Safety Database

Report 2014

Significant Accidents occurred in Europe during the year 2013

Public Report

UIC Safety Database Report 2014

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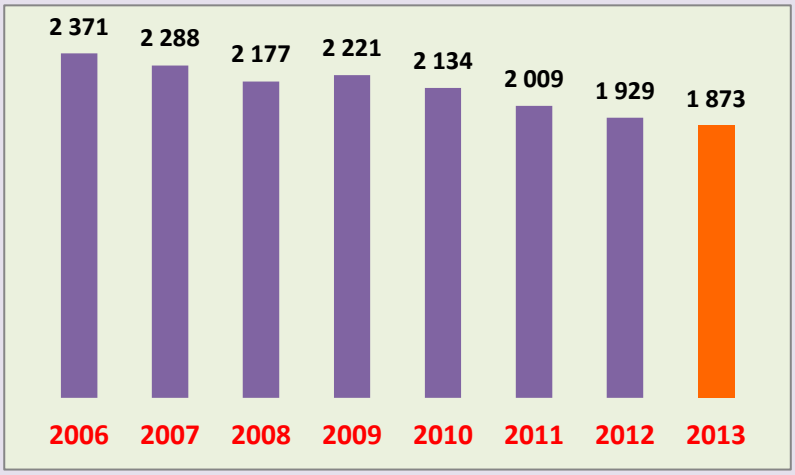
Foreword

Approximately 10 years ago, the International Union of Railways (UIC) began recording significant accidents and events. Since 2006, tables and graphs of comparable data from 21 UIC members have established a benchmark and allowed trends and developments in railway safety to be identified.

Statistical analysis of "significant" accidents in recent years has shown that there is an ongoing positive trend in Europe. The efforts made to improve railway safety amongst the 21 members of the UIC Safety Database are bearing fruit.

However, we should remain very cautious when analysing accident statistics and never forget that trends might be inversed after a single accident, such as the one that unfortunately occurred last July.



Annual number of significant accidents

However, we must not allow this positive trend to lull us into a false sense of safety.
A closer analysis of "**Train collisions and derailments**" statistics indicates that unfortunately, despite the positive trend, the number of victims increased markedly in 2013. Four accidents, each with high numbers of victims, which occurred last January (Austria) and July (France, Spain, Switzerland), mar an otherwise very positive picture.

The "**Train collisions and derailments**" graph shows that the aforementioned accidents have a negative impact on the number of victims (total deaths and serious injuries, not including suicides).

Train collisions and derailments: numbers of events and victims

The second part of the report addresses the subject of "Accidents related to human factors". I believe that the field of "**Human Factors**" offers great potential for improving safety performance in the railways.

A further aspect I wish to mention is the analysis of the causes of accidents. More than 75% of accidents are caused by "third parties" (level crossing users and people trespassing on the track). To this can be added a large number of suicides, which impact negatively on railway operations. Here, society as a whole must pull in the same direction in order to improve matters.

Safety needs long-term thinking, and we must not allow major accidents - which are rare - to distract us from this fact. I wish all the railways every success in improving railway safety going forward.

Peter Kleinschuster

Chairman of the Safety Platform

Part 1

General safety indicators

Part 1 - General Report on Significant Accidents

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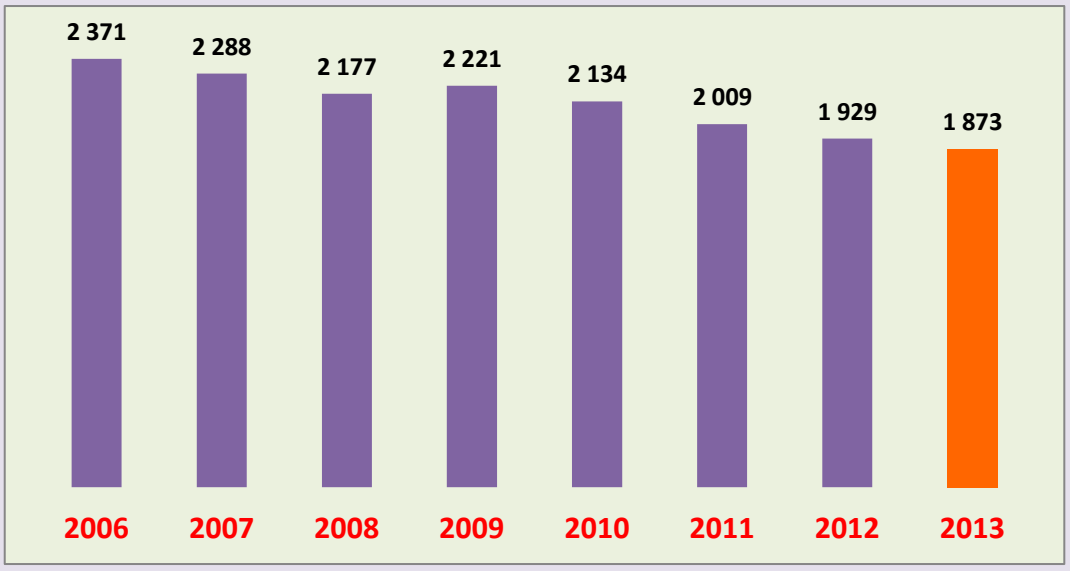
1.1 Summary of accidents and their human consequences

Years	Significant accidents	Number of fatalities per 100 significant accidents			All victims per 100 significant accidents	Significant accidents per million train-km	Fatalities per million train-km
		Passengers	Staff	3rd parties			
2013	1 873	5,1	1,4	50,8	108,4	0,46	0,26
2012	1 929	1,7	2,3	48,9	102,2	0,47	0,25
2011	2 009	1,6	1,4	51,5	98,9	0,49	0,27
2010	2 134	1,9	1,8	50,5	107,5	0,53	0,29
2009	2 221	1,2	1,1	58,4	103,6	0,55	0,34
2008	2 177	1,4	2,0	51,4	103,9	0,53	0,29
2007	2 288	1,0	1,8	56,7	109,6	0,56	0,33
2006	2 371	1,0	1,7	51,5	102,4	0,59	0,32



- 3% decrease in significant accidents declared for the year 2013.
- Lowest rate of accidents per million train-kilometre in the 8-year period.

1.2 Types of accidents according to UIC-SDB and EU definitions

<table>
<tr><th>2013</th><th colspan="3">Types of accidents as defined in UIC – SDB</th><th colspan="2">Additional information from UIC -SDB</th><th colspan="2">Types of accidents as defined in Safety Directive</th></tr>
<tr><td rowspan="5">Collective accidents

33,0%</td><td colspan="3">7,2% Derailment of trains</td><td colspan="2"></td><td>7,2%</td><td>Derailment of trains</td></tr>
<tr><td colspan="3">1,9% Train collision with another train</td><td colspan="2"></td><td rowspan="2">8,4%</td><td rowspan="2">Collisions including collisions with obstacles within the clearance gauge</td></tr>
<tr><td rowspan="2">24,0%</td><td rowspan="2">Train collision with an obstacle</td><td rowspan="2"></td><td>6,5%</td><td>Train collision with an obstacle not at LC</td></tr>
<tr><td>17,5%</td><td>Train collision with an obstacle at LC</td><td rowspan="2">25,6%</td><td rowspan="2">LC accidents, including accidents involving pedestrians at LC</td></tr>
<tr><td rowspan="3">Individual accidents

64,2%</td><td rowspan="2">60,2%</td><td rowspan="2">Individual hit by a train</td><td>8,1%</td><td>Individual hit by a train at LC</td></tr>
<tr><td>52,1%</td><td>Individual hit by a train not at LC</td><td rowspan="2">56,1%</td><td rowspan="2">Accidents to persons caused by rolling stock in motion, with the exception of suicides.</td></tr>
<tr><td colspan="3">4,1% Individual falling from a train</td><td colspan="2"></td></tr>
<tr><td rowspan="3">Other types of accidents

2,7%</td><td colspan="3">1,4% Fire in rolling stock</td><td colspan="2"></td><td>1,4%</td><td>Fire in rolling stock</td></tr>
<tr><td colspan="3">1,2% Electrocution by overhead line or third rail</td><td colspan="2"></td><td rowspan="2">1,3%</td><td rowspan="2">Other types of accidents</td></tr>
<tr><td colspan="3">0,1% Accident involving dangerous goods</td><td colspan="2"></td></tr>
</table>

- 60% of accidents involved individuals hit by a train.
- Collision with an obstacle was the second most common accident (a quarter of all accidents).
- Accidents at level crossings accounted for 26% of all significant accidents.
- 2 accidents involved dangerous goods during the year 2013.
- Accidents at level crossings are divided in the UIC database between collisions with an obstacle at LC and individuals hit by a train at LC.

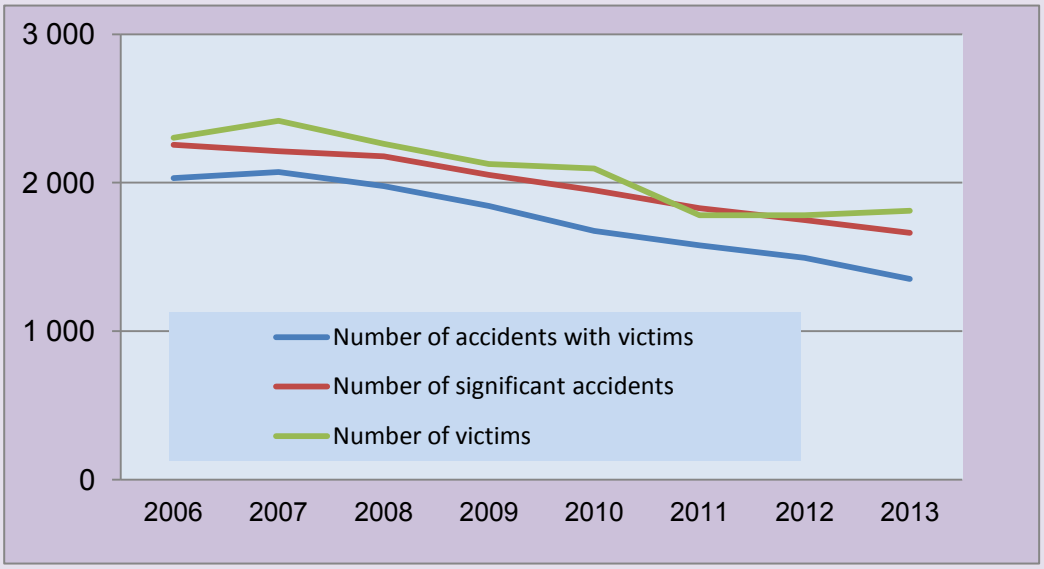
1.3 Main causes of accidents

2013	Causes at first level	Causes at second level	
EXTERNAL CAUSES	THIRD PARTIES	Trespassing	47,1%
		Vehicle (LC accident)	17,2%
		Pedestrian (LC accident)	7,6%
	77,2%	Pedestrian on public railway area	2,7%
		Other or not specified	2,6%
80,7%	WEATHER & ENVIRONMENT	Environment	2,1%
	3,5%	Weather	1,4%
INTERNAL CAUSES	INFRASTRUCTURES	Tracks and structures	2,3%
		Energy system	0,7%
	3,4%	Other or not specified	0,3%
	ROLLING STOCK	Running gear	1,1%
	4,0%	Other or not specified	2,8%
	HUMAN FACTORS (Railway staff & subcontractors)	Track and switch maintenance staff	2,5%
		Traffic operating and signalling staff	1,1%
		Train drivers	2,0%
	7,3%	Other or not specified	1,8%
18,5%	RAILWAY USERS	Passengers	3,7%
	3,9%	Other or not specified	0,2%
CAUSES NOT IDENTIFIED			0,7%

- More than 80% of accidents had external causes.
- The number of accidents with no identified causes is slightly higher than the previous year.
- Internal causes relate to both the infrastructure manager and railway undertakings.

1.4 Trend of accidents and rates over the last seven years (19 railways)

ALL RAILWAYS except MAV and HZ	2006	2007	2008	2009	2010	2011	2012	2013
Number of significant accidents	2 256	2 212	2 177	2 052	1 949	1 829	1 748	1 662
Significant accidents per million train-km	0,58	0,56	0,55	0,53	0,50	0,46	0,44	0,42
Number of accidents with victims	2 031	2 071	1 976	1 843	1 675	1 579	1 495	1 351
Accidents with victims per million train-km	0,52	0,52	0,50	0,47	0,43	0,40	0,37	0,34
Number of victims	2 302	2 418	2 262	2 125	2 096	1 781	1 780	1 810
Victims per million train-km	0,59	0,61	0,57	0,55	0,54	0,45	0,45	0,46
Number of fatalities	1 230	1 320	1 194	1 253	1 050	987	947	958
Fatalities per million train-km	0,32	0,33	0,30	0,32	0,27	0,25	0,24	0,24
Number of million train-kilometres	3 903	3 958	3 989	3 882	3 912	3 980	3 989	3 958



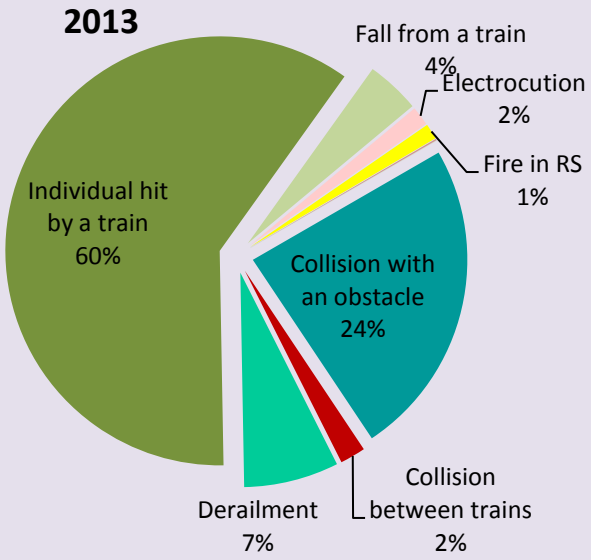
➢ This table allows a comparison on a constant perimeter, based on the 19 railways that have provided UIC with data every year since 2006.

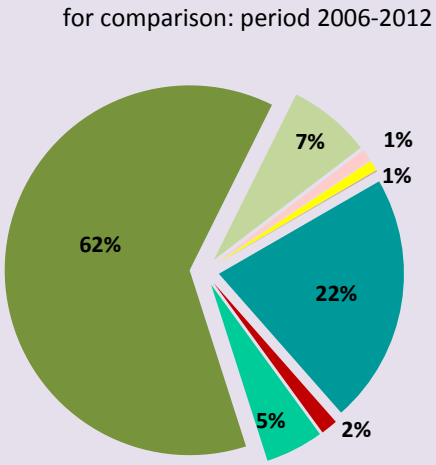
1.5 Number of accidents and victims by type of accident

2013		Number of accidents	FATALITIES			SERIOUS INJURIES			ALL VICTIMS
			Passengers	Staff	3rd parties	Passengers	Staff	3rd parties	
At station	Collisions with an obstacle (not at LC)	26	-	-	1	-	3	-	4
	Collisions between trains	29	-	3	-	49	8	-	60
	LC accidents	91	-	-	54	5	-	47	106
	Derailments	69	3	-	4	29	1	1	38
	Hit by a train (not at LC)	373	1	13	203	2	17	142	378
	Falling from a train	56	6	-	1	47	-	2	56
	Other cases	25	-	-	4	-	3	12	19
	Total at station	**669**	**10**	**16**	**267**	**132**	**32**	**204**	**661**
In open line	Collisions with an obstacle (not at LC)	93	-	1	10	3	1	-	15
	Collisions between trains	4	-	-	-	8	16	-	24
	LC accidents	360	-	1	208	2	5	210	426
	Derailments	57	77	3	-	149	2	-	231
	Hit by a train (not at LC)	591	-	6	436	-	5	156	603
	Falling from a train	20	9	-	3	8	-	-	20
	Other cases	25	-	-	1	-	1	6	8
	Total in open line	**1150**	**86**	**11**	**658**	**170**	**30**	**372**	**1327**
not specified		**54**	**-**	**-**	**26**	**1**	**1**	**15**	**43**
GRAND TOTAL		**1873**	**96**	**27**	**951**	**303**	**63**	**591**	**2031**

- 61% of accidents occured on open line, whilst 36% happened in stations.
- 70% of fatalities occured on open line (27% in stations).
- Persons hit by a train and LC accidents represented 86% of fatalities on open line (92% in stations).

1.6 Accidents by type





	Victims per accident	Fatalities per accident	Serious injuries per accident
Passengers	0,21	0,05	0,16
Staff	0,05	0,01	0,03
Third parties	0,82	0,51	0,32
Total	1,08	0,57	0,51

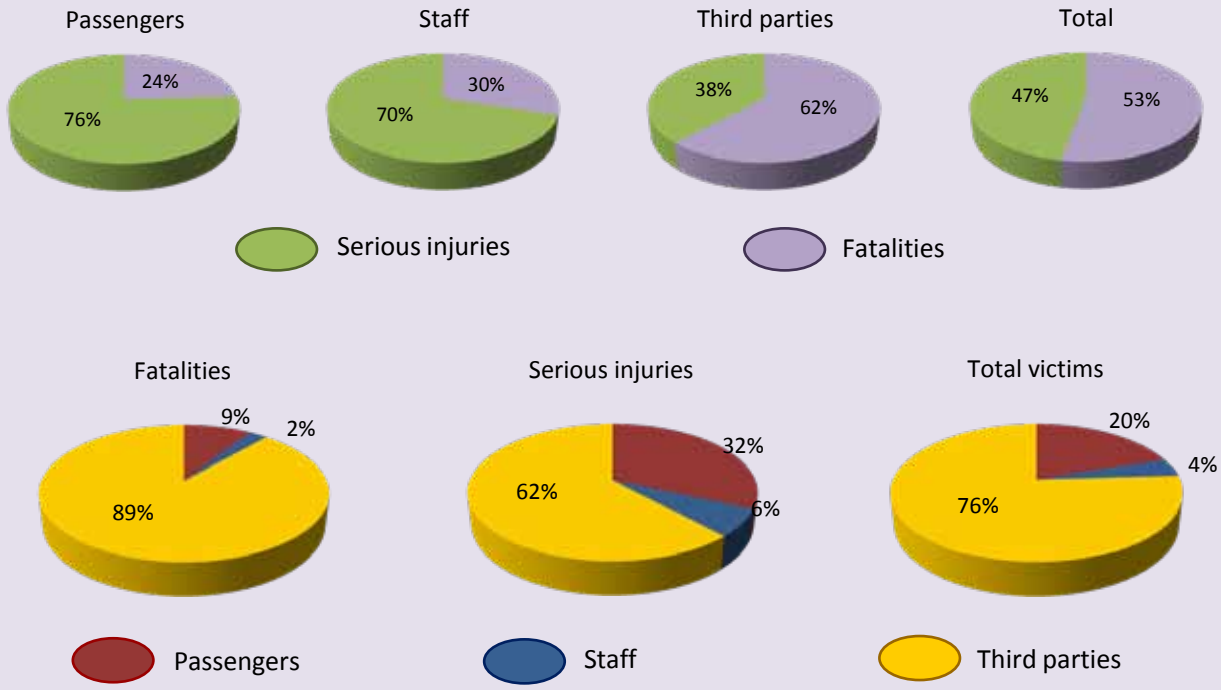
- Collisions with an obstacle include collisions at LC.
- Individual hit by a train include pedestrians at LC.
- For LC accidents, refer to table 1.11.

	Accidents		Victims	
Type of accident - year 2013	Number	%	Fatalities	Serious injuries
Collision with an obstacle	449	24,0%	174	255
Collision between trains	36	1,9%	3	81
Derailment	134	7,2%	87	182
Individual hit by a train	1127	60,2%	786	360
Fall from a train	76	4,1%	19	57
Electrocution	27	1,4%	5	21
Fire in RS	22	1,2%	-	-
Dangerous goods accidents (no release)	2	0,1%	-	1
Dangerous goods accidents (with release)	-	0,0%	-	-
Total	**1 873**		**1 074**	**957**

1.7 Fatalities and serious injuries by type of accident

2013	Fatalities			Serious injuries		
Type of accident	Passen-gers	Staff	Third parties	Passen-gers	Staff	Third parties
Collision with an obstacle	-	1	173	10	9	236
Collision between trains	-	3	-	57	24	-
Derailment	80	3	4	178	3	1
Individual hit by a train	1	20	765	3	23	334
Fall from a train	15	-	4	55	-	2
Electrocution	-	-	5	-	3	18
Fire in rolling stock	-	-	-	-	-	-
Dangerous goods accidents (no release)	-	-	-	-	1	-
Dangerous goods accidents (with release)	-	-	-	-	-	-
Total	**96**	**27**	**951**	**303**	**63**	**591**

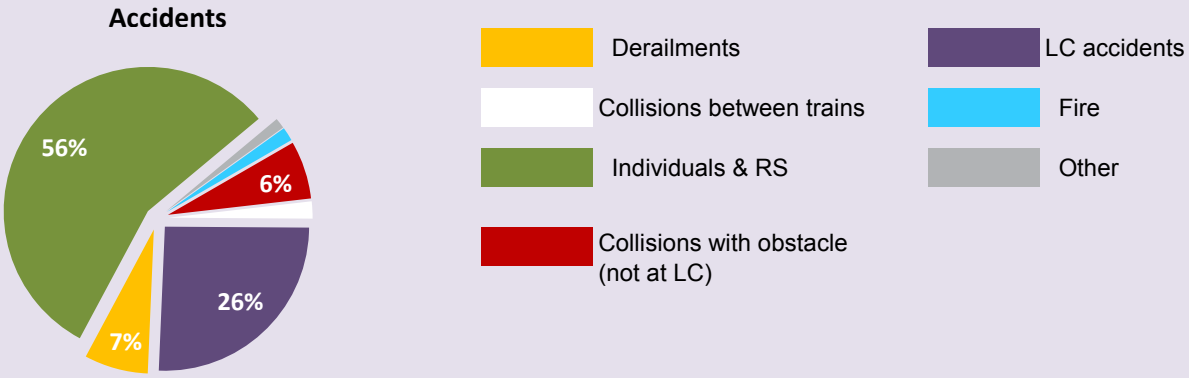
1.8 Distribution of victims

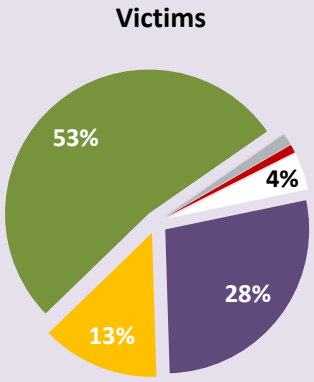


Reading method: fatalities account for 24% of passenger victims and passengers represent 9% of fatalities

- Third parties represented 89% of all fatalities and 62% of serious injuries.
- Passengers accounted for 20% of all victims (12% in 2012).

1.9 Victims by type of accident according to Safety Directive definitions



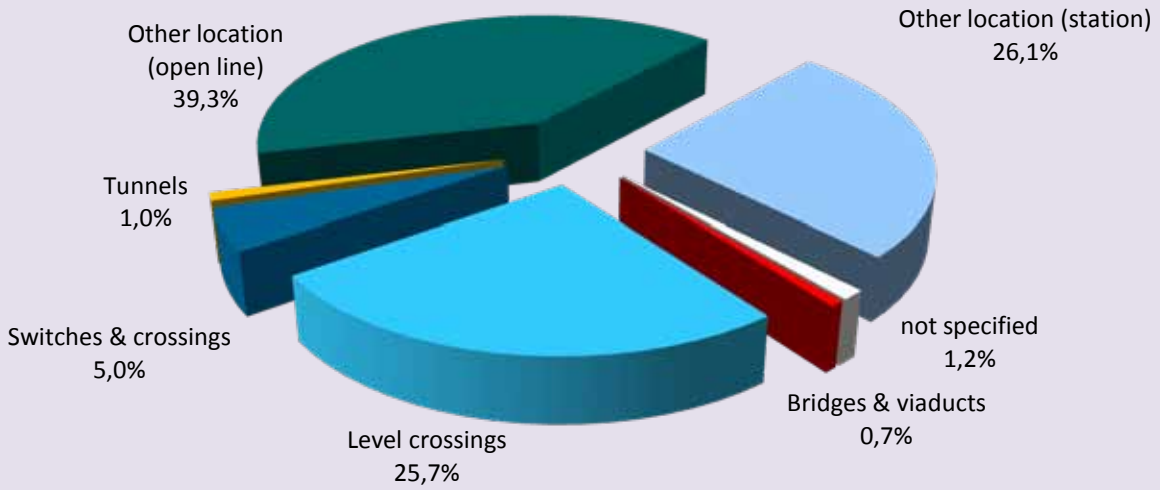


Breakdown of human consequences			
	Fatal.	Injur.	All
Passengers	5%	15%	**20%**
Staff	1%	3%	**4%**
Third parties	47%	29%	**76%**
All categories	**53%**	**47%**	**100%**

Type of accident	Number of events	%	Fatalities			Serious injuries		
			Passengers	Staff	3rd parties	Passengers	Staff	3rd parties
Collisions with obstacle (not at LC)	122	*6,5%*	-	1	11	3	4	-
Collisions between trains	36	*1,9%*	-	3	-	57	24	-
Level crossings	479	*25,6%*	-	1	280	7	5	271
Derailment	134	*7,2%*	80	3	4	178	3	1
Individuals & rolling stock in motion (not at LC)	1 051	*56,1%*	16	19	651	58	23	301
Fire	22	*1,2%*	-	-	-	-	-	-
Other types	29	*1,5%*	-	-	5	-	4	18
Total	**1 873**		**96**	**27**	**951**	**303**	**63**	**591**

2013 should not be considered as a typical year, as one sole accident resulted in 54% of passenger victims.

1.10 Accidents by location details

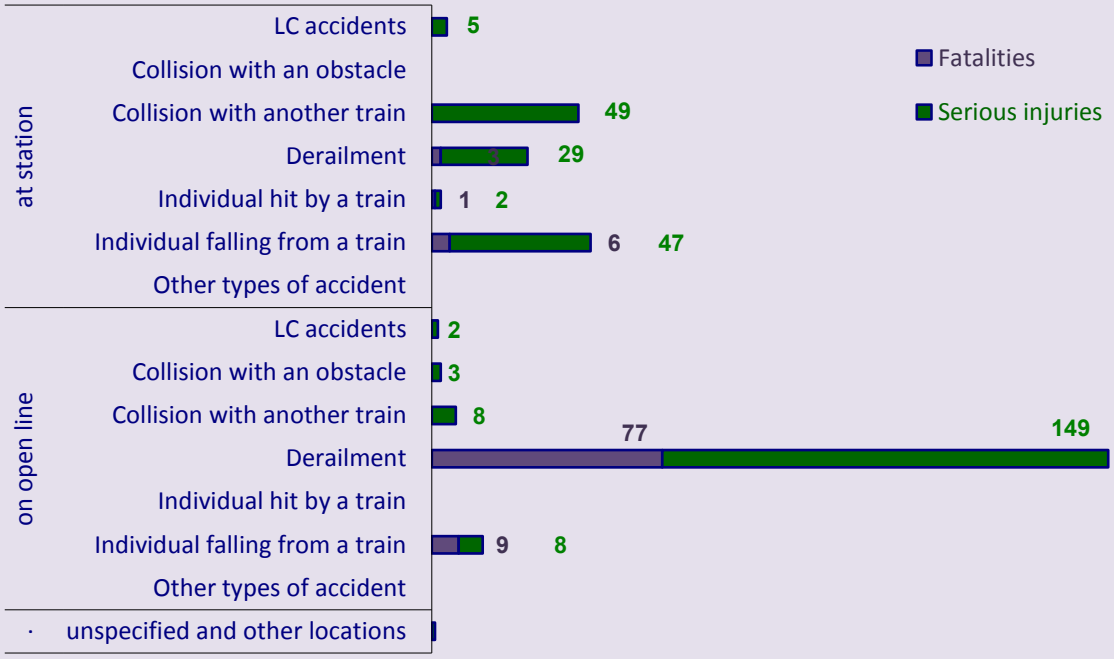


1.11 Accidents at level crossings

	Accidents at LC	Number of fatalities			% of all accidents	% of all fatalities	LC accidents per million train-km	LC fatalities per million train-km
		Passen-gers	Staff	Third parties				
2013	479	-	1	280	26%	26%	0,12	0,07
2012	510	-	1	325	26%	32%	0,12	0,08
2011	447	6	1	277	22%	26%	0,11	0,07
2010	495	1	3	315	23%	28%	0,12	0,08
2009	493	2	1	374	22%	28%	0,12	0,09
2008	539	-	3	325	25%	27%	0,13	0,08
2007	634	2	1	428	28%	32%	0,15	0,11
2006	664	1	2	350	28%	27%	0,16	0,09

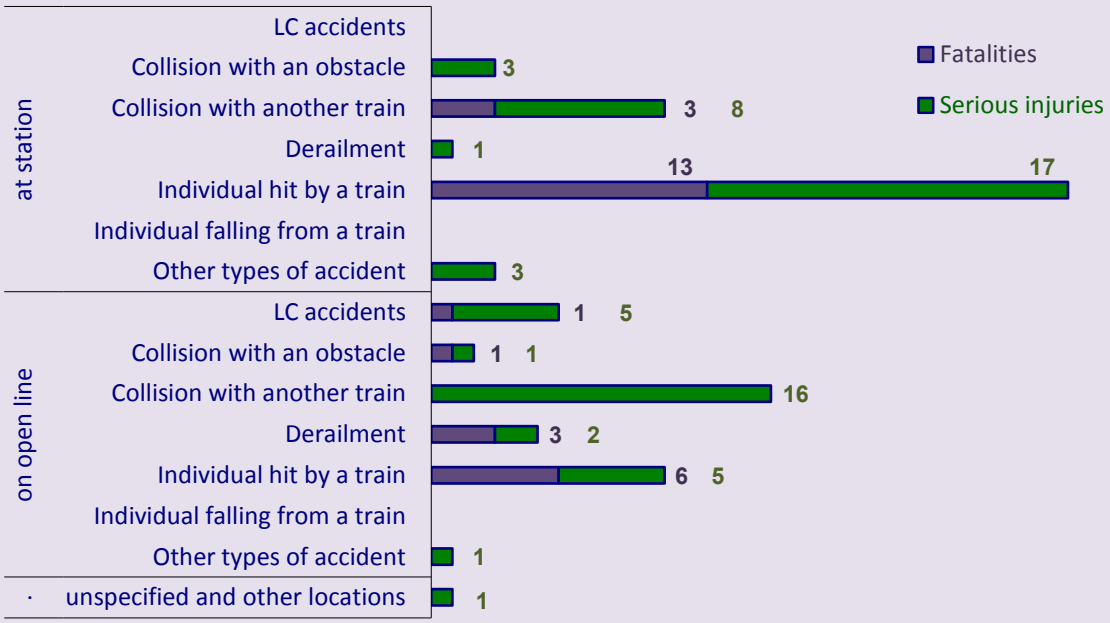
- Accidents at LC decreased by 27% compared with 2006 and 5% compared with 2012.
- Fatalities at LC decreased by 20% compared with 2006 and 13% compared with 2012.

1.12 Passenger victims by type of accident and location



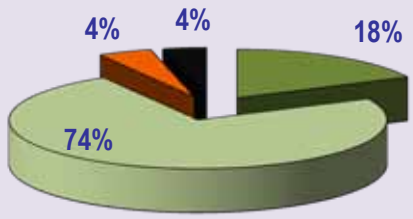
- "Fall from a train" represented 43% and train collisions 39% of victims at station
- Derailment accounted for 88% of passenger victims on open line
- All passenger victims on open line are linked to one sole accident

1.13 Staff victims by type of accident and location



- "Individual hit by a train" is the main risk in stations (63% of victims).
- Train collisions represented 39% of staff victims on open line.

1.14 Victims by type of traffic



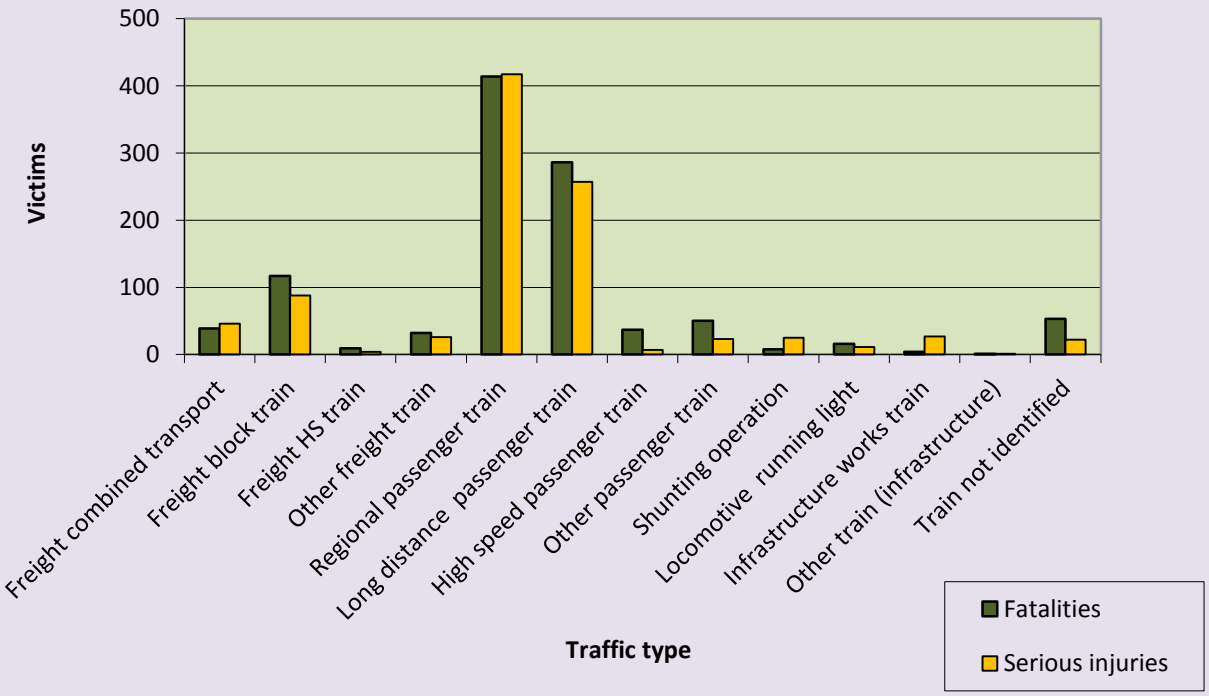
Freight trains

Passenger trains

Locomotive running light, shunting, infrastructure works train and other infrastructure train

Train not identifed

Type of accident	Freight trains	Passenger trains	Locomotive running light, shunting, infrastructure works train and other infrastructure train	Train not identifed
Collision	6	72	25	-
Derailment	37	230	2	-
Level-crossing accidents	110	432	15	6
Accidents to persons caused by rolling stock in motion	195	756	49	60
Other accidents	13	1	2	9
TOTAL victims	**361**	**1491**	**93**	**75**



- Passenger trains were involved in three out of four victims.
- Regional trains were involved in 41% of victims against 27% for long distance trains.

1.15 Accidents and victims by type of accident, causes and location

Type of accidents	Causes			Location						Victims		
				Type of location			Location details				Fatal.	S. Inj.
Individual hit by a train	INF	-	-	OL	682	696	LC	152	154	P	1	3
	RS	1	1				SC	28	29			
	HF	37	41	S	420	425	BV	4	4	S	20	23
	RU	4	4				T	11	11			
1127	WE	1	1	Ot	25	25	O	932	948	T	765	334
1146	TP	1083	1098									
Train collision with an obstacle	INF	17	4	OL	362	348	LC	327	410	P	-	10
	RS	18	-				SC	6	-			
	HF	21	5	S	70	63	BV	4	1	S	1	9
	RU	1	1				T	5	-			
449	WE	60	5	Ot	17	18	O	107	18	T	173	236
429	TP	329	413									
Individual falling from a train	INF	-	-	OL	20	20	LC	1	1	P	15	55
	RS	-	-				SC	-	-			
	HF	1	1	S	56	56	BV	-	-	S	-	-
	RU	66	66				T	1	1			
76	WE	-	-	Ot	-	-	O	74	74	T	4	2
76	TP	8	8									
Train collision with another train	INF	-	-	OL	4	24	LC	-	-	P	-	57
	RS	2	-				SC	12	51			
	HF	31	84	S	29	60	BV	1	-	S	3	24
	RU	-	-				T	-	-			
36	WE	1	-	Ot	3	-	O	23	33	T	-	-
84	TP	-	-									
Derailment	INF	46	37	OL	57	231	LC	2	-	P	80	178
	RS	31	-				SC	46	-			
	HF	44	230	S	69	38	BV	4	-	S	3	3
	RU	1	-				T	1	-			
134	WE	4	2	Ot	8	-	O	81	269	T	4	1
269	TP	1	-									
Electrocution	INF	-	-	OL	9	8	LC	-	-	P	-	-
	RS	-	-				SC	-	-			
	HF	3	3	S	18	18	BV	-	-	S	-	3
	RU	-	-				T	-	-			
27	WE	-	-	Ot	-	-	O	27	26	T	5	18
26	TP	24	23									

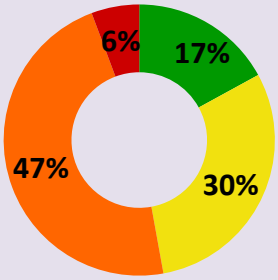
Type of accidents	Causes			Location				Victims		
				Type of location			Location details			
									Fatal.	S. Inj.
Fires	INF	-	-	OL	16	-	LC	-	-	P - -
	RS	21	-				SC	1	-	
	HF	-	-	S	5	-	BV	-	-	S - -
	RU	-	-				T	-	-	
22	WE	-	-	Ot	1	-	O	21	-	T - -
-	TP	1	-							
Accident involving dangerous goods without release	INF	-	-	OL	-	-	LC	-	-	P - -
	RS	1	1				SC	-	-	
	HF	-	-	S	2	1	BV	-	-	S - 1
	RU	1	-				T	-	-	
2	WE	-	-	Ot	-	-	O	2	1	T - -
1	TP	-	-							
Accident involving dangerous goods with release	INF	-	-	OL	-	-	LC	-	-	P - -
	RS	-	-				SC	-	-	
	HF	-	-	S	-	-	BV	-	-	S - -
	RU	-	-				T	-	-	
-	WE	-	-	Ot	-	-	O	-	-	T - -
-	TP	-	-							
TOTAL	INF	63	41	OL	1150	1327	LC	482	565	P 96 303
	RS	74	2				SC	93	80	
	HF	137	364	S	669	661	BV	13	5	S 27 63
	RU	73	71				T	18	12	
1873	WE	66	8	Ot	54	43	O	1267	1369	T 951 591
2031	TP	1446	1542							
										1074 957

number of accidents	INF: Infrastructures	OL: Open line	LC: Level crossings	P: passengers
	RS: Rolling stock	S: At station	SC: Switches & Crossings	S: Staff
	HF: Human Factors	Ot: Other locations	BV: Bridges & Viaducts	T: Third parties
	RU: Railway users		T: Tunnels	
number of victims	WE: Weather-Environment		O: Other or unidentified	
	TP: Third Parties			

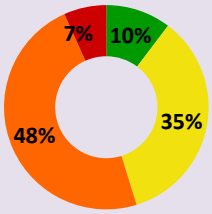
1.16 Accidents by type and number of victims

* a victim is a fatality or a serious injury

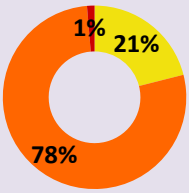
All accidents 2013 (1873 events)



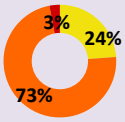
2006-2012 (15129 events)



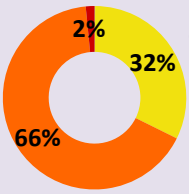
Individual hit by a train at LC 2013 (152 events)



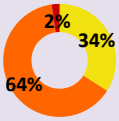
2006-2012 (1112 events)



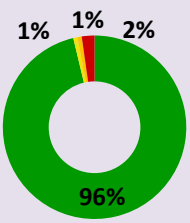
Individual hit by a train not at LC 2013 (975 events)



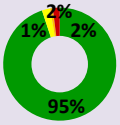
2006-2012 (8312 events)



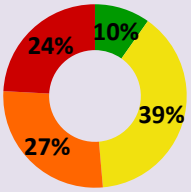
Derailment 2013 (134 events)



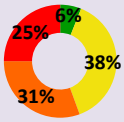
2006-2012 (768 events)



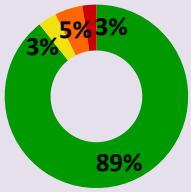
Collision with an obstacle at LC 2013 (327 events)



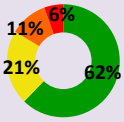
2006-2012 (2670 events)



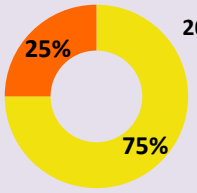
Collision with an obstacle not at LC 2013 (122 events)



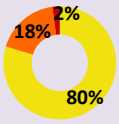
2006-2012 (635 events)



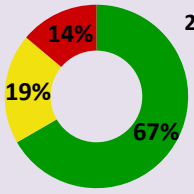
Fall from a train 2013 (76 events)



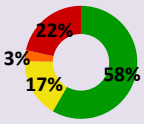
2006-2012 (1098 events)



Collision between trains 2013 (36 events)



2006-2012 (223 events)



- Fires in RS: 23 accidents (all without victims)
- Electrocutions: - 21 event with a serious injury
  - 6 events with 1 fatality
- Dangerous goods: - 1 event without victim
  - 1 event with a serious injury

Part 2

Special topic for 2013

Focus on accidents related to Human Factors

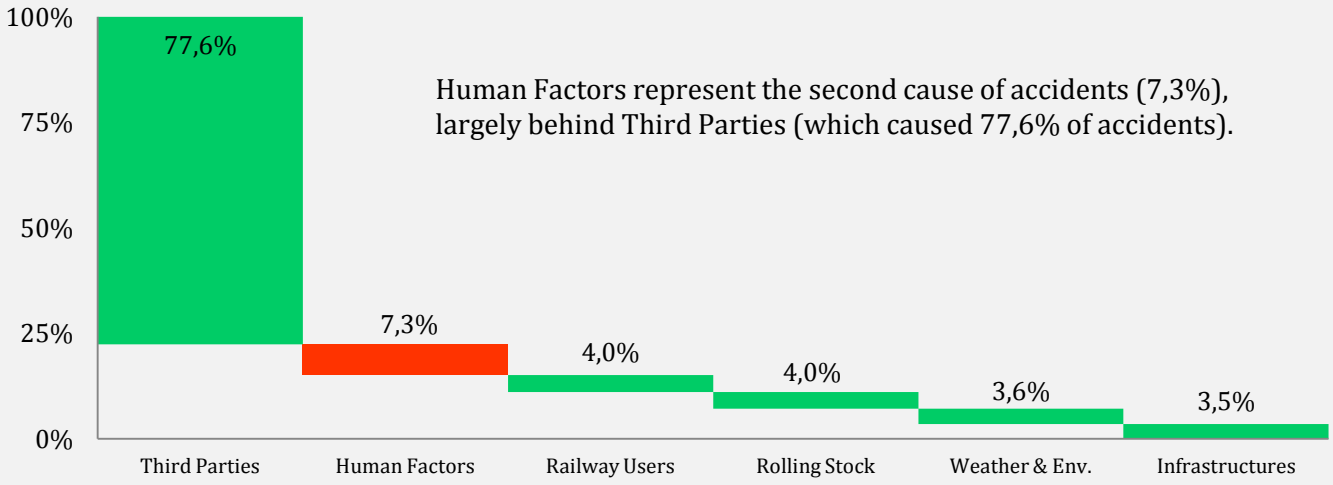
Part 2 - Focus on Accidents related to Human Factors

Table of contents

"Accidents related to Human Factors"

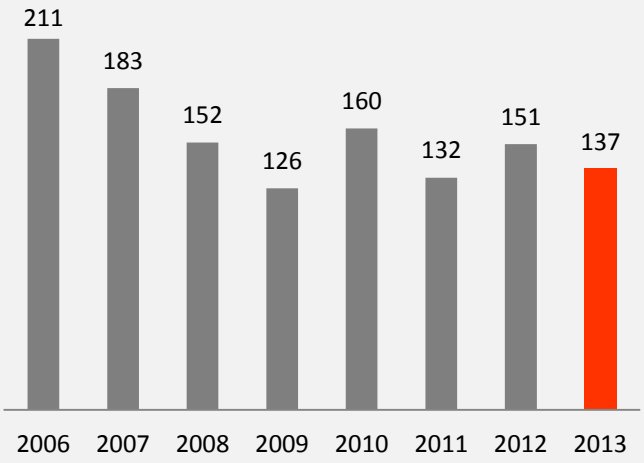
is intended as:

"Accidents caused or partly caused by Human Factors (railway staff and subcontractors)"



Human Factors represent the second cause of accidents (7,3%), largely behind Third Parties (which caused 77,6% of accidents).

2.1 Accidents related to Human Factors since 2006

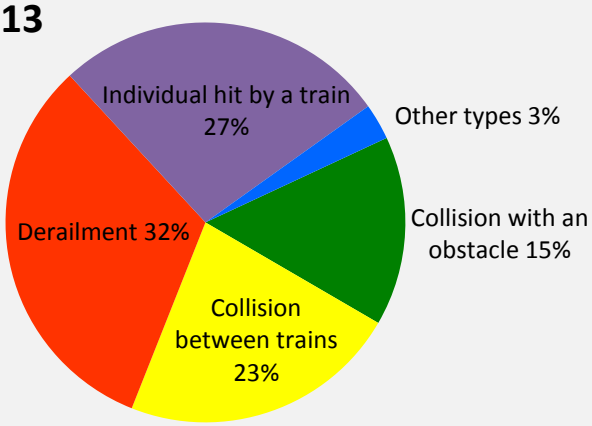


In % of all significant accidents	
2006	8,9%
2007	8,0%
2008	7,0%
2009	5,7%
2010	7,5%
2011	6,6%
2012	7,8%
2013	7,3%

- Events related to Human Factors represented 7,3% of all declared significant accidents for the year 2013
- There is a general down trend with some variations

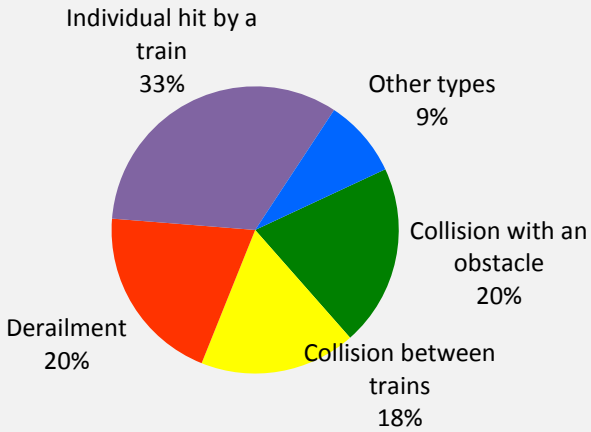
2.2 Accidents related to Human Factors by type of accident

2013



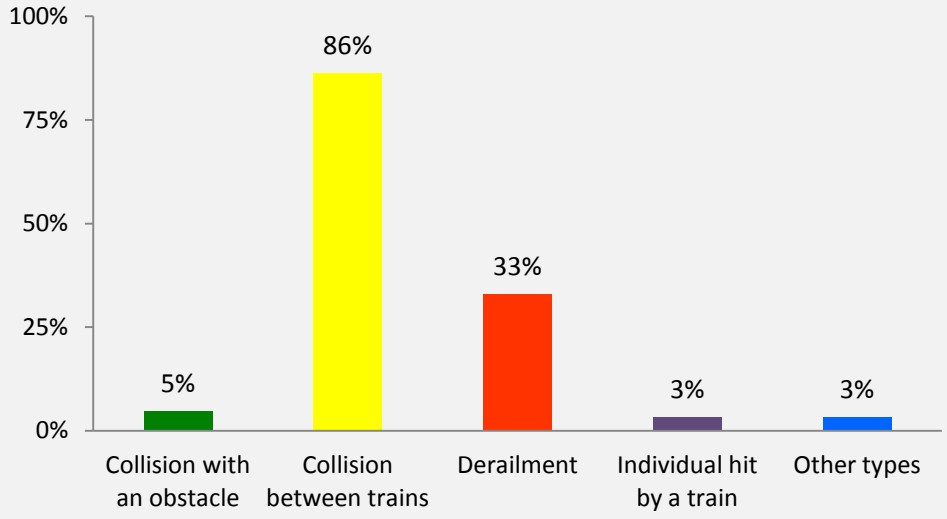
Derailments accounted for almost one third of events related to Human Factors during the year 2013, but only for one fifth on the period 2006-2012.

Individual hit by a train (mostly infrastructure staff) appears as the most common accident related to Human Factors from 2006 to 2012.



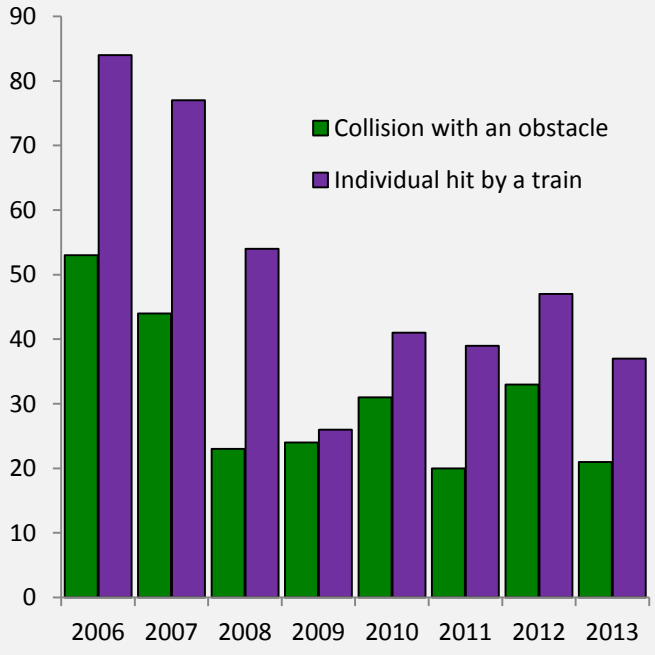
2006 - 2012

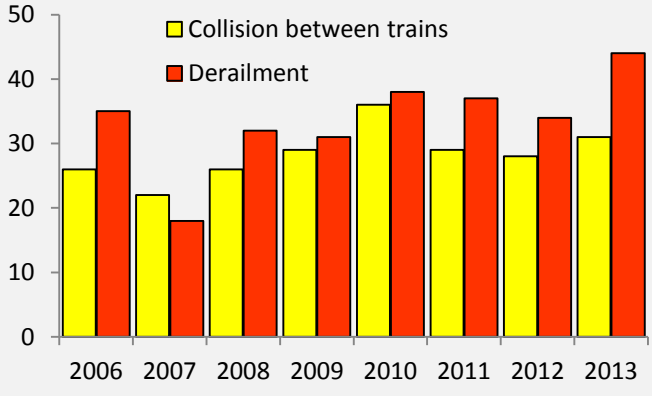
2.3 Proportion of events related to Human Factors by type of accident



86% of train collisions and 33% of derailments are related to Human Factors. Although individual hits represent the second most common type of event related to Human Factors, 97% of these events have other causes.

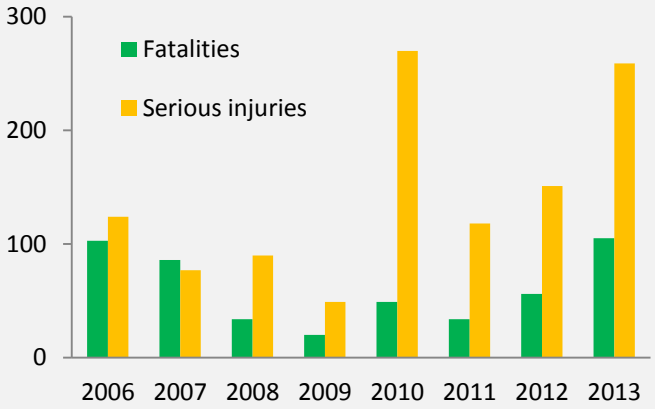
2.4 Trends of events related to Human Factors by type of accident since 2006





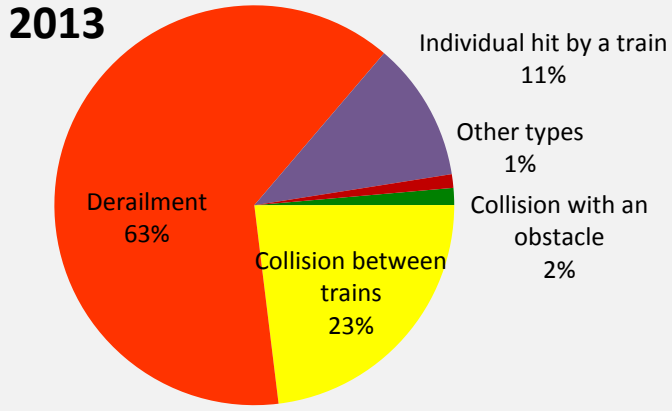
Trends between 2006 and 2013 show a general decrease in collisions with an obstacle and individuals hit by a train related to Human Factors. However, collisions between trains and derailments related to Human Factors show an increasing trend.

2.5 Victims of accidents related to Human Factors by type of victim since 2006



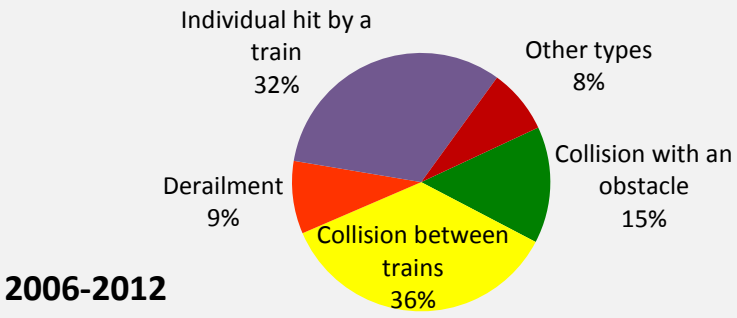
In terms of victims of accidents related to Human Factors, 2013 appears as the worst year since 2006. One accident is responsible for 75% of all fatalities and 58% of all serious injuries that occurred in accidents related to human factors.

2.6 Victims of accidents related to Human Factors by type of accident



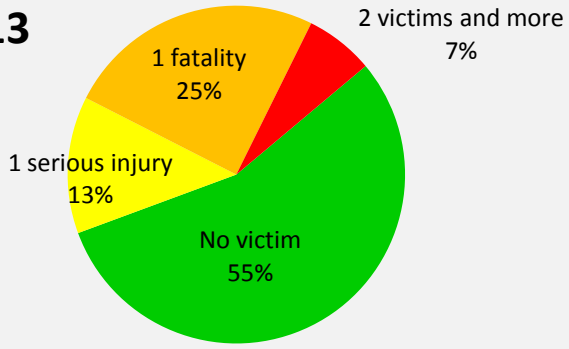
Severity rate * 2013	
Collision with an obstacle	0,24
Collision between trains	2,71
Derailment	5,23
Individual hit by a train	1,11
Other types	1,00

* average victims per event
ratio victims / events



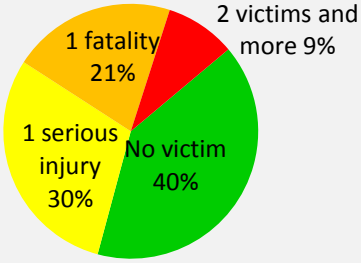
2.7 Accidents related to Human Factors by number of victims

2013



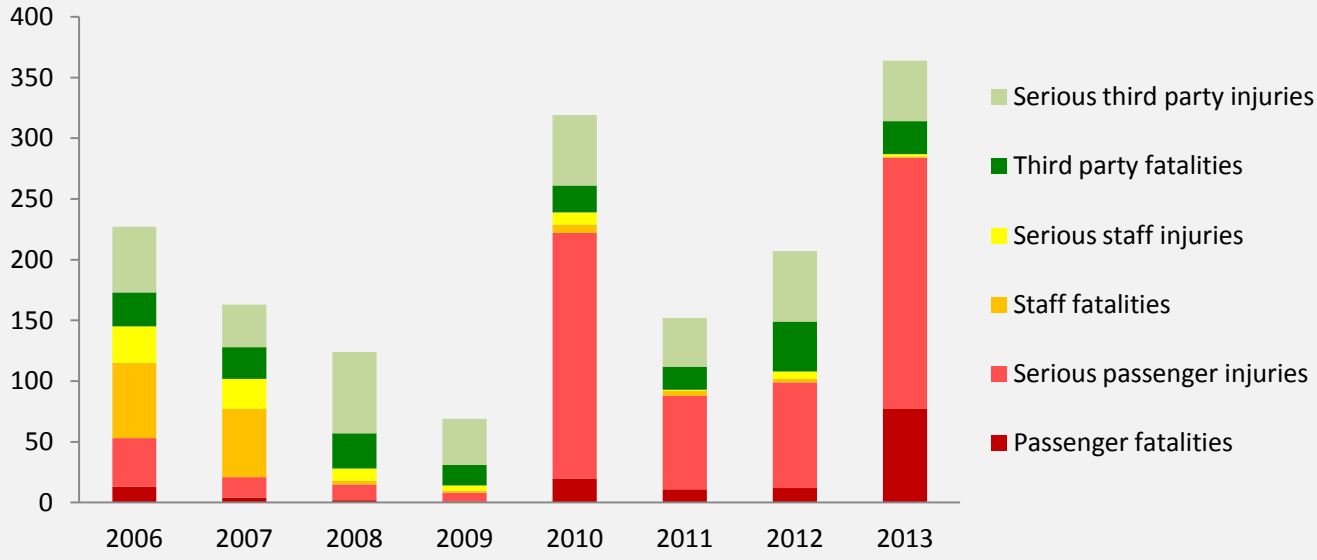
9 accidents (representing 7% of total events related to Human Factors) resulted in two or more victims:

- 1 derailment with passenger and staff victims
- 5 train collisions with passenger and staff victims
- 3 "individual hit by a train" events with staff victims



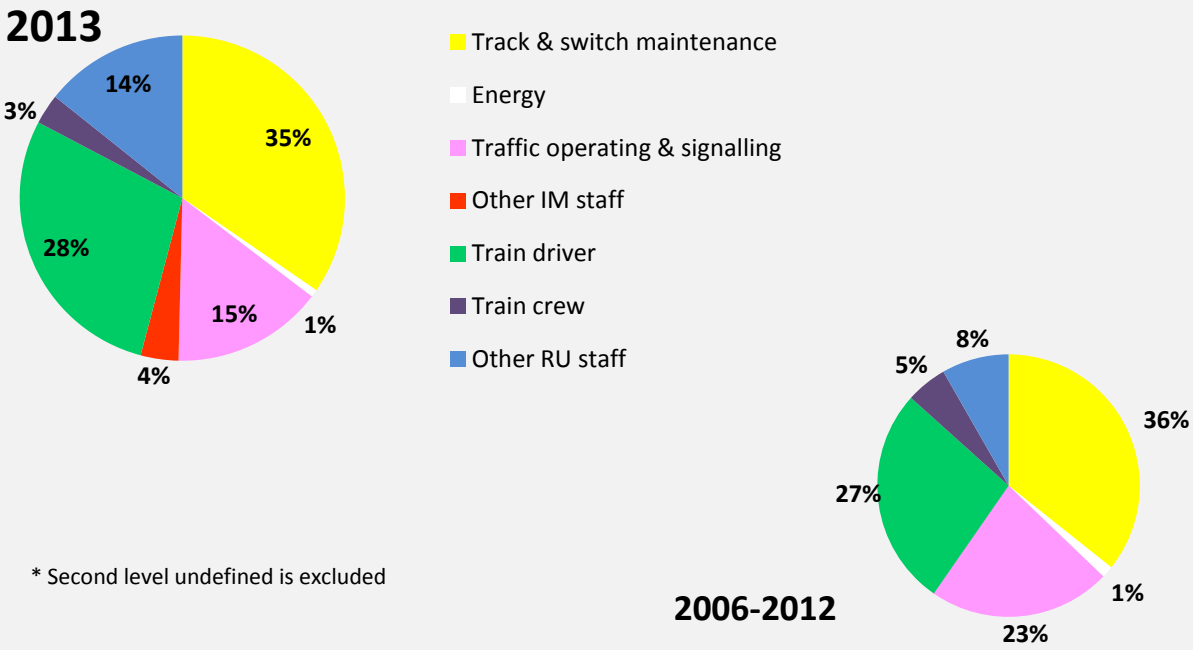
2006-2012

2.8 Victims by category on the period 2006-2013



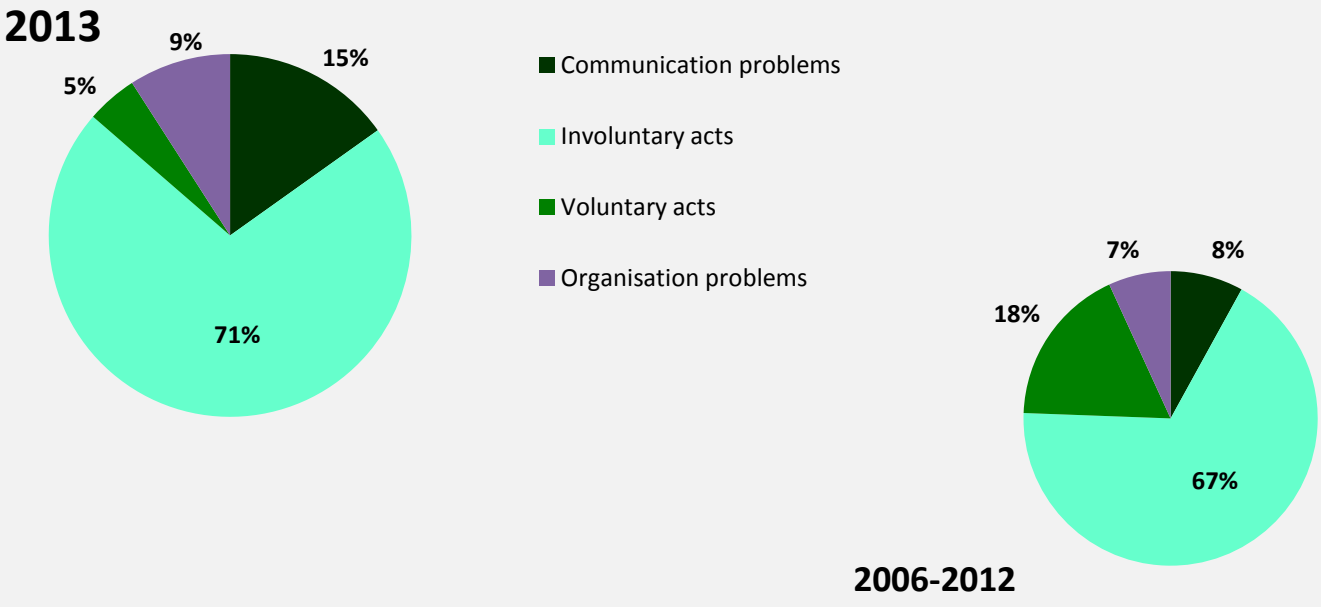
There were no identified trends on the 8-year period. The specific high numbers observed in 2010 and 2013 are due to a small number of very severe accidents related to Human factors.

2.9 Causes at second level



* Second level undefined is excluded

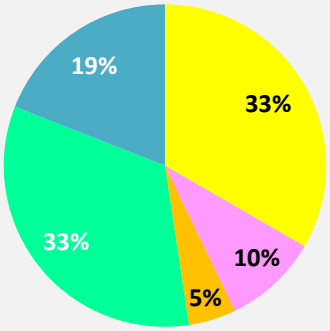
2.10 Causes at third level

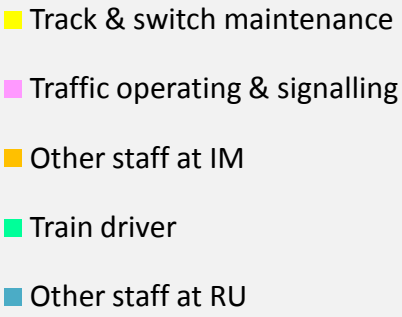


* Third level undefined is excluded

2.11 Causes at second level by type of accident 2013

Collision with an obstacle

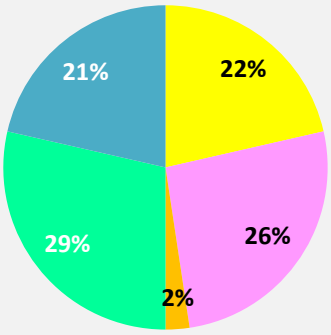




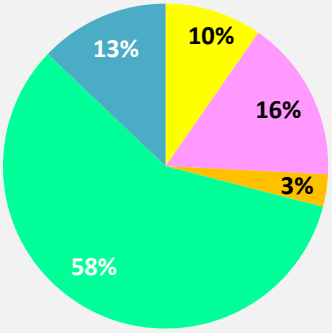
Collisions with an obstacle, as well as derailments, related to Human Factors are shared almost equally between staff of the Infrastructure Manager (IM, in yellow, pink and orange colours) and staff of railway undertakings (RU, in green and blue colours)..

The proportions are 52%-48% for collisions with an obstacle and 50%-50% for derailments.

Derailment

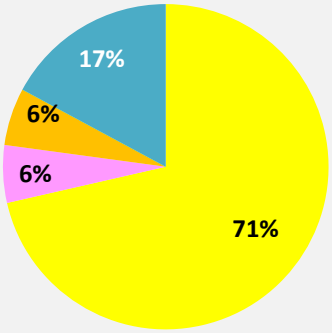


Collision between trains



Collisions between trains related to Human Factors are mostly linked to the staff of railway undertakings (71% of all cases).

Individual hit by a train



Individuals hit by a train related to Human Factors are mostly due to the staff of the Infrastructure Manager (83% of all cases).

Useful links

UIC Studies

- The analysis of the Human, Organizational and Social Dimensions of an incident (2012)
- Organisational and human aspects of safety at border crossings (2012)
- Guidance on the safe use of mobile phones and other portable electronic communication devices by railway workers (2012)

RSSB studies

- Human factors library
- Human factors case studies
- Human factors tools and resources
- SPARK database on rail research (registration needed)

Human Factors at offices of rail regulation

- Office of Rail Regulation (UK)
- Office of the National Rail Safety Regulator (Australia)
- Federal Railroad Administration (USA)

European Railway Agency

- ERA Human factors network
- Support Study for Human Factors Integration – Human Functions in European Railways

Definitions from the Commission Directive 2009/149/EC ("Safety Directive"), app. 1

"**Significant accident**" means any accident involving at least one rail vehicle in motion, resulting in at least one killed or seriously injured person, or in significant damage to stock, track, other installations or environment, or extensive disruptions to traffic. Accidents in workshops, warehouses and depots are excluded.

"**Significant damage to stock, track, other installations or environment**" means damage that is equivalent to EUR 150 000 or more.

"**Extensive disruptions to traffic**" means that train services on a main railway line are suspended for six hours or more.

Safety Database European Members

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CFR SA	Romania	RO
DB AG	Germany	DE
Eurotunnel	France - UK	-
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Infrabel	Belgium	BE
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PKP	Poland	PL
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REFER	Portugal	PT
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SBB CFF FFS	Switzerland	CH
SŽ	Slovenia	SI
SŽDC	Czech Rep.	CZ
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ŽSR	Slovak Rep.	SK

UIC Safety Database

Report 2014

Significant Accidents 2013

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The electronic version of the report is available on the UIC website at the following address:

http://safetydb.uic.org

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