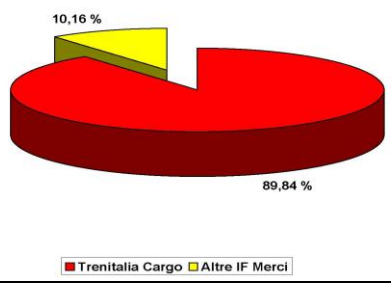
The table below gives the figures in train-kilometres for passenger and freight services provided by the certified RUs on their respective sections in 2006 and 2007. It also shows the percentage differences between the two years.

		2006 traffic (train-kilometres)				2007 traffic (train-kilometres)				DIFFERENCE	
		passengers	goods	%		passengers	goods	%		+/-	
TRENITALIA SPA	Nat/internat. Pax. Dir.	85 594 269.73		24.62	98.22	84 199 680.00		24.66	97.59%	-0.40%	-2.39%
	Local Pax Dir.	195 598 572.92		56.25		191 449 350.00		56,07		-1.19%	
	Logistics Dir.		60 337 155.66	17.35			57 559 130.00	16.86		-0.80%	
LE NORD		470 097.10		0.14		488 000.00		0.14		+0.01%	+0.59%
RAIL TRACTION COMPANY			1 776 330.02	0.51			2 112 000.00	0.62		+0.10%	
IMPRESA FERROVIARIA ITALIANA. SPA (EX DFG)			434 026.11	0.12			291 950.00	0.09		-0.04%	
SERFER SERVIZI FERROVIARI SRL		23 135.30	346 761.33	0.11		22 560.00	411 760.00	0.13		+0.02%	
HUPAC SPA			24 642.89	0.01			28 030.00	0.01		+0.00%	
FERROVIE EMILIA ROMAGNA SRL			83 259.86	0.02			90 220.00	0.03		+0.00%	
NORD CARGO			960 73b3.48	0.28			1 117 980.00	0.33		+0.05%	
FERROVIA ADRIATICO SANGRITANA SRL		141 070.59	25 668.96	0.05		615 080.00	20 230.00	0.19		+0.13%	
RAILION ITALIA SRL			598 055.36	0.17			580 120.00	0.17		-0.01%	
SBB CARGO ITALIA			783 644.11	0.23			1 380 660.00	0.40		+0.17%	
METROCAMPANIA NORD EST SRL		392 372.29		0.11		395 720.00		0.12		+0.00%	
SAD		18 519.34		0.01		212 710.00		0.06		+0.06%	
SNCF FRET ITALIA			102 024.93	0.03			164 000.00	0.05		+0.02%	
RAILONE			10 577.85	0.00			239 770.00	0.07		+0.07%	
FERROVIA LINEA SRL				0.00			69 610.00	0.02		+0.02%	
		282 238 037.27	65 482 880.56	100.00		277 383 100.00	64 065 460.00	100.00			
		347 720 917.83				341 448 560.00				-1.80%	

Analysis of the figures reveals a **1.80%** fall in total traffic. The Railway Undertaking Trenitalia SpA alone handles **97.59%** of total traffic volume on the national rail infrastructure. In percentage terms Trenitalia's services, in particular, fell by -**2.39%,** while the other RUs recorded an overall +**0.59%** increase in services. Of the latter, the following RUs are listed, in order of their utilisation of infrastructure capacity:

- Rail Traction Company SpA (**0.62%**), higher than 2006;
- SBB Cargo Italia Srl (**0.40%**), higher than 2006;
- NordCargo Srl (**0.33%**), higher than 2006;
- Railion Italia Srl (**0.17%**), slightly lower than 2006;
- LeNord Srl (**0.14%**), slightly higher than 2006;,
- Serfer Servizi Ferroviari Srl (**0.13%**), higher than 2006; and
- Del Fungo Giera SpA (**0.09%**), lower than 2006.

Looking at goods services alone, in 2007 the percentage of traffic generated by RUs other than Trenitalia SpA rose from **7.85%** to **10.16%** of the total, a percentage increase in traffic share of **+2.31%** on the previous year.

	
Goods traffic 2006 (total train-km 65 480 349)	**Goods traffic 2007 (total train-km 64 067 771)**
Trenitalia Cargo Other freight RUs	Trenitalia Cargo Other freight RUs

The next table contains figures entered directly by the RUs on a computerised archive available at the *Certificazione Sicurezza Imprese Ferroviarie* (CESIFER) [Railway Undertaking Safety certification] at the ANSF. These relate to the types of staff employed in safety functions in 2007 (driving, crewing, train make-up and checking).

The Driving, Checking, Make-Up and Crewing columns show the number of people holding authorisations for these tasks. The numbers in the Total column are total numbers of people **deployed** on safety activities, not total personnel **authorised** for those activities. This is because one staff-member may be authorised for several safety functions.

The three new RUs certified in 2007 have contributed 85 employees to the rail system. They have been issued with 30 new authorisations for driving, 10 for checking rolling stock and 80 for making up and crewing trains.

RU	Staff per safety activity (at 31/12/2007)				
	Driving	Checking	Make-up and crewing	Total	% of total authorised staff
Trenitalia S.p.A	20 399	1839	18 022	36 242	**91.90**
LeNord s.r.l.	420	14	417	707	**1.79**
Rail Traction Company S.p.A.	155	25	54	170	**0.43**
Del Fungo Giera Servizi Ferroviari S.p.A.	65	50	74	101	**0.26**
Gruppo Torinese Trasporti S.p.A.	64	1	77	107	**0.27**
SERFER – Servizi Ferroviari s.r.l.	146	79	346	366	**0.93**
Hupac S.p.A.	32	11	68	81	**0.21**
Ferrovia Emilia-Romagna s.r.l.	170	35	321	344	**0.87**
Trasporto Ferroviario Toscano S.p.A.	38	2	43	69	**0.17**
Nord Cargo s.r.l.	178	12	197	208	**0.53**
Ferrovie Adriatico Sangritana s.r.l.	36	6	52	75	**0.19**
Sistemi Territoriali S.p.A.	44	2	63	86	**0.22**
Railion Italia s.r.l.	71	65	73	84	**0.21**
SBB Cargo Italia s.r.l.	193	85	170	271	**0.69**
Azienda Consorziale Trasporti ACT	63	2	15	66	**0.17**
MetroCampania Nord Est s.r.l.	45	0	48	97	**0.25**
Ferrovie Centrali Umbre Srl	55	0	35	86	**0.22**
RailOne S.p.A.	16	7	18	23	**0.06**
ATCM S.p.A.	15	1	39	42	**0.11**
ATC	4	0	1	4	**0.01**
SAD	45	0	1	45	**0.11**
SNCF Fret Italia S.r.l.	60	58	61	77	**0.20**
LINEA S.r.l.	11	7	40	41	**0.10**
Ferrovie Udine Cividale S.r.l.	17	1	36	38	**0.10**
Ferrotramviaria S.p.A.	2	2	4	6	**0.02**

The above figures, compared with those supplied for 2006, show an overall increase in the human resources deployed on safety functions, both by Trenitalia S.p.A. and the other RUs.

F.3 Procedural aspects

N/a

PART G - SUPERVISION OF INFRASTRUCTURE OPERATOR AND RAILWAY UNDERTAKINGS

G.1 Description of supervision of RUs and IO

G.1.1 Audits carried out in 2007

Audits on train operations and railway safety aim to evaluate the organisational adequacy and efficiency of the RUs' internal audits and of the RFI's operating structures. They also assess the correct application of the regulatory standards and instructions issued by the IO.

Audits are carried out pursuant to Articles 4(j) of Instruction 247/VIG3 of the Ministry of Transport and Navigation, of 22 May 2000, 3(1) of Ministerial Decree 138-T of 31 October 2000 and IO Instructions 13/2001 and 17/2001.

54 inspection assignments were carried out in 2007, of which **23** were audits:

- 1 on the Divisional Directorate of Infrastructure in Rome;
- 1 on the Divisional Directorate of Movement in Rome; and
- 21 on Trenitalia equipment;
- No other RU was audited.

There were **31** follow-ups of progress with remedial action agreed to eliminate the non-conformities identified during the audit:

- 5 on RFI structures, namely 2 on the Divisional Directorates of Movement and 3 on the Divisional Directorates of Infrastructure;
- 26 on RUs, of which 24 were on Trenitalia's regional structures (8 also covering maintenance workshops).

Audits undertaken in 2007

Structures audited		Location	Date
RFI	Divisional Directorate of Infrastructure	Rome	4 - 8 June
	Divisional Directorate of Movement	Rome	3 - 6 April

Trenitalia	**NATIONAL/INTERNATIONAL PASSENGER DIVISION**	
	National/international Production	
	Nat./Internat. Production, Lombardy	12 – 15 March
	National/International Production, Basilicata and Calabria	8 – 11 May
	National/International Production Marche, Abruzzo and Molise I	9 – 12 July
	Nat./International Production, Liguria	18 – 21 September
	National/International Production, Emilia Romagna	19 – 23 November
	National/International Production, Lazio and Umbria	26 – 30 November
	Audit targeting Pax Bologna's locomotion equipment	18 January 2007
	National/International Ongoing Maintenance	
	Ongoing Carriage Maintenance Workshop, Milan	13 – 16 March
	Ongoing Carriage Maintenance Workshop, Reggio Calabria	8 – 10 May
	Ongoing Locomotive Maintenance Workshop, Milan	25 – 27 July
	Ongoing Elettrotreno Rapido (ETR) Maintenance Workshop, Milan	6 – 8 November
	Ongoing ETR Maintenance Workshop, Rome	27 – 29 November
	Ongoing Carriage Maintenance Workshop, Rome	18 – 20 December
	REGIONAL PASSENGER DIVISION	
	Regional Directorate, Abruzzo	15 – 19 January
	CARGO DIVISION – Cargo Operations	
	Venice/Verona Area	26 – 30 March
	TECHNICAL DIRECTORATE AND INDUSTRIAL PROCUREMENT	
	ETR and light railcar lifecycle	
	Light Railcar Cyclical Maintenance Workshop, Foggia	13 – 16 February
	ETR Cyclical Maintenance Workshop, Vicenza	3 – 5 October
	Ongoing Light Railcar Maintenance Workshop, Ancona – Locomotive Maintenance Workshop, Sulmona	16 – 18 January
	Locomotive Lifecycle	
	Locomotive Cyclical Maintenance Workshop, Rimini	10 – 13 July
	Carriage Lifecycle	

	Ongoing Carriage Maintenance Workshop, Porta Prato, Florence	23 – 25 October
	Cyclical Maintenance Workshop, Voghera	11 – 13 December
	Ongoing Light Railcar Maintenance Workshop, Ancona – Locomotive Maintenance Workshop, Sulmona	12 – 14 December

Following the auditing, critical areas were identified, requiring more vigorous action, summarised on the following pages.

Critical areas for IO:

a. infrastructure maintenance:
   1. compliance with set intervals for infrastructure maintenance;
   2. state of maintenance and adjustment of points and long welded rail;
   3. rusting of rarely used track circuits;
   4. straightening bent layout (curves in alternating directions) on through tracks;
   5. maintenance of built structures;
   6. checking outsourced maintenance work and disruption of railway operations by third-party contractors;
   7. correct following of the process for bringing new equipment into use, modifying layout and monitoring the meeting of deadlines by parties outside RFI;
   8. surveying the condition of infrastructure after train derailments; and
   9. checking how maintenance is done on safety-related items.

b. maintenance of skills of staff deployed on operations management, with special reference to managing unsafe situations;

c. monitoring the processes which require liaison between operation management staff and maintenance staff;

d. correct following of the process for bringing new equipment into use and modifying layout, including times of issue and distribution of divisional circulars on implementing layout modifications;

e. mitigation of the risks of crossing the railway line:
   1. to adopt the necessary measures to reduce the risk of accidents at level crossings; and
   2. to identify critical points where railway outsiders cross the line and adopt the necessary counter-measures.

Specific critical areas for the RUs:

a. technological updating of rolling stock:
   1. to fit the SCMT and SSC on-board sub-systems;
   2. to monitor the use of the driver warning system;
   3. to upgrade train closing and locking devices on passenger trains;

b. rolling stock maintenance:
   1. to manage the process of staff training and distribution of technical documentation;
   2. to check that the authorisations required to deploy staff are held or valid;
   3. to comply with the set intervals for rolling stock maintenance;
   4. traceability of maintenance operations and management of measurement instruments;
   5. traceability and validity of type-approval of rolling stock in service;
   6. lack of planning of the use of funds for safety training in most critical aspects;

c. fire prevention;

d. use of computer systems in safety-related processes:
   1. to update the data used in computer systems for planning and control of safety-related processes;

e. training and skills maintenance:
   1. to extend the use of driving simulators
   2. to foster skills of marshalling staff by monitoring their activity, bearing in mind the importance of accurate train make-up and braking data for the proper functioning of the automatic train protection systems (SCMT, SSC and ERTMS/ETCS); and
   3. to foster the skills of shunters by monitoring their activity, with special attention to document drafting and chocking of stationary rolling stock;

f. commissioning in-service activities relating to operating safety:
   1. to prepare a specific risk assessment;
   2. to assign responsibilities correctly; and
   3. to monitor and supervise the assigned activities.

Follow-up carried out in 2007

Structure followed up		Location	Date
RFI	Divisional Directorates of Infrastructure	Naples	16 – 19 July
		Milan	23 – 26 July
		Bologna	11 – 14 September
	Divisional Directorates of Movement	Verona	23 – 25 January
		Palermo	20 – 22 February

Trenitalia	**NATIONAL/INTERNATIONAL PASSENGER DIVISION**	
	National/International Production	
	National/International Production Sicily	10 – 12 April
	National/International Ongoing Maintenance	
	Ongoing ETR Maintenance Workshop, Naples	
	Ongoing Carriage Maintenance Workshop, Palermo	
	REGIONAL PASSENGER DIVISION	
	Regional Directorate Veneto	9 – 11 January
	Regional Directorate Veneto - Locomotive Maintenance Workshop, Treviso	10 – 12 January
	Regional Directorate Friuli Venezia Giulia + Rolling Stock Maintenance Workshop, Trieste	3 – 5 July
	Regional Directorate Lazio + Rolling Stock Maintenance Workshop, Rome	30 January - 1 February
	Regional Directorate Calabria + Locomotive Maintenance Workshop, Reggio Calabria	17 - 19 April and 8 May
	Regional Directorate Emilia Romagna + Locomotive Maintenance Workshop, Bologna	6 – 8 March
	Regional Directorate Lombardy + Farini Vehicle Maintenance Workshop, Milan	19 – 21 June
	Regional Directorate Abruzzo + Locomotive Maintenance Workshop, Sulmona	3 – 6 September
	Regional Directorate Calabria (2° Fw)	24 – 26 September
	Regional Directorate Piedmont + Locomotive Maintenance Workshop, Turin	9 - 11 October
	CARGO DIVISION – Cargo Operations	
	Cagliari/Rome Area – Sardinia and Civitavecchia Head Office (2° Fw)	6 – 8 February
	Naples/Reggio Calabria – Calabria Head Office	20 – 22 March
	Palermo Area	2 – 4 May
	Naples/Reggio Calabria Area	29 – 31 May
	Leghorn Area	26 – 28 June
	Ancona/Bari Area	7 – 10 August
	Naples/Reggio Calabria Area – Calabria Head Office (2° Fw)	26 – 28 September
	Venice/Verona Area	16 – 18 October
	TECHNICAL DIRECTORATE AND INDUSTRIAL PROCUREMENT	
	Locomotive Lifecycle	
	Locomotive Cyclical Maintenance Workshop, Foligno	28 – 30 August
	Locomotive Cyclical Maintenance Workshop, Verona	17 – 19 October
	Carriage Lifecycle	
	Carriage Cyclical Maintenance Workshop, Messina	26 – 27 April
Other RUs		11 – 15 June
		11 – 15 November

Findings of follow-up of RFI, Trenitalia and the other RUs' Divisional Directorates of Infrastructure and Movement were not always positive.

Only some of the recommendations made at audit, and followed up, had been acted on (the average was around 50%). Hence the managers of the audited organisations had to assume further responsibilities and take further action to act on recommendations which were still pending.

The table below summarises the percentages:

Structure followed up in 2007		% non-conformities rectified
RFI	Divisional Directorates of Movement	53
	Divisional Directorates of Infrastructure	47.5
Trenitalia	Nat./Internat. Pax Directorate	60
	Regional Passenger Directorate	
	General Directorate of Operations and Logistics	
	Technical Operations Directorate	
Other RUs		65

G.1.2 Inspection (monitoring) of Railway Undertakings in 2007

As shown above, 2007 saw an overall fall in transport activity by certified RUs (**-1.80**%).

2007 also saw an overall improvement in RU safety performance, as recorded by the monitoring activity described in this report. As stated, the CESIFER area officers concentrated on RUs which provided a significant quantity of services on their own sections during 2007. Overall, this allowed an accurate analysis of services and irregularities of all certified RUs providing services on the national rail infrastructure.

The main critical areas highlighted in the analysis of the data contained in this report proved to relate to the following activities:

- ✓ shunting and train make-up, especially conditions of acceptance of trains, match between actual train data and data on accompanying documents and, above all, train parking operations in yards. In this context, many non-conformities were found with regard to marshalling staff. These related both to authorisations and to working practices;
- ✓ driving in relation to marshalling practices. As stated, the high percentage of derailments during marshalling has cross-cutting implications for all RUs;
- ✓ wagon load control and checking, especially compliance with insurance terms for these loads.

Special attention must be paid to non-conformities found on goods rolling stock for the carriage of dangerous goods, especially by Trenitalia SpA.

This year, too, will require separate reflection on the growing use of services between RUs, especially in shunting and train make-up. The result is increasing evidence of critical situations, especially at facilities where more than one RU is present.

This critical condition reflects a more general need for more effective adoption of processes and procedures based on safety management principles. The documentation generated by the RUs at the time of safety certification must actually be part of their own daily activity management. There is also a need to revise the regulations, to govern the conditions of provision of services more clearly.

G.2 Implementation status of activities included in Infrastructure Operator's and Railway Undertakings' annual safety plans

G.2.1 Infrastructure Operator

Article 13(4) of Legislative Decree 162/2007 requires IO and RUs to submit an annual safety report for the past year, by 30 June. That Decree is not yet fully implemented, so this section has been based on RFI's annual safety plan for 2007.

The Annual Plan contains projects devised and executed centrally by RFI and projects carried out by its operations directorates (Maintenance and Movement). These projects have been devised to reduce the critical areas identified by the IO in memorandum RFI-AD\A0011\P\2006\0000283. Projects under these plans have largely been completed.

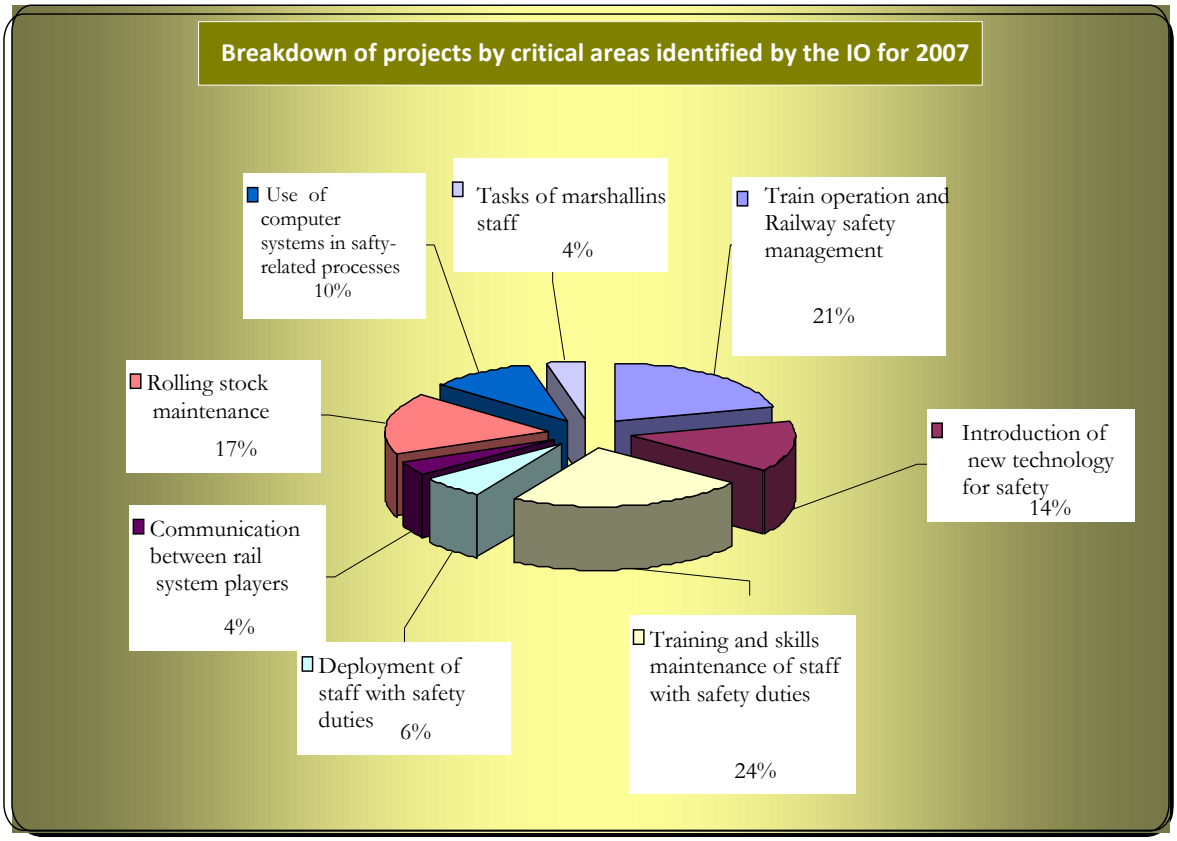
G.2.2 Railway undertakings

This section summarises the RUs' annual safety reports.

As stated in G.2.1 above, Article 13(4) of Legislative Decree 162/2007 requires IO and RUs to submit an annual safety report for the past year, by 30 June. That Decree is not yet fully implemented, so this section has been based on the train operation and railway safety plans drawn up by the RUs in accordance with IO Instruction 56 of 29 December 2003, as subsequently amended and supplemented.

The safety plans are based on projects devised to achieve rail system macro-targets and minimise the critical areas reported in G.1.1 above, identified by the IO in memorandum ref. RFI-AD\A0011\P\2006\0000283 of 10/4/2006.

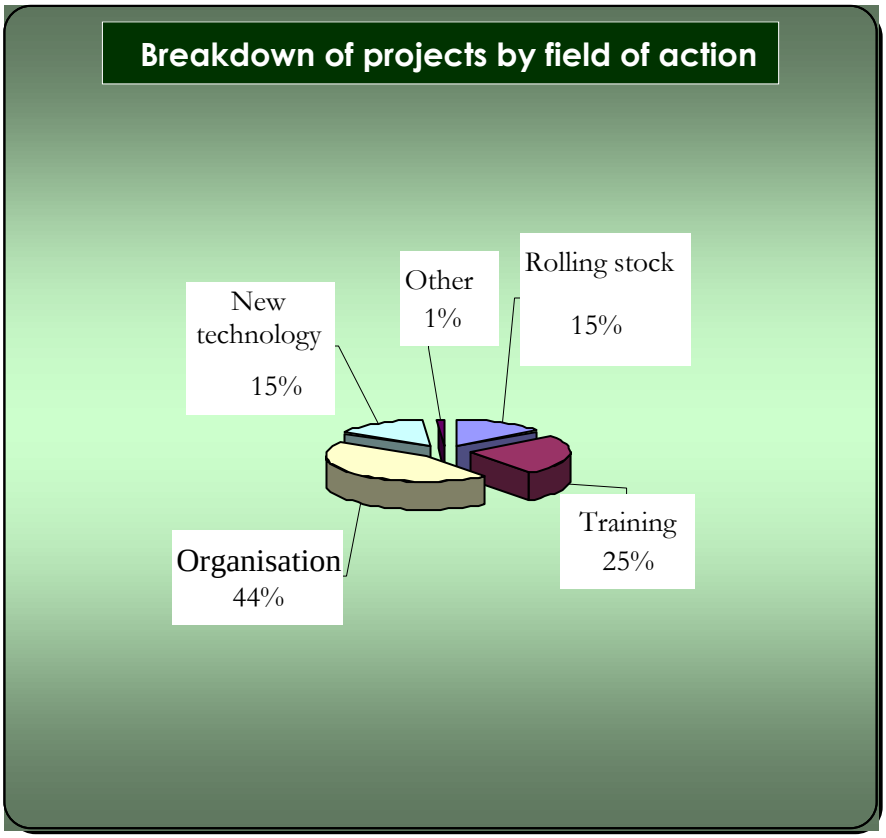
The pie chart below shows the critical areas identified for 2007. With these in mind, the RUs have developed their own projects, focusing especially on critical areas of corporate safety management systems and training and skills maintenance of staff that fulfil safety functions.



Based on the criteria of IO Instruction 56, the RUs have classified their projects as follows:

- organisation;
- training;
- rolling stock; and
- technological innovation.

Projects which do not fit the above types are classed as "other."

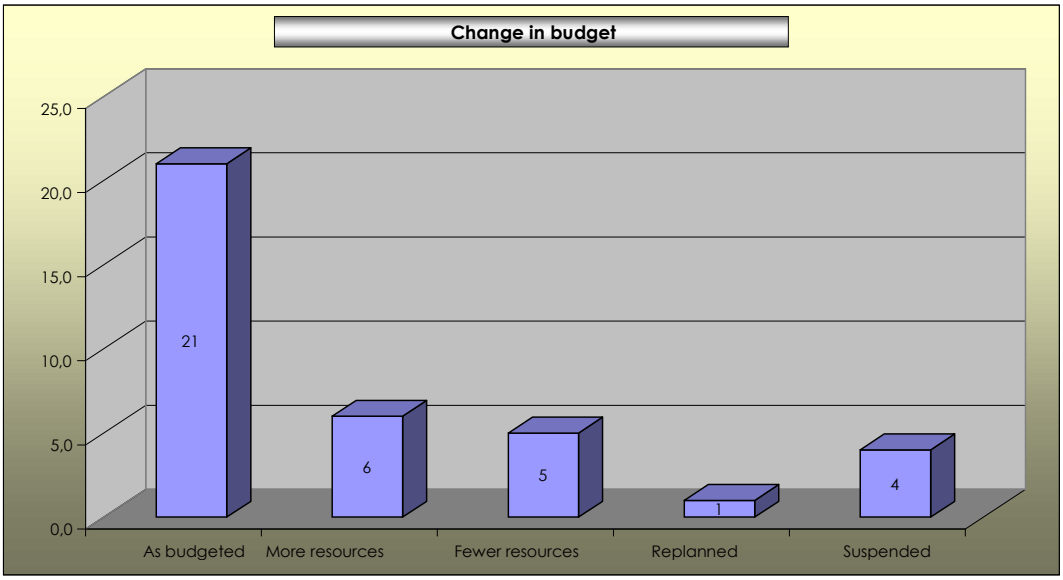


The various RUs do not compile their documents on the progress of their safety plans in a uniform way. Hence no meaningful summary for the whole system was possible at 31 December 2007. The following is a summary of Trenitalia's safety plan alone, bearing in mind that Trenitalia alone accounts for 97.59% of total traffic volume on the national rail infrastructure.

Trenitalia's Safety Plan dated 31.12.2007 covered 37 projects: 7 more than the first edition of the plan.

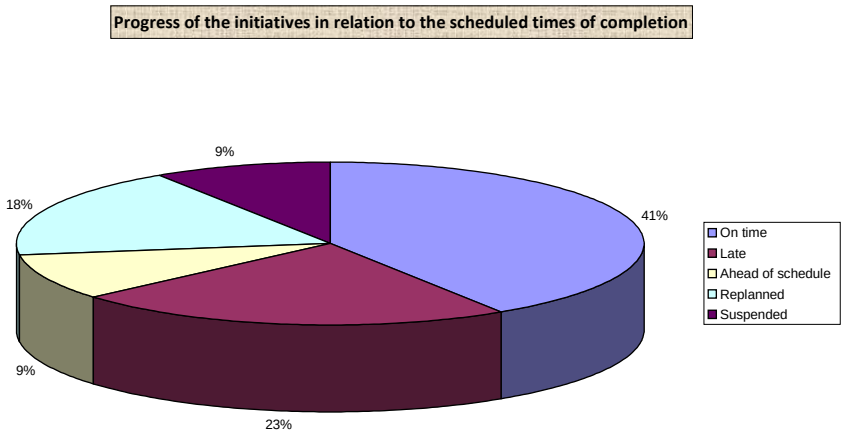
The difference is attributable to the restructuring of certain projects, due to addition of new content or to critical factors detected during the year.

Looking at Trenitalia's total planned effort to complete 30 projects under its own safety plan, at 31 December the completed activities were summarised as follows:

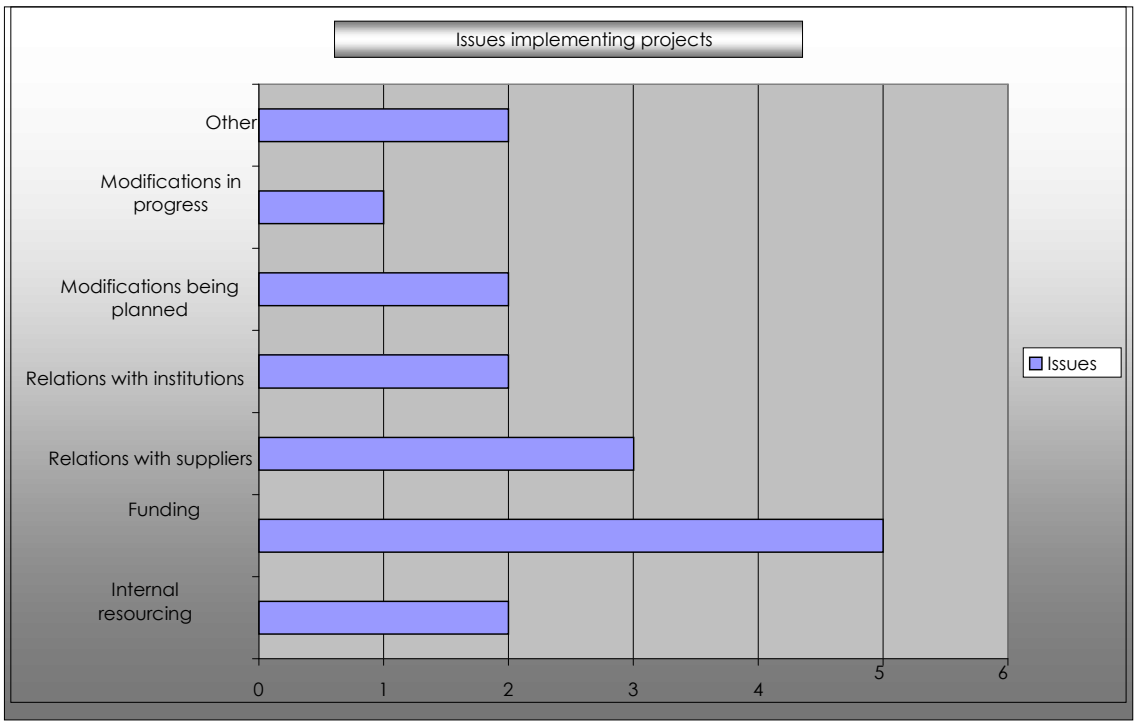


As for scheduled times of completion of the initiatives, Trenitalia's safety plan progress report, represented in the pie chart below, shows that:

- 41% of projects are on time;
- 23% are late;
- 18% have been replanned;
- 9% are ahead of schedule; and
- 9% have been suspended.



Many projects of the safety plan concerned are behind schedule, especially work to improve the technological standards of locomotives and hauled stock, and planned resources are not being provided, due to problems in funding and relations with suppliers.



For the reasons stated, Trenitalia's safety plan summary at 31/12/07 and counterpart documents from most other safety-certified RUs do not contain the following data required for annual safety reports:

- details of methods of achieving internal safety targets;

- preparation of national safety indicators and common safety indicators as per Legislative Decree 162/2003, Annex I;
- results of internal safety audits; and
- comments on shortcomings and malfunctions of railway operations and infrastructure management.

As regards the compilation of national and common safety indicators as per Legislative Decree 162/2003, Annex I, it is necessary to explain that the RUs did supply the required data individually, in accordance with the provisions of IO memorandum ref. RFI-DTC\A0011\P\2007\0002795 dated 19/9/2007.

G.3 Complaints by the IO against RUs concerning the conditions of the part A/part B certificate

Not applicable

G.4 Complaints by RUs against the IO on the conditions of their authorisations

Not applicable

PART H - CONCLUSIONS, PRIORITIES AND SAFETY RECOMMENDATIONS

Movement by rail remains by far the safest mode of transport in Italy, especially on the network operated by RFI.

As stated, the programme of equipping the ground network with train protection systems (SCMT/ETCS/SSC) was completed in 2007. Equipment of the rolling stock continues.

The completed fitting programme has already contributed to a reduction in accident figures from the rail system. It should guarantee that continued containment of accident rates.
Crossing railway lines remains a critical factor. The work of closing level crossings continues. This should be accompanied by a vigorous campaign of public education, to counter user malpractice.

The auditing, inspection and monitoring work completed during 2007 on activities with an impact on train operation and railway safety have highlighted the continued problems in certain critical areas. These include ongoing improvement of the Safety Management System (updating in line with new regulations and measuring system efficiency improvements by using and monitoring the indicators).

The need to perfect the aspects of deployment and training of staff in safety roles was particularly highlighted.

These problems fall within the critical areas identified for preparation of the train operation and railway safety plans. These must define projects and activities designed to minimise the effects of such critical points.