

**An Assessment of
Rail Market Operations
and Rail Traffic Safety
in 2013**



Dear Madams and Sirs,

As in previous years, I am pleased to present to you an assessment of the current situation on the rail transport market and of the issue of rail traffic safety.

2013 marked yet another year when challenging modernisation projects were carried out, contributing to declines in indicators related to the passenger transport market. The presented data demonstrate that fewer people travelled by train, and a decrease in transport performance was observed. This can be attributed to a substantial acceleration in modernisation works that necessitated the closing of certain lines, as well as delays and longer travel times. Investments, in particular in projects co-financed with European Union funds, were speeded up due to approaching project completion deadlines and the necessity to accurately account for the funds within the 2007-2013 financial perspective. The modernisations and investments are aimed at increasing the competitiveness of rail against road transport; it should be borne in mind, however, that this objective can be achieved only after the completion of the works. The inconveniences resulting from repair works on active railway lines have an adverse impact on the parameters analysed with regard to the passenger transport market.

At the same time, it is worth emphasising that the freight transport market, despite the mentioned inconveniences caused by numerous modernisations, observed a growth in market parameters. Moreover, the data available in the Railway Event Register indicate a decrease in the number of events recorded and a drop in the number of fatalities and serious injuries in railway accidents.

I am convinced that the results of the works carried out, i.e. reduced travel times, improved comfort of travelling in the new trains, an attractive network of connections, renovated train stations, an increased number of modernised freight terminals and new safety solutions, will serve as an incentive to use rail services.

Wishing you pleasant reading,



Krzysztof Dyl



Krzysztof Dyl
President of the Office of Rail Transport

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PART I
AN ASSESSMENT OF
RAIL MARKET OPERATIONS
IN 2013



Background

This document is a detailed analysis of the state of the rail market, which also outlines its future growth prospects. The data on which this study are based come from licensed railway undertakings, infrastructure managers, and organisers of public rail transport, who are obliged to provide, on a regular basis – monthly, quarterly, and annually – the President of the Office of Rail Transport (UTK) with information about market operations for the purposes of control and monitoring.¹ This facilitates active co-operation between the regulatory body and participants of the rail market and, as a result, makes it possible to better determine the barriers and opportunities for development of Polish railways.

The Assessment reflects the state of the Polish rail market in 2013, taking into account also changes in comparison to earlier periods. This analysis is dynamic and depicts many market parameters, trends, and interrelations between various phenomena, thereby allowing better understanding of the market operations and changes within this market over the past years. The data included in this study can therefore serve as a starting point for making decisions about specific actions aimed at increasing competitiveness.

This document analyses the most important issues related to the rail transport market and the granting of access to the railway infrastructure in Poland, including in particular:

- the characteristic features and diagnosis of the state of the rail transport market in Poland,
- the passenger transport and freight transport markets, including the structure of railway undertakings, the structure of passenger rail traffic, and the rolling stock structure, licensing, market effectiveness indicators, aspects of passenger rights protection, product groups, the transport of goods in the intermodal system, and the transport of dangerous goods,
- the railway infrastructure market including effectiveness indicators, the analysis of access charges, and an assessment of the quality and availability of the railway infrastructure,
- the role of the market's regulator and the scope of regulatory decisions concerning access to the railway infrastructure,
- the issues concerning passenger and freight transport, the railway infrastructure, and competition between various transport modes in the European Union as compared to the Polish rail market.

The analyses and statistical research additionally relied on secondary sources of information, including data from the Central Statistical Office (GUS), the Statistical Office of the European Union "Eurostat", the European Commission working groups in charge of rail market monitoring and in charge of the regulatory bodies, as well as European organisations associating railway undertakings such as the International Union of Railways (UIC), the Community of European Railway and Infrastructure Companies (CER), and the International Union for Road-Rail Combined Transport (UIRR).

¹ *In line with Art. 13(1)(6) and 7a of the Rail Transport Act of 28 March 2003 (consolidated text: Dz. U. [Journal of Laws] of 2013, item 1594, as amended)*

1. The passenger transport market

1.1. Changes in the passenger transport markets in the EU Member States

1.1.1. The significance of rail in passenger transport

Transport plays a key role in the European Union by allowing its residents to commute to work and school on a daily basis and to travel on business or for pleasure. Because of the high level of motorisation (483 cars per 1000 residents in 2011) and a well-developed road network, the vast majority of all journeys are made by car; however, due to problems with traffic congestion

and air pollution, EU policy is directed towards the promotion of rail transport. Policy papers in this field were passed at the beginning of the 21st century: both the EU Sustainable Development Strategy (the so-called Gothenburg Strategy) and the White Paper on transport from 2001 indicated the necessity to enhance alternative transport modes to road transport. One of the

objectives of the new White Paper on transport from 2011 is to shift the majority of medium-distance passenger transport to rail by 2050. As can be seen, these objectives are planned to be brought into effect within an extended time horizon. More than 80% of passenger journeys are still made on the roads, mainly for reasons of convenience, as the car makes it possible to travel "from door to door." The Eurobarometer poll conducted in 2013 among EU residents finds that 12% of them travel by rail every day, 6% at least once a week, and 6% several times a month. At the same time, however, one third of the EU residents do not travel by train at all.

France, Germany, Italy, Spain, and recently also the UK, have started to develop high-speed railway lines in terms of both special infrastructure and rolling stock that can run at speeds of more than 200 km/h. Grappling with the adverse effects of the high share of road transport, these countries started to follow a policy of promoting rail as a more environmentally friendly and safer mode of transport. Most of the countries in East-Central Europe in turn decided to make up for negligence in the construction of new roads. While the motorisation rate was increasing dynamically there, the modernisation of rail receded into the background, which was conducive to the marginalisation of this transport mode. The competitiveness of rail in relation to other transport modes in the European Union increased as a result of an eleven-fold lengthening of high-speed lines between the years 1985 and 2013 (from 643 km to 7259 km).

Road transport dominates in the European Union, but its policy is directed towards the promotion of rail transport.

Tab. 1: The length of high-speed lines which make it possible to travel at ≥ 250 km/h in respective EU Member States (in km)

	Austria	Belgium	Germany	Spain	France	Italy	Netherlands	UK	European Union
1985	-	-	-	-	419	224	-	-	643
1990	-	-	90	-	710	224	-	-	1024
1995	-	-	447	471	1281	248	-	-	2447
2000	-	72	636	471	1281	248	-	-	2708
2003	-	137	875	1069	1540	248	-	74	3943
2004	-	137	1196	1069	1540	248	-	74	4264
2005	-	137	1196	1111	1540	248	-	74	4296
2006	-	137	1285	1283	1540	876	-	74	5205
2007	-	137	1285	1532	1872	562	-	113	5501
2008	-	137	1285	1620	1872	744	-	113	5771
2009	-	209	1285	1625	1872	923	120	113	6147
2010	-	209	1285	2077	1896	923	120	113	6623
2011	-	209	1285	2165	2036	923	120	113	6851
2012	93	209	1334	2165	2036	923	120	113	6993
2013	93	209	1334	2431	2036	923	120	113	7259

Source: prepared by UTK using UIC data

Currently 2705 km of high-speed railway lines are under construction, almost half of which are in Spain (1308 km). 757 km of such lines are under construction in France and 428 km in Germany. In Poland, the Central Railway Main Line from Warsaw

to Katowice and Kraków on the Korytów-Zawiercie section of 207 km is being adapted to the speed of 250 km/h.

In France and Spain most long-distance journeys are already made with high-speed trains (58% and 49% respectively). At the same time one should remember that while Spain pays particular attention to the construction of high-speed railway lines.

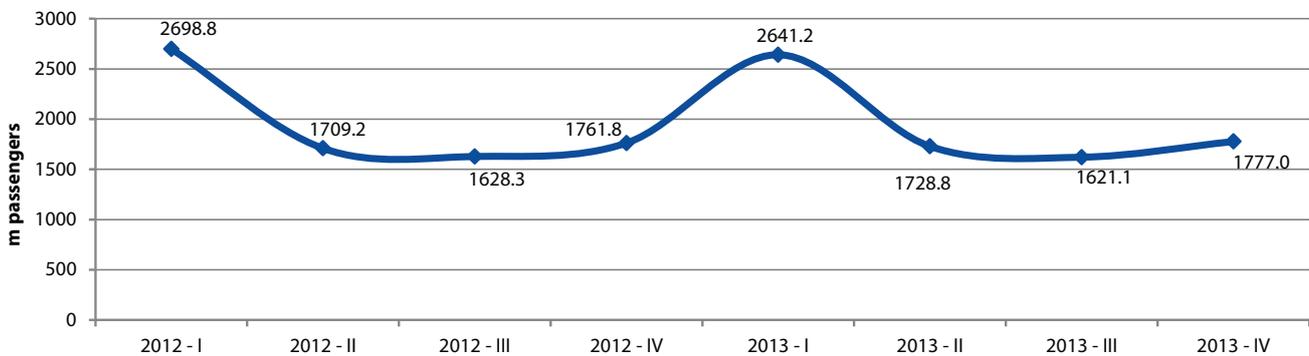
have recently taken place in this market segment. The number of transported passengers in 2013 was by 30 m lower than that of 2012, which amounts to a slight drop, by 0.38%. It is clearly evident that people travel by train most often in the first quarter of the year and least often in the third quarter which falls in the holiday season, when they commute to school and work less regularly. As the results for 2013 are very similar both to the ones for the preceding year and for 2011, we may speak of a certain stagnation on the market.

1.1.2. The dynamics of passenger rail transport in Europe

With the quarterly data from Eurostat's databases from 22 countries at one's disposal, one can see the changes which

Fig. 1: The number of transported passengers in the 22 EU Member States for which data are available in the respective quarters of the years 2012 and 2013

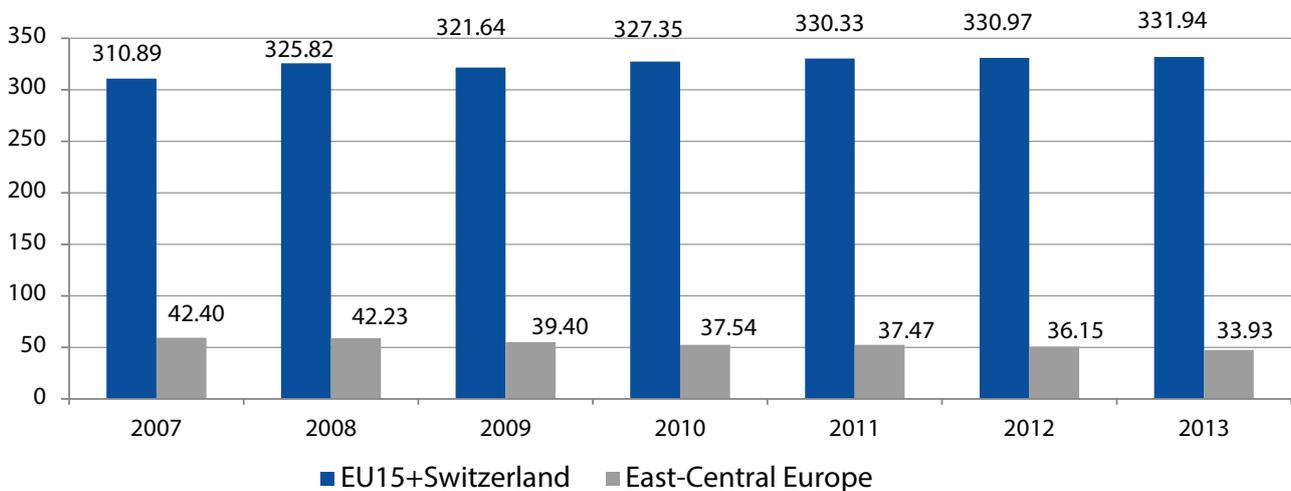
Source: prepared by UTK using Eurostat estimates



The data of CER concerning passenger transport performance indicate both the continuation of a slow but upward trend in the „old EU-15“ countries (0.3% in 2013) and the simultaneous substantial decrease in East-Central Europe (-6.1% in 2013). The trends of a slow rebound of the passenger rail transport market in Western Europe, with a concurrent regression in the new

Member States, are therefore reflected in the data for 2013. The data concerning Poland, to be presented in subsequent chapters, fit the trend prevailing in our region of Europe. The considerable drop in transport performance is particularly significant here, as it is primarily long-distance rail transport that is diminishing in importance.

Fig. 2: Transport performance in the EU-15 countries + Switzerland, and East-Central Europe in the years 2007-2013 (in bn passenger-kilometres)



Source: prepared by UTK using CER data

The data concerning Poland fit the trend prevailing in our region of Europe - long-distance rail transport that is diminishing in importance.

1.2. Competition between modes on the Polish passenger transport market

According to GUS data, in 2013 in Poland the total number of passengers in all transport modes decreased by nearly 489.3 m

compared to 2001. In relation to the preceding year, the drop in the number of passengers amounted to 4.2%. 746.7 m passengers were transported by all modes of transport, which is 32.5 m less than in 2012. The drop affected road transport (of ca. 6%)² and rail transport (of 1.2%). Air transport recorded the highest upward trend, with a growth of more than 6.7%. Inland waterways also recorded an increase of 1.7% in terms of the number of transported passengers. In 2013 the average distance covered by passengers in all transport modes reached 67.6 km, and was higher than in 2012 by 4.2 km and than in 2001 by 19.1 km. The average distance travelled on rail transport dropped by 3 km compared to 2012 and amounted to 62 km. The lowest average distance was to be found in inland waterways (13 km) and road (bus) transport (44 km).

Tab. 2: The number of transported passengers in Poland in the years 2001-2013

Passenger transport market in the Poland in the years 2001 - 2013													
transport mode	year												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
in m passengers													
in total	1 236.00	1 124.50	1 111.15	1 083.92	1 045.71	1 020.95	1 004.71	964.66	902.95	838.18	807.42	779.16	746.71
road transport	898.71	815.04	822.88	807.28	782.03	751.47	718.27	664.67	612.88	569.65	534.87	497.29	467.65
rail transport	332.22	304.14	282.50	271.20	257.60	262.60	278.75	292.74	284.05	262.33	264.54	273.18	269.87
air transport	3.44	3.67	3.98	4.04	4.64	5.33	6.19	5.46	4.35	4.80	6.49	7.17	7.65
inland waterways	1.64	1.65	1.80	1.40	1.44	1.55	1.49	1.79	1.67	1.40	1.52	1.52	1.54

Source: prepared by UTK using GUS data

The overall volume of passenger transport is decreasing, whereas rail transport is increasing its market share. In 2013 it amounted to 36.1%, which is nearly 1 percentage point more than in 2012 and 9.2 percentage points more than in 2001. It is worth not-

ing that, despite the high growth dynamics in the number of passengers on domestic air traffic, the share of this transport mode in the overall volume is still insignificant. At the end of 2013 it amounted to ca. 1%.

Tab. 3: Transport performance in passenger transport in Poland in the years 2001-2013

Passenger transport market in the Poland in the years 2001 - 2013													
transport mode	year												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
in m passenger-km													
in total	59 919,0	56 753,0	56 281,7	55 517,7	55 653,8	58 156,0	58 016,2	56 512,1	50 524,7	47 431,9	49 893,3	49 726,0	50 469,0
road transport	30 996,0	29 295,0	29 995,6	30 118,0	29 314,0	28 129,9	27 359,0	26 775,0	24 375,0	21 600,0	20 635,0	20 012,0	20 570,0
rail transport	22 469,0	20 749,0	19 382,5	18 305,3	17 814,8	18 298,9	19 495,2	20 263,1	18 691,7	17 917,9	18 169,3	17 826,0	16 795,0
air transport	6 412,0	6 672,0	6 869,9	7 071,4	8 504,0	11 706,2	11 129,0	9 438,0	7 428,0	7 891,0	11 065,0	11 864,0	13 084,0
inland waterways	42,0	37,0	33,7	23,0	21,0	21,0	33,0	36,0	30,0	23,0	24,0	24,0	20,0

Source: prepared by UTK using GUS data

The share of rail transport in the passenger transport market in 2013, measured in transport performance, amounted to 33.3%, which is ca. 2.6 percentage points less compared to 2012. The

share of road transport increased from 40.2% to 40.8%. The share of air transport performance in turn experienced a more evident increase, reaching 25.9% at the end of 2013.

² The data concerning road transport do not take into account city transit and individual transport.

1.3. The Polish passenger rail transport market

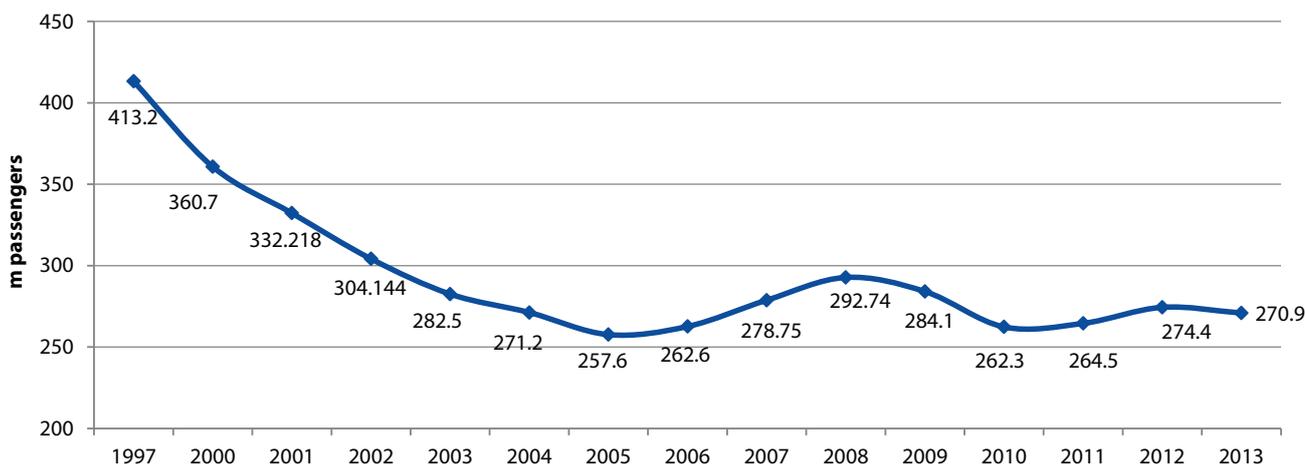
1.3.1. Polish passenger railway undertakings

In 2013 the number of business entities involved in passenger rail transport increased from fourteen to sixteen standard-gauge undertakings compared to 2012. For the first time in three years, there had been a drop in the number of transported passengers on the Polish passenger market. Rail transported 3.5 m people less than in 2012, which means a drop of 1.28%. The upward trends in 2011 and 2012 were therefore hindered, but still, more people were transported by rail compared to 2011. One should remember that 2012 ended with a very large increase by almost 10 m passengers. As the figure below indicates, the number of passengers over the last 10 years has maintained the level of 260-290 m passengers a year, which means a considerable drop

compared to the position of the railway sector in the 1990s, which resulted from the development of road transport accompanied by the underinvestment in the railway sector. At present many investments in infrastructure under the EU's financial perspective for 2007-2013 are being carried out with a view to encouraging passengers to turn back to rail; however, in most cases they are delayed, cause disruptions to the flow of traffic, substantially extend journey times, and affect the punctuality of trains. Rail therefore is losing out to individual and collective road transport.

For the first time in three years, there had been a drop in the number of transported passengers on the Polish passenger market – by 3.5 m passengers less than in 2012, a drop of 1.28%.

Fig. 3: The number of passengers in passenger rail transport in the years 1997-2013



Source: prepared by UTK

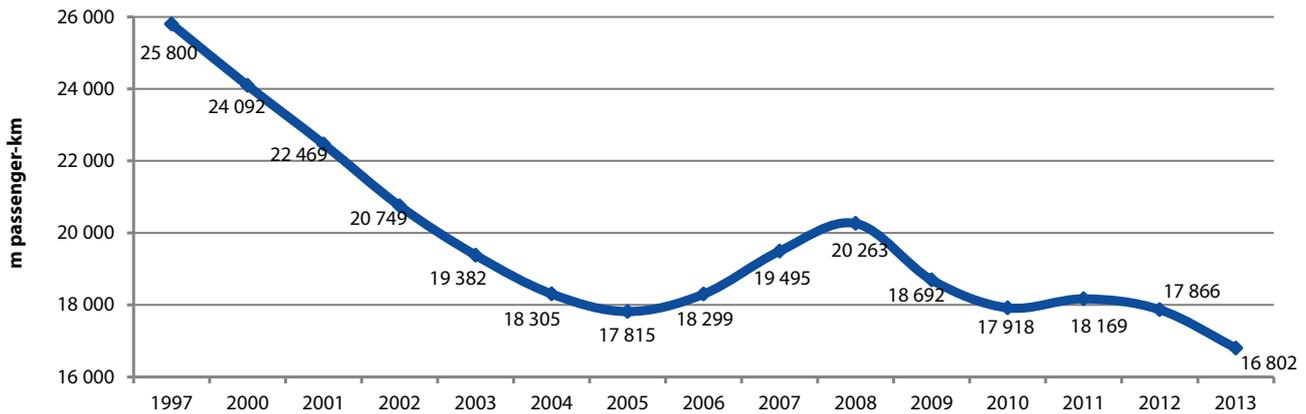
In 2013 the performance of railway undertakings was calculated as the sum of the products of the number of transported passengers on respective lines and the journey distances, amounting to 16 802 m passenger-kilometres, which meant a drop of 5.95%. This was a drop to the lowest level since 1989. These results primarily indicate a very clear and growing loss

of passengers, as well as the reduction in long-distance train services as the drop in transport performance was much higher than the decrease in the number of passengers. The average journey distance for one passenger in 2013 was 62 km, i.e. 3.2 km less than in the preceding year.

In Poland the number of passengers over the last 10 years has maintained the level of 260-290 m passengers a year, which means a considerable drop compared to the position of the railway sector in the 1990s, which resulted from the development of road transport accompanied by the underinvestment in the railway sector.



Fig. 4: Transport performance in passenger rail transport in the years 1997-2013

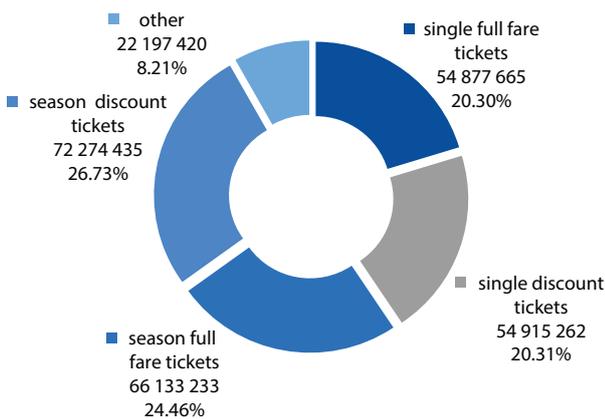


Source: prepared by UTK

Operational performance in train-kilometres throughout 2013 amounted to ca. 137.1 m km, which is 4.27% less compared to the preceding year.

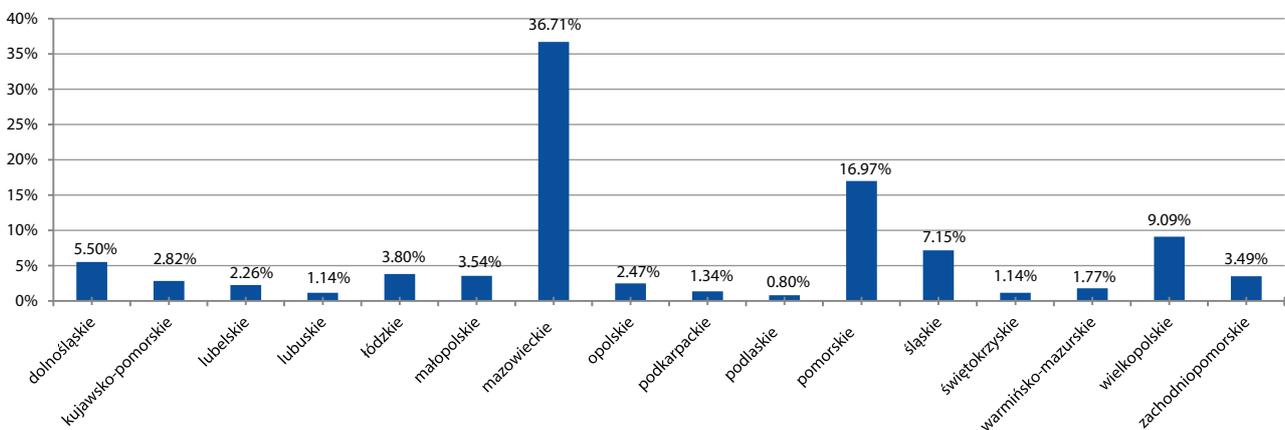
In 2013, 109.8 m passengers travelled with single tickets, which constitutes 40.6% of all journeys (2 percentage points less than in the preceding year). This again confirms the main trend on the rail market, i.e. a decrease in the share of long-distance journeys in relation to daily short-distance journeys. The share of journeys made with season tickets grew marginally to 51.2% (138.4 m passengers). The share increase of 1.77 percentage points took place in the case of tickets under separate agreements with institutions, e.g. the common ticket option. One example was Warsaw metropolitan area with a common ticket for city transit, Szybka Kolej Miejska (Warsaw Fast City Rail, SKM) as well as selected sections of Warszawska Kolej Dojazdowa (Warsaw Commuter Railway, WKD) and Koleje Mazowieckie (Mazowieckie Railways). The common ticket was introduced also in Wrocław and Poznań. It should be noted that the share of journeys made with common ticket options and the share of rail in city transit remain insignificant. Further growth in such services may contribute to the development of cities' and agglomerations' transit networks and, as a result, to a dynamic increase in the number of passengers using both suburban and city rail transport.

Fig. 5: The number of passengers with respective types of tickets in 2013



Source: prepared by UTK

Fig. 6: The share of the number of checked-in passengers in respective provinces in 2013



Source: prepared by UTK

Taking into account the number of passengers checked in respective regions, most people (over 99 m) started their journeys in the Mazowieckie Province, which corresponds to an increase of more than 3 percentage points and the exceeding of the level of the one-third share. The second position is invariably occupied

by the Pomorskie Province (with a large number of passengers using the services of PKP SKM), whereas the third place belongs to the Wielkopolskie Province. The lowest share in the number of transported passengers belongs to the Podlaskie Province, followed by the Lubuskie, Świętokrzyskie, and Podkarpackie Provinces. The provinces with such low shares in the overall number of checked-in passengers are characterised not only by a small population (the smallest in this respect is the Opolskie Province), but also a low density of railway lines (except for the Lubuskie Province) and the bad state of the railway infrastructure, including the withdrawal of certain lines from operation and, as a result, rail's poor package of transport services.

In 2013 an increase in the number of passengers compared to the preceding year was recorded only in two regions – the Mazowieckie Province (of almost 10%) and the Dolnośląskie Province (of 5.8%). The increase in Mazovia results from the growing number of passengers commuting by train to Warsaw, whereas in Lower Silesia it is the consequence of the growing service offered by Koleje Dolnośląskie, which uses the modernised Bolesławiec-Legnica-Wrocław main line. The drop in the number of rail passengers by almost one quarter was recorded

Taking into account the number of passengers checked in respective regions, most people passengers started their journeys in the Mazowieckie Province.

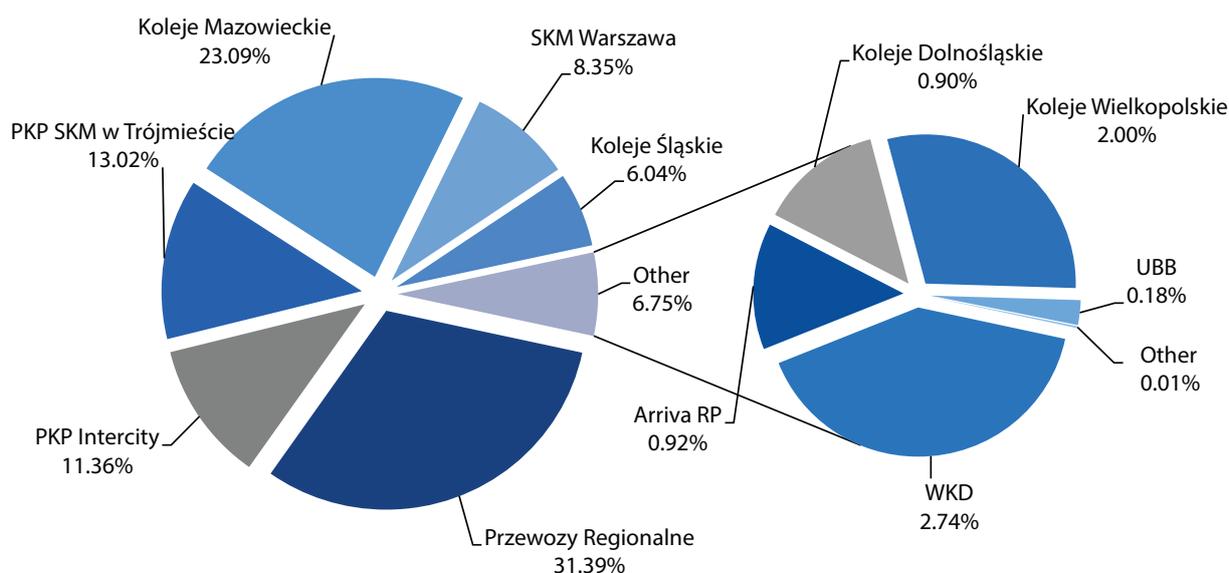
by the Małopolskie Province, which probably resulted from the prolonged renovation of the E30 main line in that province and rail's decreasing competitiveness in relation to the constantly improving road infrastructure. The Podlaskie Province in turn recorded an unsettling drop; this is a region where currently only 2.2 m passengers travel by train

and the available transport services are very poorly developed

despite the potential of the existing lines. The drops in the remaining provinces are to a large extent caused either by ongoing renovations of the infrastructure or the lack of them. In either case, the competitiveness of rail is going down. In the former, however, the decrease in competitiveness is only temporary, as there is the potential to regain market share after the completion of the investments. Another cause of such drops is the poor transport service: low frequency of trains and a shortage of regular intra- and intermodal connections.

In 2013 an increase in the number of passengers compared to the preceding year was recorded only in two regions – the Mazowieckie Province (of almost 10%) and the Dolnośląskie Province (of 5.8%).

Fig. 7: The market share of passenger transport undertakings per the number of passengers in 2013



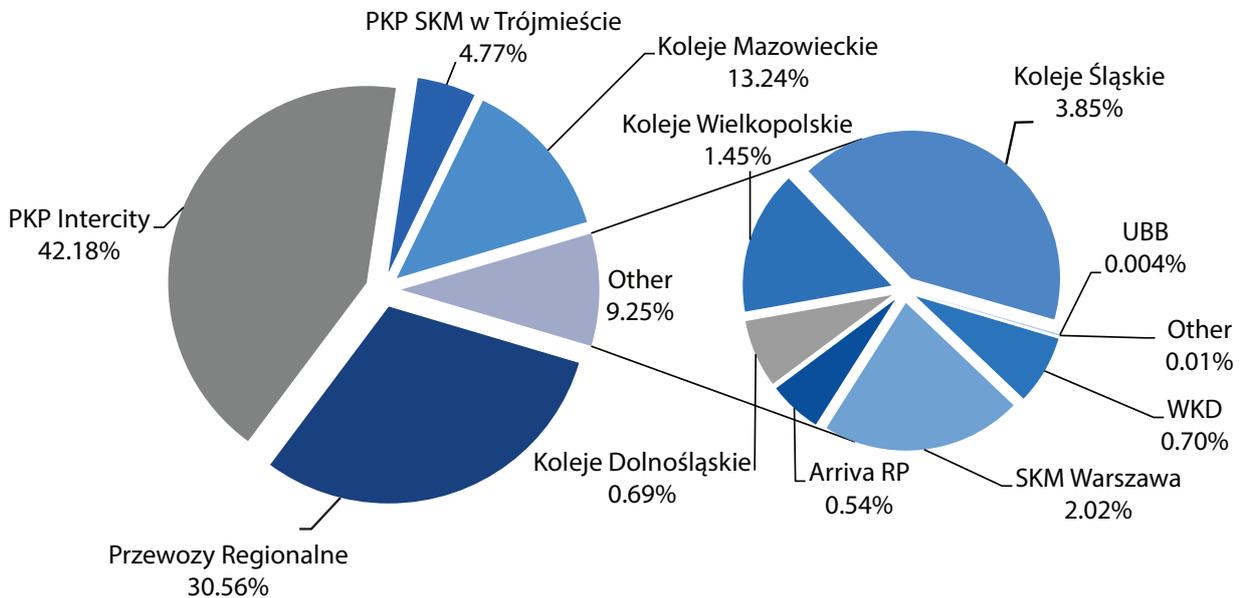
Source: prepared by UTK

In 2013, similarly to the preceding year, the largest market share measured in the number of transported passengers belonged to Przewozy Regionalne, a local-government company; however, the number of its passengers decreased by more than 16 m, that is nearly 16%, and scored a historically low result. Such a

drop in part results from the takeover of transport services by individual companies developing in respective provinces, as Koleje Śląskie recorded an increase in transport services of 7.2 m (78.8%), Koleje Wielkopolskie – of slightly over 2 m (61.2%), and Koleje Dolnośląskie – of 581 thousand (31.58%).

The number of transported passengers of Przewozy Regionalne, decreased by ca. 16%, and scored a historically low result.

Fig. 8: The market share of passenger railway undertakings as per transport performance in 2013



Source: prepared by UTK

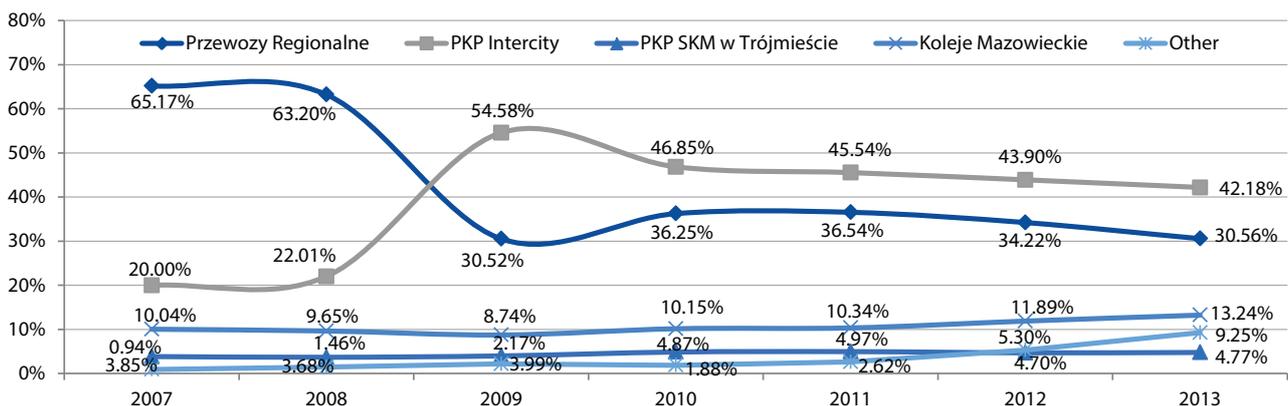
The largest market share in terms of transport performance of PKP Intercity, is to be credited to transport services for long distances between provinces and countries.

When measured in transport performance, the largest market share belonged to PKP Intercity – 42.18% (a drop of 1.7 percentage points) and Przewozy Regionalne – 30.56% (a drop of as many as 3.7 percentage points). The largest market share in terms of transport performance of PKP Intercity, despite the mere 11% share in the number of transported passengers, is to be credited to transport services for longer distances

in terms of transport performance are significantly lower, but growing, including the 13.24% share of Koleje Mazowieckie (an increase of 1.35 percentage points), the 4.7% share of PKP SKM w Trójmieście (an increase of 0.08 percentage point despite the drop in performance), the 3.85% share of Koleje Śląskie (the largest absolute increase in transport performance, a share increase of 2.22 percentage points), and the 2.02% share of SKM Warszawa (an increase of 0.57 percentage point). The market share of the other railway undertakings did not exceed 2%, but increased significantly in the case of Koleje Wielkopolskie (by 0.87 percentage point, the largest relative increase in transport performance). In the case of Koleje Śląskie and Koleje Wielkopolskie, the increase in the number of passengers was lower than the growth of transport performance. The average distance of passenger transport in local-government companies in 2013 amounted to 43.8 km, which corresponded to a drop of 1.9 km compared to the preceding year.

between provinces and countries. The average distance of passenger transport in this company in 2013 reached ca. 230.5 km (an increase of 8 km). The market shares of other companies

Fig. 9: The shift in market shares as per transport performance in the years 2007-2013



Source: prepared by UTK

1.3.2. Polish passenger rail market structure

In 2013, the total number of passengers dropped slightly compared to 2012, by 1.28% (3.5 m passengers: from 273.9 m to 270.4 m). The most considerable drop compared to 2012 was recorded in intercity transport in IC trains - of 21.89% (over 575 thousand passengers). This drop was caused by modernisation works on selected parts of the railway infrastructure in 2013, which extended the travel time between individual stations and stops. In addition, according to PKP IC's data, this railway undertaking recorded a decrease in the number of passengers using trains on regular paths, e.g. in daily commutes to work. Due to the improvement in the road infrastructure many of them choose to travel by private car instead of train. It is worth noting that for each person who stops using such a service, the railway undertaking may statistically record up to 40 passenger-journeys less per month.

The share of monthly tickets and reduced fare rail tickets is currently 30-35% of the total number of tickets sold by PKP Intercity.

As regards companies present on the market, particular attention should be paid to the nearly 13% decrease in the number of passengers transported by PKP Intercity (from 35.2 m to 30.7 m passengers). The reasons for this are given above, with the reservation that this railway undertaking points to a decrease in the number of monthly tickets, which generated significant changes in the statistics. The share of monthly tickets (and reduced fare rail tickets) is currently 30-35% of the total number of tickets sold by PKP Intercity. According to its data, even after 2009 the share of these tickets was 45%. Other significant factors included the ongoing modernisation of railway lines, which extended the travel time of trains, as well as the rapid development of the road infrastructure and competition, not only from buses and minibuses, but also airplanes of low-cost airlines.

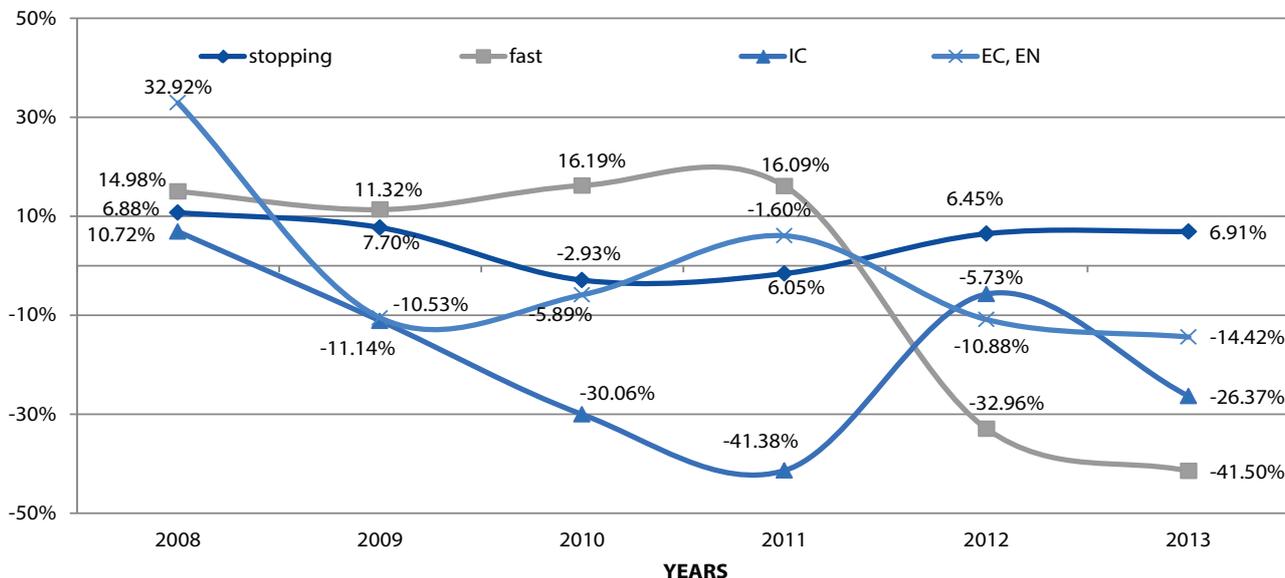
Also worth noting is the significant increase in the number of passengers transported by dynamically growing companies which provide services in different regions of Poland. The highest increase in the number of passengers transported in 2013 was recorded by Koleje Śląskie – from 9.1 m to more than 16.3 m passengers (a growth of almost 79%). Such a major change resulted from the continual taking over of connections from Przewozy Regionalne by the company which in December 2012 took over the operations in the region. A significant increase in the number of passengers could also be observed in the case of Koleje Wielkopolskie – of 61.2% (from 3.3 m to nearly 5.4 m passengers). It is worth pointing out that in 2011, which was the first year of its operations, Koleje Wielkopolskie transported 566 thousand passengers, so a high growth rate was preserved. In 2013, a substantial increase of ca. 31% was recorded by SKM

The further significant increase in the number of passengers transported by dynamically growing companies which provide services in different regions of Poland is the effect of transfer of transport services from Przewozy Regionalne.

Warszawa (50.8% in 2012) and Koleje Dolnośląskie (over 110% in 2012). The Mazovian WKD and Koleje Mazowieckie companies recorded an increase of 4.2% and 5.7%, respectively. It is worth noting that with more than 62.4 m passengers in 2013, Koleje Mazowieckie is second behind Przewozy Regionalne in terms of market share.

A significant decrease in the number of passengers in 2013 was recorded by Przewozy Regionalne, whose customers are gradually being taken over by regional local-government railway undertakings. Decreases were also recorded by PKP SKM w Trójmieście (-4.4%), UBB (-1.4%) and Arriva RP (-0.1%).

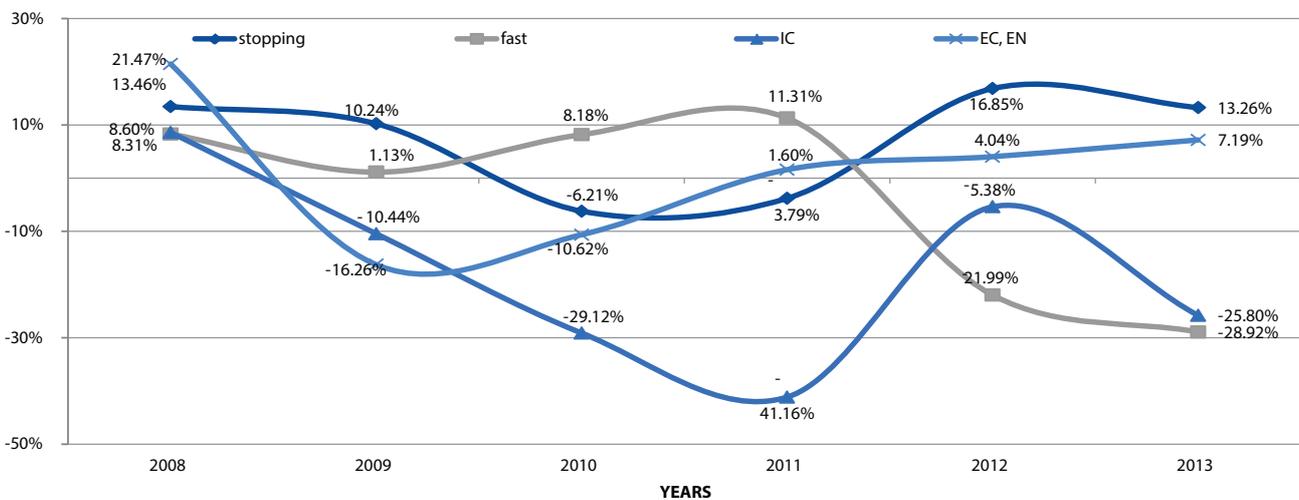
Fig. 10: The dynamics of the number of transported passengers on particular types of trains – 2013/2008 [2007=0]



In the years 2010 and 2011, the dynamics of the number of passengers in stopping trains remained negative. In 2012, there was a significant increase in this respect, changing this trend to positive. In 2013, a positive trend in the dynamics of the number of passengers in stopping trains was still observed. In the case of transport on Intercity trains, a sharp decrease was recorded from 2008 onwards, reaching, in terms of the number of passengers, over 41% at the end of 2011. In 2012, a continuation of this trend was observed, but the rate of decline dropped to -5.38%. In 2013, the rate of decline increased, resulting in a drop of -25.80%. The main factor influencing demand in this segment of the market is the ratio of the price (which is twice as high as economic transport) to the travel time (similar in both segments) with simultaneous high flexibility in relation to the comfort of travel by train.

As regards transport performance achieved by passenger railway undertakings, in 2013 the total value of this parameter decreased compared to 2012 by less than 6%. A decrease was recorded by the following companies: Przewozy Regionalne (-16%), PKP Intercity (-9.6%), PKP SKM w Trójmieście (-4.4%) and Arriva RP (-0.5%), which were exactly the same companies that also recorded a decrease in the number of passengers. However, an increase in transport performance was characteristic of all Mazovian companies: WKD (5.2%), Koleje Mazowieckie (4.8%) and SKM Warszawa (30.7%). The largest increase in the parameter was recorded by Koleje Dolnośląskie – of 32.3% (189% in 2012), Koleje Śląskie – of 122% (443% in 2012) and Koleje Wielkopolskie – of 132.3% (568% in 2012). Therefore, it should be noted that the growth rate of the latter three companies slightly weakened in 2013 compared to 2012, though it still remains at a high level.

Fig. 11: The dynamics of the transport performance on different types of trains in the years 2013/2008 [2007=0]

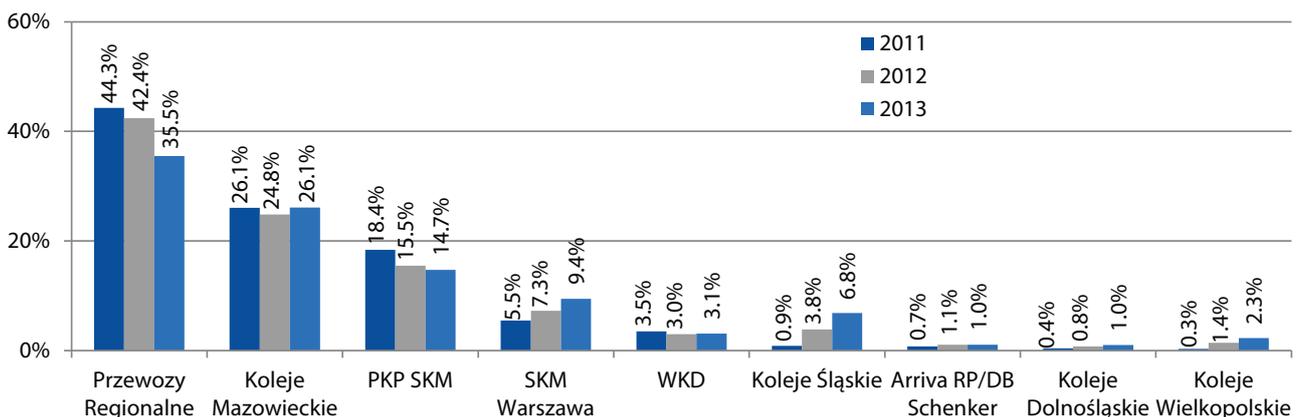


Source: prepared by UTK

In the passenger transport segment, taking into account rail transport in agglomerations, in 2013 operations were performed by 10 licensed railway undertakings. The highest share was still owned by Przewozy Regionalne – at the end of the year it was ca. 35.5%, which, compared to 2012, meant a quite significant decrease of 6.9 percentage points (taking into account the number of transported passengers). The largest railway undertakings as regards passenger numbers, besides Przewozy Regionalne, were Koleje Mazowieckie and PKP SKM w Trójmieście, whose market share was 26.1% (an increase in

share of ca. 1.3 percentage points) and 14.7% (a decrease of ca. 0.8 percentage point), respectively. In total, these companies owned a 76.3% share of the market for passenger transport (a decrease of ca. 6.4 percentage points). Railway undertakings which commenced their activities in 2011 saw a significant increase in the regional market share: Koleje Śląskie – from 3.8% in 2012 to 6.8% in 2013 and Koleje Wielkopolskie – from 1.4% to 2.3%. Attention should also be paid to further increase in the share of SKM Warszawa (which thereby achieved a 9.4% share in the passenger transport market).

Fig. 12: The share of railway undertakings of the passenger transport market by the number of passengers in the years 2011-2013



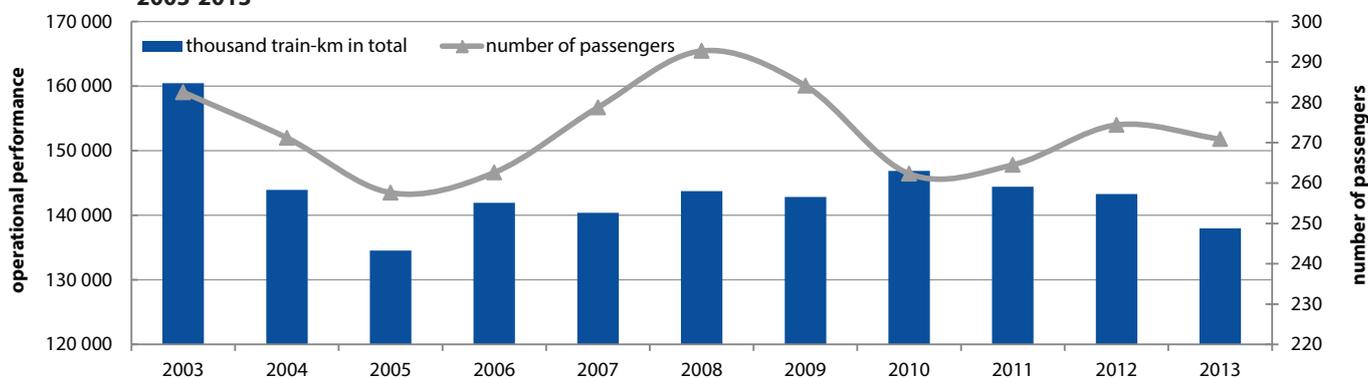
Source: prepared by UTK



In 2013, a decrease both in the number of passengers (of 1.28%) and operational performance (by 3.73%) was noted. A gradual decrease in operational performance (the total length of paths covered by all trains) has been seen on the rail market already since 2010. In spite of this, in the years 2011 and 2012, an increase in the number of passengers was observed, and

thus an increase in the undertakings' operational effectiveness. Therefore, a reversal of this trend in 2013 meant that in the end the passenger market reacted negatively to a decrease in the number of covered paths, which reduced the effectiveness of the railway undertakings.

Fig. 13: The operational performance of all railway undertakings compared to the number of passengers in the years 2003-2013



Source: prepared by UTK

The decrease in the number of train-kilometres in 2013 was higher than the relative decrease in the number of passengers. This might indicate that supply of the railway undertakings' services is not correlated with demand from passengers, and the customers' market behaviour is not accurately predicted.

- PKP Intercity – long-distance trains (including Eurocity, EuroNight);
- Przewozy Regionalne – at-border and InterRegio trains;
- UBB – Świnoujście Centrum – country border – Ahlbeck (Germany) trains.

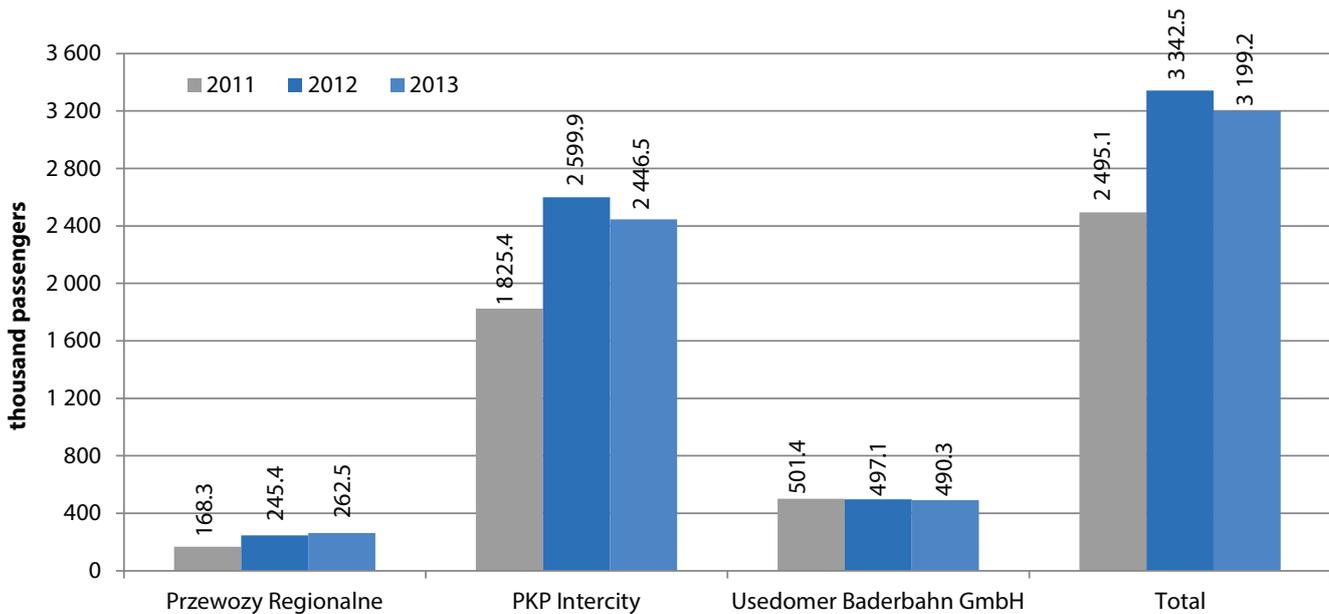
1.3.3. Passenger transport in international communication

In 2013 passenger transport in international communication (including transport in the cross-border area) was provided by three railway undertakings:

In addition, in 2013 one railway undertaking holding a licence to transport passengers (Freightliner PL) provided occasional minor transport services across the Szczecin-Gumieńce-Tantow border.

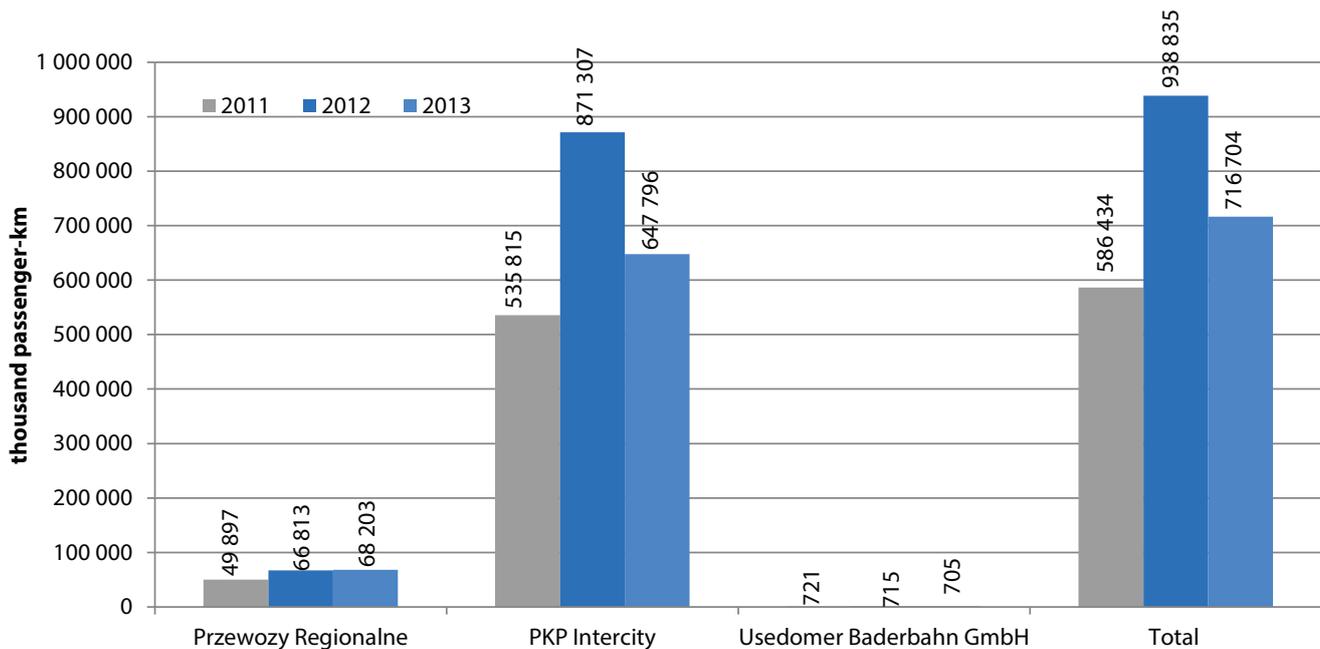
In 2013 in international communication 3.199 m passengers were transported, which is 143.2 thousand less than in 2012 (a decrease of 4.3%). The transport performance in transport services amounted to 716 m passenger-kilometres, which is 222 m more than in the previous year. The average travel distance of a passenger dropped to 224 km (57 km less than in 2012).

Fig. 14: The number of passengers in international communication in the years 2011-2013



Source: prepared by UTK

Fig. 15: Transport performance in international communication in the years 2011-2013



Source: prepared by UTK

In 2013, only one of the companies performing transport services in international communication recorded an increase in the number of passengers: Przewozy Regionalne – from 245.4 thousand to 262.5 thousand passengers (an increase of less than 7%). PKP Intercity – a slight decrease from 2.599 m to 2.446 m (of 5.9%). A slight 1.4% decrease in transport activity was recorded by UBB, a German railway undertaking, which transported around 6.8 thousand passengers less than in the previous year. The largest number of passengers crossed the Terespol – Brest border with Belarus – in total 567 thousand passengers (a decrease of over 24% compared to the previous year). A large percentage was journeys through border crossing points at the border with

Germany, including Świnoujście – Ahlbeck, with the German railway undertaking Usedomer Badenbahn – 490 thousand passengers, and Kunowice/Rzepin – Frankfurt (Oder) – 334 thousand passengers.

PKP Intercity recorder a slight decrease of 5.9% in the international communication transport services.

1.3.4. The structure of the rolling stock owned by passenger railway undertakings

In 2013, in the quantitative structure of the passenger rolling stock³ there were minor changes in relation to the previous year. There was an increase in the stock of electric multiple units, reaching 1264 units at the end of the year (48 more than in 2012, an increase of 3.95%). The number of wagons in electric multiple units increased from 3977 units to 4024 (an increase of

1.18%). The number of wagons in general (including in electric multiple units), however, dropped to 7149 units (from 7520; a decrease of 5.19%). There was an increase in the number of diesel vehicles owned by passenger railway undertakings – at the end of 2013 there were 287 of them in total (an increase of 10.8%), including the stock of so-called railbuses – 191 (a decrease of 15 units). The total number of locomotives also changed, from 670 down to 627. This number also includes electric locomotives, the number of which fell by 4.6% (from 412 to 393 units), diesel engine locomotives (9.4%; from 244 to 221 units) and steam locomotives (from 14 to 13 units).

Tab. 4: The quantitative structure of the traction and wagon rolling stock of passenger railway undertakings, including those operating on narrow-gauge railways in the years 2004 – 2013

type of rolling stock	Year									
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
locomotives in total	70	75	75	124	618	691	706	674	670	627
of which electric locomotives	0	0	0	31	314	384	392	380	412	393
of which diesel locomotives	63	67	66	79	290	292	298	277	244	221
of which steam locomotives	7	8	9	14	14	15	16	17	14	13
electric multiple units	1165	1170	1170	1174	1186	1194	1205	1248	1216	1264
diesel engine vehicles	51	88	104	98	165	175	230	252	259	287
of which railbuses	45	80	93	72	116	154	184	205	206	191
passenger wagons	8829	8487	8353	8247	8060	7921	7900	8079	7520	7149
of which in electric multiple units	3586	3648	3672	3718	3797	3853	4037	4221	3977	4024

Source: prepared by UTK

In 2013, the total value of rolling-stock investment in passenger railway undertakings recorded an increase of 64.5%.

In 2013, the total value of rolling-stock investment in passenger railway undertakings exceeded PLN 1071.6 m, which is a substantial increase compared to the situation in 2012, when passenger railway undertakings had invested a total of PLN 651.6 m (an increase of 64.5%) in rolling stock. Around 64.8% (PLN 694.815 m) of the amount for rolling stock investments in 2013 covered the acquisition of new or second-hand rolling stock. 88.1% of this amount was total investments in the acquisition of the rolling stock of two companies: PKP Intercity (PLN 444.6 m) and Koleje Śląskie (PLN 167.6 m). Investments in the acquisition of rolling stock in 2013 were also recorded by SKM Warszawa (PLN 64.2 m) and, on a much lower scale, Przewozy Regionalne (PLN 18.4 m).

As regards PKP Intercity, in 2013 the company allocated funds for the acquisition of rolling stock as part of the partial financing of the purchase of twenty ETR 610 trains (Pendolino).

1.3.5. The volume, structure and efficiency indicators of the passenger transport market

The volume of the Polish market for passenger rail transport in 2013 can be characterised by the following parameters:

- the number of licensed undertakings - 35,
- the number of regular (timetable operating) railway undertakings - 11,
- yearly market revenue - PLN 4.808 bn,
- the yearly costs of railway service provision - PLN 4.965 bn,
- employment by the railway sector - 23 154 people,
- the number of passengers transported - 270.9 m,
- transport performance - 16.8 bn passenger-kilometres,
- operational performance - 138.0 m train-kilometres,
- the number of standard-gauge locomotives - 627,
- the number of electric multiple units - 1264,
- the number of wagons (including in electric multiple units) - 7149 (4024).

³ The data refer to the quantitative structure of railway rolling stock remaining at the disposal of licensed railway undertakings and railway undertakings performing their activities on narrow-gauge lines

The downward trend in the number of employees in the passenger transport sector, as observed over the years 2008-2012, continued in 2013.

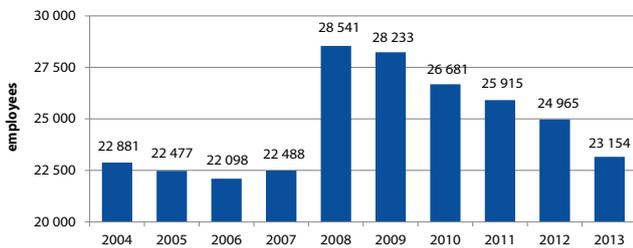
The downward trend in the number of employees in the passenger transport sector, as observed over the years 2008-2012, continued in 2013. At the end of 2013, the number of employees of all railway undertakings amounted to 23 154, which is 7.25% less than in 2012. In the general workforce 44.6% employees were directly related to the management and safety of rail traffic. Their number amounted to ca. 10.3 thousand people, including 4.6 thousand drivers and 179 drivers' assistants, 4.1 thousand train supervisors, 1008 rolling-stock auditors, 117 shunters and 350 shunting masters.

A significant increase in the number of employees in 2008 was caused by the takeover by Przewozy Regionalne, and then by PKP Intercity, of some of the employees who until then had been working for the freight railway undertaking PKP Cargo.

A decrease in the number of employees in 2013 was caused by further reductions in employment in the ongoing restructuring process, and the resulting necessity for the further minimisation of the undertakings' operating costs. The largest decrease in employment, of almost 18%, was recorded by Przewozy Regionalne (from 11 778 to 9671 people). A large increase in employment occurred in two regional companies: Koleje Śląskie, of 33% (from 752 to 1003 employees), and Koleje Wielkopolskie, of 35% (from 404 to 546 employees). The highest increase in employment - of 51% - was recorded by Arriva RP (from 156 to 236 employees).

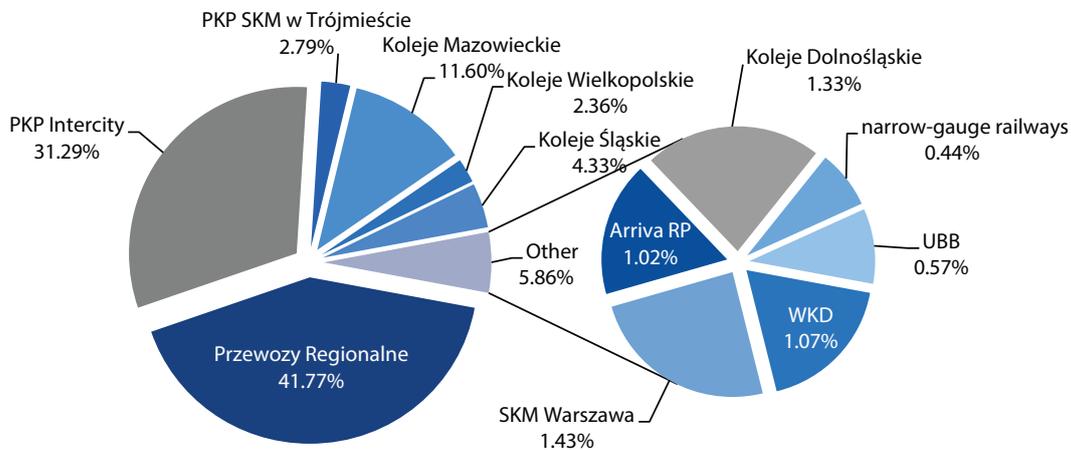
A decrease in the number of employees in 2013 was caused by further reductions in employment in the ongoing restructuring process, and the resulting necessity for the further minimisation of the undertakings' operating costs.

Fig. 16: Employment in the passenger transport sector in the years 2004-2013



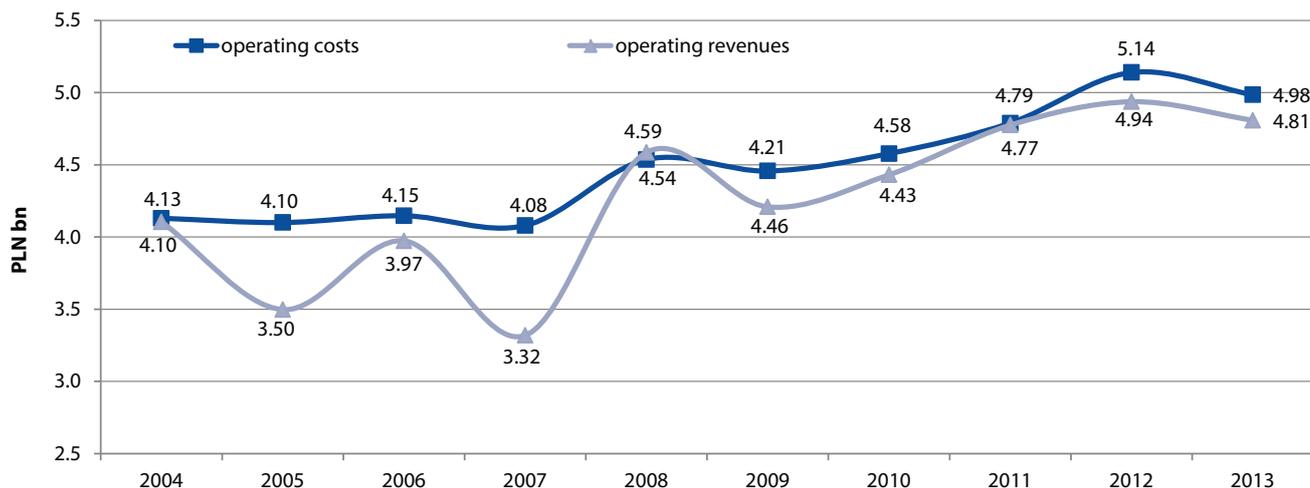
Source: prepared by UTK

Fig. 17: The employment structure of passenger RUs in 2013 (share)



Source: prepared by UTK



Fig. 18: The operating performance of passenger railway undertakings (in PLN bn) in the years 2004-2013

Source: prepared by UTK

In total, the market recorded a loss of ca. PLN 176 m, as compared to a loss of PLN 192 m in 2012, which means a slight improvement in profitability.

It should be noted that subsidies were also included in the revenues of passenger railway undertakings, including those obtained from the State budget and local governments, allocated for the provision of public services and to cover the deficit on account of statutory deductions. Apart from the subsidies, the main element of the revenues of railway undertakings was the sale of tickets.

In 2013, subsidies for the provision of public services and purposive subsidies to statutory reliefs accounted for more than 44% in the total amount of revenues (41% in 2012). Railway undertakings received PLN 2.153 bn for this purpose, i.e. 5.3% more than in 2012 (an increase of PLN 109 m). In contrast to previous years, an increase in the amount of subsidies for the provision of public services did not go hand-in-hand with an increase in revenues from the sale of services. Therefore, in 2013 a slight decrease in the general level of revenues (including from sales of services and subsidies) was observed as compared to 2012, of 2.6%.

In 2013, subsidies for the provision of public services and purposive subsidies to statutory reliefs accounted for more than 44% in the total amount of revenues.

1.3.6. The evaluation of the quality of rail transport services

Passenger railway undertakings have for several years been striving to raise the quality of their services, which is to encourage the use of their range of services and help to overcome the bad public opinion about the low level of attractiveness of rail travel. Railway undertakings and transport organisers see the

necessity of investments in traction and wagon rolling stock, which is confirmed by the data on capital expenditure – it amounted to nearly PLN 1.2 bn in 2013.

According to the European Commission's Eurobarometer of September 2013 measuring the satisfaction of Europeans with rail services, the satisfaction of Poles with information about timetables at railway stations (by 16 percentage points) and the cleanliness and maintenance of railway stations is improving (an increase of as many as 21 percentage points and equalling negative opinions). However, still only 37% of Poles (not only regular passengers) positively assess the cleanliness of trains, which is well below the EU average (56%), but it means an increase of 11 percentage points compared to the most recent survey of 2011. In the index of overall satisfaction with train travel compiled by the European Commission, Poland was ranked 4th from bottom with a score of 64% of negative opinions (the EU average is 55% positive opinions). The result improves to 61% of negative opinions if the assessment of railway stations is also taken into account, which shows that in this respect there has been a noticeable improvement in recent years.

In the index of overall satisfaction with train travel compiled by the European Commission, Poland was ranked 4th from bottom with a score of 64% of negative opinions.

Although in recent years the quality of service in rail traffic has significantly improved, disabled passengers and persons with reduced mobility are still faced with the lack of proper, necessary assistance, and help when travelling by train. Railway stations, buildings and railway structures in many places, still not adjusted to the needs of disabled passengers, also cause many problems. As a result of inspections conducted by the employees of the Office of Rail Transport in December 2012 it was shown that over 60% of launched train sets were not adjusted to transport disabled passengers.



Although in recent years the quality of service in rail traffic has significantly improved, disabled passengers and persons with reduced mobility are still faced with the lack of proper, necessary assistance, and help when travelling by train.

The level of passenger services offered by railway undertakings providing transport services indicates that further regular training in the field of passenger assistance and service in rail traffic is necessary, with special emphasis on the issues related to assistance for disabled passengers and passengers with limited movement ability.

One of the most important determinants of the quality of transport services is the level of punctuality. Trains that reach the final station on time or with a 5-minute delay are considered punctual. The ratio of punctuality on arrival is the quotient of the number of trains that reach the final station on time (including those delayed up to 5 minutes) and the number of all trains launched by railway undertakings. In 2013, the punctuality of trains on final stations reached 91.61%, which means a decrease in comparison to the previous year of 0.47 percentage point from 92.08%. In 2013, licensed railway undertakings launched a total of 1507 thousand trains, i.e. ca. 46 thousand less than in the previous year. Moreover, the number of all trains delayed on arrival (including those delayed up to 5 minutes) reached 26% in the analysed period, which is a minimal decrease compared to 2012. Total delay time amounted to 58 790 hours, which constituted 2450 days.

The average delay time, except for delays of up to 5 minutes, amounted to 21 min. 47 sec. (13 sec. less than in 2012). Including trains delayed up to 5 minutes, the average delay time was 9 minutes. The largest percentage was definitely trains delayed by up to 5 minutes: 67.73%. 30.46% was trains delayed by 5 to 60 minutes, 1.41% was trains delayed by 1 to 2 hours, and 0.40% was trains delayed by more than 2 hours. The number of cancelled trains fell to 2362 in comparison to 2012, but such a significant decrease is due to the changes in the methodology used by the infrastructure manager who in the previous years included initially cancelled trains which nevertheless travelled.

Tab. 5: The punctuality of passenger railway undertakings in 2013

	Q1	Q2	Q3	Q4	2013	2012
In total	92.75%	92.13%	90.57%	90.98%	91.61%	92.08%
PKP Intercity	88.52%	85.98%	80.86%	81.09%	84.16%	80.73%
Przewozy Regionalne	94.19%	93.45%	91.00%	90.43%	92.27%	92.34%
Koleje Mazowieckie - KM	89.25%	87.14%	83.96%	87.95%	87.09%	89.57%
PKP SKM w Trójmieście	98.89%	98.49%	98.90%	98.72%	98.75%	97.91%
Szybka Kolej Miejska w Warszawie	91.68%	91.65%	93.65%	94.27%	92.88%	92.73%
Warszawska Kolej Dojazdowa	99.02%	99.58%	99.48%	98.63%	99.18%	99.30%
Koleje Dolnośląskie	96.67%	92.55%	95.28%	93.50%	94.46%	95.18%
Koleje Śląskie	85.61%	86.47%	85.30%	87.86%	86.25%	83.87%
Koleje Wielkopolskie	93.01%	95.87%	95.77%	94.18%	94.67%	96.00%
Arriva RP	97.53%	97.07%	96.58%	94.41%	96.25%	96.31%

Source: prepared by UTK

As shown in the table above, the punctuality of PKP Intercity and Koleje Śląskie improved to a statistically significant level, but the punctuality of Koleje Mazowieckie and Koleje Wielkopolskie decreased. The punctuality of PKP SKM w Trójmieście is higher within its own infrastructure, as evidenced by the total delay pattern. Delays, irrespective of the relations or train category, are unfortunately an element that cannot be entirely eliminated. In the winter season delays are mostly caused by difficult weather conditions, such as icing on the traction network, the freezing of switches and cracks in the rails. In the period from spring to autumn delays mainly result from modernisation work conducted on a major part of the railway infrastructure. The factor influencing disruptions to timely transport performance are also frequent thefts and damage to railway infrastructure elements.

Assessing the quality of railway services, ticket distribution channels should also be analysed, including the possibility of purchase through modern IT techniques. The data presented by individual railway undertakings show that the highest share of total sales still belonged to ticket kiosks – in 2013 their average share amounted to 59.4%, which, however, is a significant decrease compared to 67% in 2012. At the end of 2013 railway undertakings owned a total of 1211 stationary ticket kiosks

(9 more than in the previous year). More and more frequently ticket sales are dispensed via self-service stationary ticket machines (an over 13% share). Their number is growing and in 2013 it amounted to 336 (in comparison to 229 in 2012). Also the number of mobile ticket machines and portable terminals in trains increased (21.6% of share of this sales channel). Their stock

at the end of 2013, after a significant decrease in 2012, grew by 29%, and amounted to 1619. Modern ticket distribution channels are enjoying growing popularity, e.g. the webpages of railway undertakings (PKP Intercity, Przewozy Regionalne) or smartphones with special apps. In 2011, the possibility of online purchase was used by 0.7% of passengers in average, and in 2012 the threshold of 1% was exceeded; in 2013 the share of this sales channel increased to 1.92% (as much as 15% in the case of PKP IC).

Conductor teams in Koleje Mazowieckie have been provided with mobile devices, which contributes to such a high increase in portable terminals in this company's trains. KM also installed 84 stationary ticket machines. A significant decrease in the number of mobile ticket machines and portable terminals in PKP IC is worth mentioning, but now card payments are possible on all trains. Mobile ticket machines were withdrawn by PKP SKM. The total number of information points at railway stations decreased, which is mainly due to a decrease in PKP IC which, on the other hand, employed mobile informers and launched a helpline. Machines with an infokiosk function are contributing to a significant increase in KM's information points. The changing structure of ticket distribution is aimed at further fulfilling the expectations of railway passengers, especially in terms of the diversity of distribution channels. A drawback may be the insufficient number of ticket kiosks, mainly in larger agglomerations during rush hours and on weekends, which considerably extends the waiting time of travellers in queues. A vast impediment is also the lack of the possibility of card payment in all ticket kiosks and in most portable terminals.

1.3.7. The protection of passengers' rights

Since 3 December 2009 the provisions of Regulation (EC) No. 1371/2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers' rights and obligations have been binding to a limited extent in the Republic of Poland.

On 25 May 2011, the Minister of Infrastructure issued a regulation on the exemption from the application of selected provisions of Regulation No. 1371/2007, by virtue of which the number of railway connections with possible compensations to passengers for train delays increased. For the most part, provisions of the Regulation have been implemented by all railway undertakings providing regular passenger transport in the scope in which they are binding on the territory of Poland. Excluding the automatic

Total sales in the ticket kiosks – in 2013 their average share amounted to 59.4%, which, is a significant decrease compared to 67% in 2012.

payment of compensation for delays of trains other than international and national EICs does not interfere with the possibility of pursuing claims for compensation for damage by passengers, under the Transport Law and the Civil Code.

As regards supervision over compliance with the provisions of

Regulation No. 1371/2007, in 2013 the President of UTK conducted inspections of railway undertakings.

The supervising activities carried out in 2013 revealed numerous irregularities concerning, i.a.:

- the operation of the passenger information system on railway stations, PKP PLK S.A. – SDIP,
- the proper publication of timetables by PKP PLK S.A.,
- the operation of the seat reservation system on trains, PKP Intercity S.A.,
- the lack of the possibility to purchase reduced fare tickets on trains,
- no information available on the terms of entitlement to the lowest fares in ticket machines of PKP Intercity S.A.,
- the lack of proper marking of trains,
- the hindering of the return of tickets in agency ticket kiosks,
- the lack of effort to provide assistance for a disabled passenger or a person with reduced mobility,
- the lack of proper safety and hygiene conditions, as well as comfort and a convenient journey – Koleje Mazowieckie – travel with side-door open; Koleje Wielkopolskie – watering; PKP Intercity – conditions on the "Jantar" train,
- the publication of tariffs and price lists – PKP Intercity,



- compliance by railway undertakings with the obligations to implement and publish Quality Management Systems (Warszawska Kolej Dojazdowa, Przewozy Regionalne).

As a result, the President of UTK initiated administrative proceedings on the violation of the provisions of the Regulation.

Nevertheless, a positive assessment of the state of observance of passenger rights in Poland would stand in stark contrast to the low quality of transport services and the insufficient supply of seats. These factors translate into results achieved by rail transport and its image, e.g. in the media. The negligence on the part of railway undertakings, infrastructure managers and railway-station owners, which led to a drastic deterioration in travel conditions, in most cases did not constitute violations of the provisions of Regulation No. 1371/2007, but the standard of provided services was still far from the necessary minimum specified in the Act on Transport Law.

The negligence which led to a drastic deterioration in travel conditions, in most cases did not constitute violations of the provisions of Regulation No. 1371/2007, but the standard of provided services was still far from the necessary minimum specified in the Act on Transport Law.

From January to December 2013, the Office of Rail Transport received 1127 complaints (1041 of which were by e-mail and 86 via traditional post). Most complaints and suggestions provided by phone related to travelling conditions, which indicates that passengers expect improved travelling comfort, have a growing awareness of their rights and know what they should require from the railway undertaking. Suggestions provided by phone also largely relate to the possibilities of interlinking trains during travel and the possibility and manner of notifying the need to provide assistance during travel to passengers with reduced mobility.

The priority for UTK in 2013 was also taking measures aimed at improving the standard of service of passengers with reduced mobility.

Persons with reduced mobility are defined in Commission Decision 2008/164/EC. The definition of the term includes a list of categories of passengers considered persons with reduced mobility. These include:

- wheelchair users or persons with reduced mobility (having difficulties with walking, as a result of injuries or fractures of limbs),
- people travelling with small children,

- persons with heavy or bulky luggage,
- elderly people,
- pregnant women,
- blind people and the visually impaired,
- deaf people and the hearing impaired,
- communication-impaired (persons who have difficulty in communicating or understanding the written or spoken language, as well as foreigners with lack of command of the local language),
- people with psychological and intellectual impairments,
- people of small stature (including children).

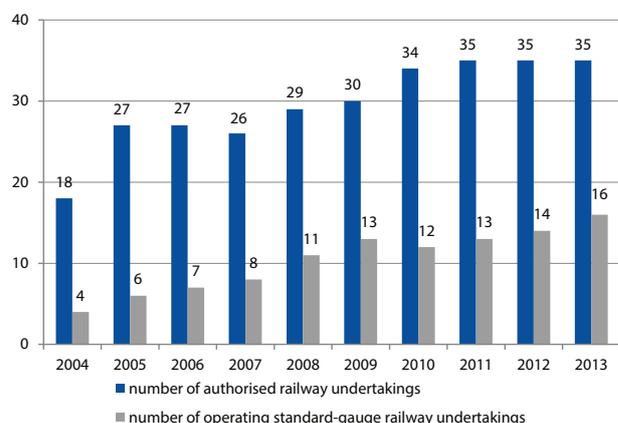
The definition includes permanent and temporary impairments. A guardian travelling with a small child or a child in a pushchair should also be considered as a person with reduced mobility.

1.3.8. Licensing railway passenger transport

In 2013, the President of UTK, pursuant to Art. 10(1)(2) of the Rail Transport Act, granted one licence for the provision of passenger railway services. In recent years the number of licences issued by the President of UTK has been gradually decreasing.

At the end of 2013, 35 railway undertakings had active licences (except for suspended ones) entitling them to engage in activities, 14 of which were owned by narrow-gauge railway undertakings. From the very start of the activities of the Office of Rail Transport, its President issued 43 licences for the provision of passenger transport services.

Fig. 19: The number of licensed railway undertakings authorised to provide transport services and actually operating on the rail market in the years 2004-2013



Source: prepared by UTK

The timeline between the beginning of the second half of 2003 and the end of February 2004 was a transition period, when the legal status allowed the railway undertakings to run transport operations on the basis of concessions granted by the minister responsible for transport or licences granted by the Office of Rail Transport. Therefore, the number of railway undertakings providing transport services in 2003 was higher than the number of authorised railway undertakings acting on the basis of the granted licences.

As a result of the administrative proceedings conducted *ex officio* in the period from 1 January till 31 December 2013, the President of UTK issued a decision concerning the licensing of railway passenger transport, including:

- 1 licence for the provision of passenger rail transport granted,
- 1 temporary licence for the provision of passenger rail transport granted,
- 2 licences for the provision of passenger rail transport suspended,
- data in 5 licences for the provision of passenger rail transport changed,
- 4 decisions granting an extended period for the start of licensed activity in the provision of passenger rail transport issued,
- 2 decisions withdrawing licences for the provision of passenger rail transport issued,
- 1 decision repealing the decisions of the President of UTK in the provision of passenger rail transport issued,
- 1 decision reapproving a licence for the provision of passenger rail transport issued,
- 8 decisions discontinuing the proceedings in the suspension of a licence in the provision of passenger rail transport issued,
- 1 decision discontinuing proceedings in the imposition of a penalty for passenger railway undertakings issued,
- 3 decisions imposing penalties on railway undertakings in connection with the failure to submit in time a certificate of compliance with the requirements of good reputation in the provision of passenger rail transport issued,
- remained without examination:
 - 1 application for the reapproval of a licence for the provision of passenger rail transport,
 - 1 application for granting a licence for the provision of passenger rail transport.



2. The freight rail transport market

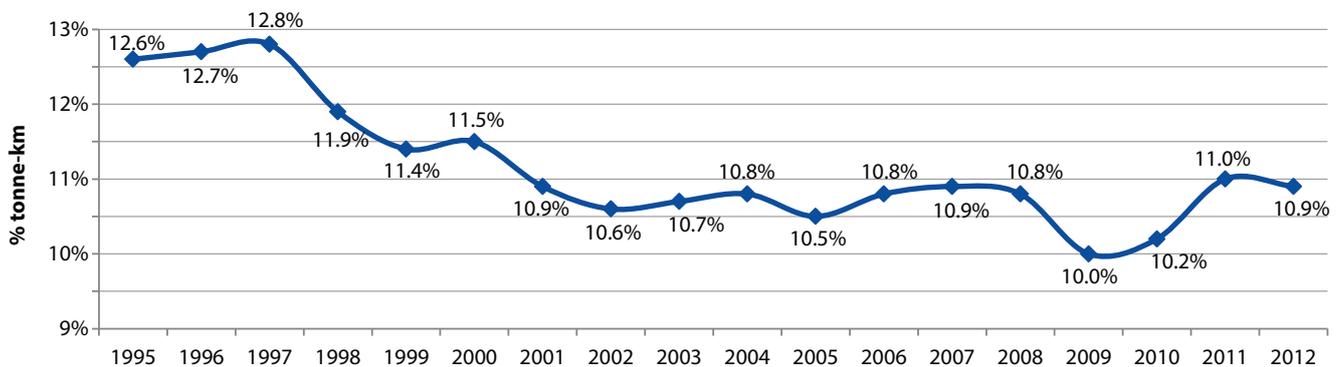
2.1. Changes in freight rail markets in European Union countries

2.1.1. The characteristics of the importance and use of rail in freight transport

Considering environmental pollution, noise emissions, and the burden on roads, for which lorries transporting goods to the EU are responsible, the 2011 White Paper on Transport recommends that:

- 30% of road freight over 300 km be shifted to other modes such as rail or waterborne transport by 2030;
- 50% of road freight over 300 km be shifted to other modes such as rail or waterborne transport by 2050.

Fig. 20: The share of rail in transport performance for the transport of goods in the EU in the years 1995-2012



Source: prepared by UTK using the European Commission data. The fourth report on monitoring the development of the rail transport market

However, in 2012, the share of rail in the total transportation of goods in the EU was 10.9%, which is a slight decrease compared to the previous year. It is one of the highest shares in the last 10 years, but it must be remembered that in 1997 this share was almost 13%. These results testify to the fact that the share of rail transport is still relatively small.

It should be noted that the choice of means of transport is primarily determined by the price (bearing in mind that transport and storage cost is ca. 10-15% of the final cost of goods). If the price of two alternative modes of transport is comparable, then other factors such as time and the quality of services, including predictability and timeliness are involved. Given that the cost of rail transport is largely determined by the rates of access to the infrastructure, road transport in the EU below the distance of e.g. 200 km is more competitive because of lower prices, greater flexibility and speed, the transparency of the range of services, the ease of crossing borders or the ability to directly reach the destination. A considerable advantage of road freight transport is evidenced by statistics which have been unchanged for years. The advantage of rail can be seen only over longer distances and in the transport of heavy materials. It should be noted that railway undertakings are characterised by much lower pricing flexibility as regards their services and thus they are less eager to negotiate prices with final customers. However, due to a very significant dispersion, companies providing road transport services compete with one another, reducing their margins to a minimum. In terms of prices, this makes their range of services more appealing to final customers than the services offered by

railway undertakings. Road transport is also dominant in increasingly frequent transport of highly processed freight. Potential clients often forego rail transport because of the impossibility of reaching the preferred place of receipt, as the number of reloading points is being reduced. Other factors that influence the choice of alternative modes of transport than rail in the case of freight transport include insufficient frequency and punctuality, low speed, which directly influences the extension of delivery times of shipments, services unadjusted to low freight volumes, the lack of a sufficient number of door-to-door deals, a complicated contract conclusion process, and difficulties in accessing additional services such as shipment tracking, packaging and storage, as well as the frequent lack of a competitive and clear price list. It is also important to indicate the problem of insufficient information about the possibilities and range of rail transport services, which are more available and clear in the case of road transport.

A considerable advantage of road freight transport is evidenced by statistics which have been unchanged for years. The advantage of rail can be seen only over longer distances and in the transport of heavy materials.



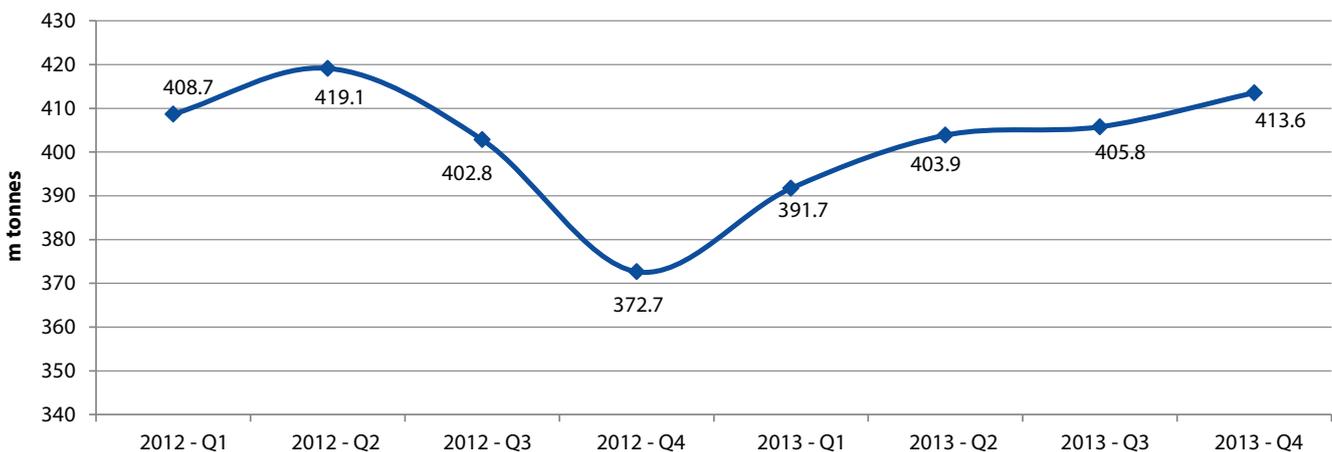
As much as 27% of the EU tonne-kilometres are performed in Germany, while in Poland, which is ranked second, it is 12% of transport performance in the EU.

When it comes to freight rail transport in Europe, the key role is played by Germany, both as the EU's largest economy and as a transit country located in the centre of the Community. As much as 27% of the EU tonne-kilometres are performed in Germany, while in Poland, which is ranked second, it is 12% of transport performance in the EU, followed by France with 8% and the United Kingdom with 5%.

2.1.2. The dynamics of freight rail transport in Europe

It is evident that the fourth quarter of 2012 ended with a large drop, followed by the market recovery over 2013. The results for the last quarter of the previous year were as much as 11% better than for the same period in 2012, which made it possible to close the year with a minimum increase of 0.72% in terms of transported volume.

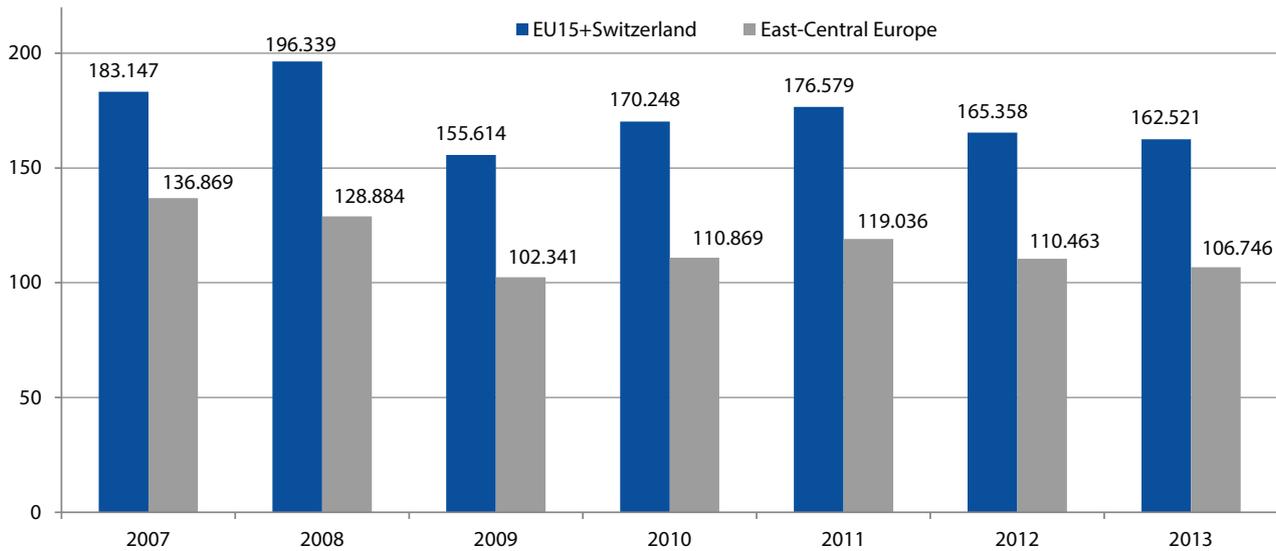
Fig. 21: The volume of goods in individual quarters of 2012-2013 in 21 EU countries for which data are available



Source: prepared by UTK using Eurostat estimates

CER, in turn, stated in its report that in 2013 there was a decrease in the transport performance of its members (CER members represent 84% of the freight rail transport market in Europe; the PKP Group and Rail Polska are CER members from Poland). Transport performance decreased by 2.4%, which was, nevertheless, a lower decrease than that from 2012, of 6.7%. CER also noted that the downward trend was reversed in the second half of the year, because for the first six months

transport performance decreased by 5.8%, and from July to December increased by 1.2%. Therefore, the observed trend is consistent with the Eurostat estimates. It is worth noting that the decrease in transport performance was higher in the countries of East-Central Europe and reached 3.4%, while the so-called "old fifteen" and Switzerland recorded a decrease of 1.7%. The following sections will show that the situation on the Polish market differs from the average for our region.

Fig. 22: Transport performance in the EU15+Switzerland and the countries of East-Central Europe in the years 2007-2013 [in bn tonne-kilometres]

Source: prepared by UTK using CER data

According to UIRR data, operating for road-rail combined transport, the intermodal transport market seems to be recovering from the crisis. In 2013, 3.84% more freight was transported than in 2012. More than 80% of freight were containers the transport of which increased by 2.27%. Taking into account transport performance, an increase compared to 2012 was as high as 4.25%, while the average transport distance was 722 km, i.e. of 20 km more than in the preceding year.

2.2. Competition between modes on the Polish freight transport market

According to the GUS data, in 2013, 1.84 bn tonnes of goods in total were transported in Poland via all modes of transport. There was an increase of 3.3% compared to the previous year. Nearly 233 m tonnes were transported by rail. Road transport was still dominating with over 1.55 bn tonnes of goods transported.

Tab. 6: The volume of goods transported in Poland in the years 2001-2013

Freight transport market in the Poland in the years 2001 - 2013													
transport mode	year												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
In m tonnes													
in total	1 294,75	1 279,16	1 283,24	1 302,09	1 413,06	1 469,12	1 569,85	1 672,96	1 723,79	1 848,70	1 905,18	1 781,87	1 841,38
road transport	1 072,30	1 002,37	981,96	956,94	1 079,76	1 113,88	1 213,25	1 339,47	1 424,88	1 551,84	1 596,21	1 493,39	1 553,05
rail transport	166,86	222,90	241,50	283,00	269,40	290,30	293,90	276,30	242,98	235,47	249,35	230,88	232,60
pipeline transport	45,30	46,13	51,78	53,38	54,26	55,63	52,87	49,03	50,24	56,21	54,49	52,99	50,66
air transport	10,26	7,73	7,97	8,75	9,61	9,27	9,79	8,11	5,66	5,14	5,09	4,58	5,04

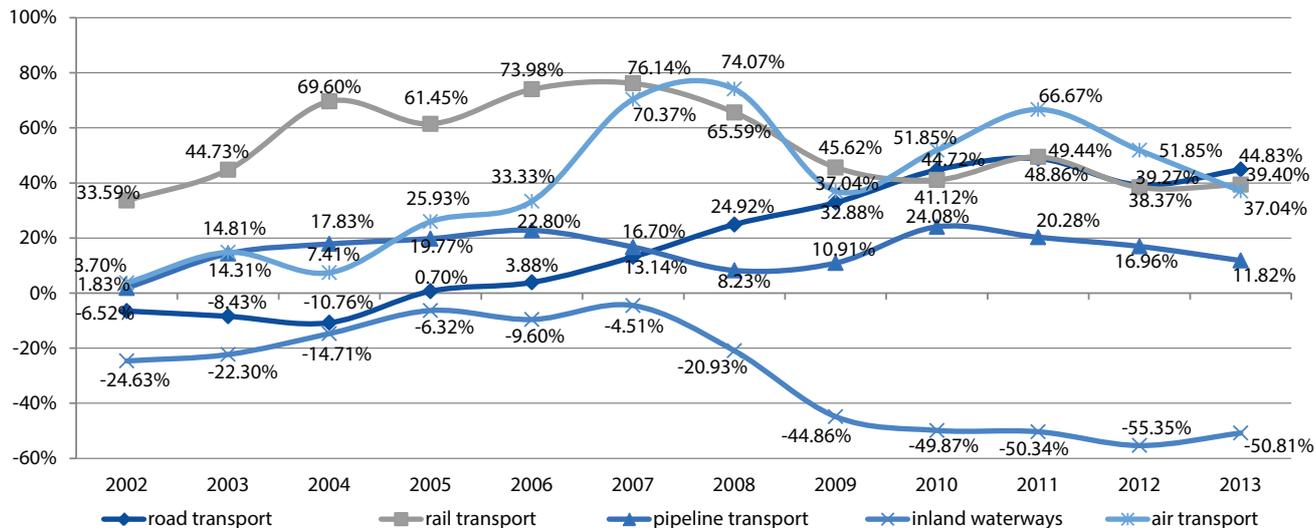
Source: prepared by UTK using GUS data

At the end of 2013, the share of freight carried with road transport in the weight of transported goods amounted to 84.3%, which is by 0.5 percentage point more than in the previous year. The railway's share in the total volume of transported goods fell from 13.0% to the level of 12.6%. The weight of raw materials transported via pipelines fluctuated around the same level, similarly as in the previous years. In 2013, the volume of raw material

transported amounted to nearly 51 m tonnes. The share of this mode was 2.8%. The share of inland waterway transport and air transport in the weight of transported goods is of marginal significance. At the end of the previous year the share of both modes in total amounted to less than 0.28%.

According to GUS data, the railway's share in the total volume of transported goods fell from 13.0% to the level of 12.6%.

Fig. 23: The dynamics of freight weight in particular modes of transport in 2013/2002 (2001=0%)



Source: prepared by UTK using GUS data

According to UIRR data, the intermodal transport market seems to be recovering slowly from the crisis.

A characteristic phenomenon in recent years was a further change in the division of freight transport market between modes, resulting in a significant decrease in the role of rail transport and an increase in the significance of the road segment of transport. This trend is rooted not only in the changes in the structure of the economy but also in the rapid changes in the road transport sector. Low barriers to entering the market and relatively low costs are the reasons why tens of thousands of road transport companies

were established in the transformation period. Growing competition made road transport services evolve while the prices remained low. Due to high barriers to entering and operating on the market, including high, disproportionate costs of access to the infrastructure, rail transport recorded a dynamic decrease in its share – of more than 9% only in 2004-2013 (in terms of transported freight weight).

In 2013, there was an 8.6% increase in freight transport conducted with the use of all modes of transport by transport performance. In absolute values, it was an increase of 26.112 m tonne-kilometres. Road transport achieved the best result, exceeding the 78% threshold of the market share in 2013. The share of rail transport by transport performance amounted to 15.3%, which is by 0.7 percentage point less than in 2012.

Tab. 7: Transport performance in freight transport in the years 2001-2013

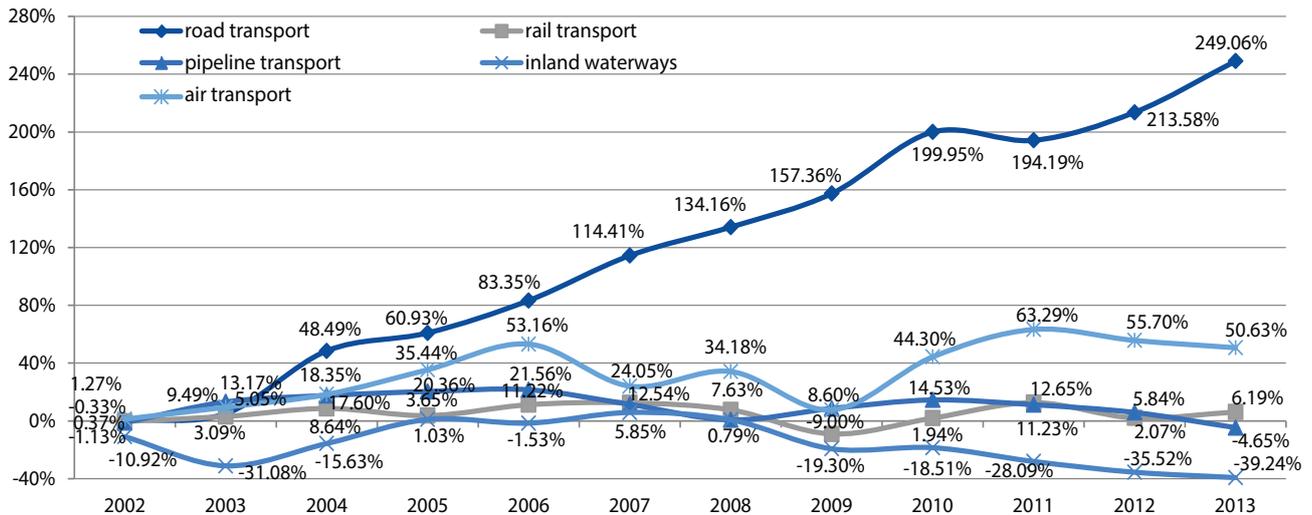
Freight transport market in the Poland in the years 2001 - 2013													
transport mode	year												
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
in m tonne-km													
in total	144 752	144 495	152 381	188 500	196 176	216 713	238 399	248 420	259 098	297 313	297 361	305 476	331 588
road transport	74 403	74 679	78 160	110 481	119 740	136 416	159 527	174 223	191 484	223 170	218 888	233 310	259 708
rail transport	47 913	47 756	49 392	52 053	49 664	53 291	53 923	51 570	43 601	48 842	53 974	48 903	50 881
pipeline transport	21 093	20 854	23 871	24 806	25 388	25 640	23 513	21 247	22 908	24 157	23 461	22 325	20 112

Source: prepared by UTK using GUS data

In 2013, road and rail transport recorded an increase in transport performance: road transport of 26 bn tonne-kilometres and rail transport of nearly 2 bn tonne-kilometres more than in 2012. The remaining modes of transport showed a falling trend. It is important to stress that the volume of air transport performance was low and amounted to only 119 m tonne-kilometres. In the same period road transport performed 259.7 bn tonne-kilometres.

In pipeline transport, due to the long distances of the transport of raw materials, transport performance amounted to 20.1 bn (a decrease of 9.9%), which constituted 6.1% of market share (a decrease of 1.2 percentage points). The share of inland waterways and air transport was insignificant, amounting to 0.2% and 0.04%, respectively.

Fig. 24: The dynamics of transport performance in particular modes of transport in 2013/2002 (2001=0%)



Source: prepared by UTK using GUS data

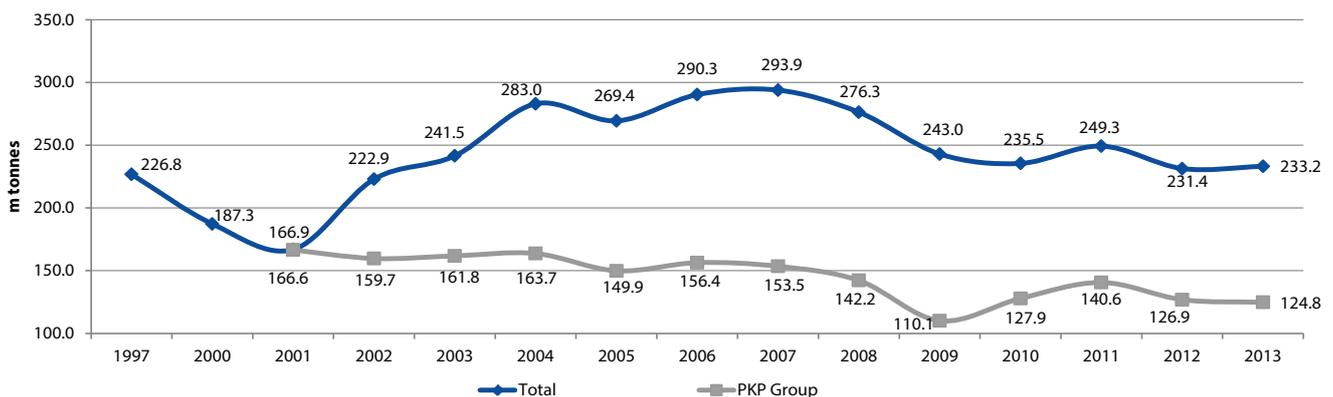
Numerous economic changes influenced the alteration of market roles of particular modes of transport. Poland, similarly to other EU countries, witnessed a decrease in the importance of freight transport by rail in 2001-2013 in favour of road transport, the advantage of which is still price, time and the possibility to provide “door-to-door” transport without changing the modes of transport in between – a key element when it comes to the choice of the mode of transport by the customer. The disadvantage of this mode of transport is the limited capacity to carry high weight freight.

2.3.1. Polish freight railway undertakings

In 2013, freight rail transport was conducted by 54 licensed railway undertakings, including 53 railway undertakings on standard-gauge tracks and one on broad-gauge tracks. This represents an increase by six companies compared to 2012. Additionally, four railway undertakings declared that they provided transport services on narrow-gauge tracks. It should be stressed that there is no obligation of licensing the provision of services on narrow-gauge tracks.

2.3. The Polish freight rail transport market

Fig. 25: Freight rail transport in Poland 1997-2013 (by weight)*



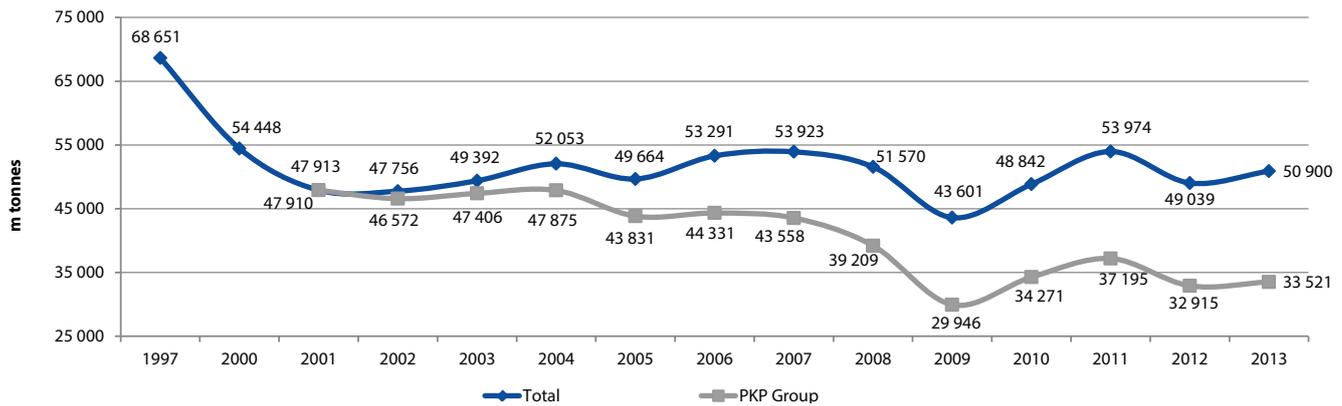
Source: prepared by UTK

In 2013, railway undertakings transported 233.3 m tonnes of freight. In comparison to 2012, it was an increase in transported weight of 0.78%. At the same time, PKP Group recorded a decrease of 1.7%. Therefore, the freight market in Poland stabilised after a significant drop of more than 7% in 2012, and it should be emphasised that this stabilisation was at the lowest level for over 10 years. Around the middle of the year the downward trend, observed from the beginning of the year, was stopped. Good

results in the summer, and above all, a significant increase in transported weight from December to December in the previous year, made it possible to close the year with the result indicating an increase. Taking into account the correlation between the economic situation and freight transport, it can be stated that the signs of economic recovery in the second half of the year were conducive to increased transport. 2014 should bring more answers concerning the trend on the freight market.

* Until 2009 part of the manoeuvre traffic conducted by licensed railway undertakings was included in the total volume of transport.

Fig. 26: Transport performance in freight rail transport in Poland in 1997-2013*



Source: prepared by UTK

In 2013, freight railway undertakings conducted transport performance at the level of 50 900 m tonne-kilometres, which corresponds to an increase of 3.8% (for the PKP Group it was an increase of 1.8%). Therefore, the increase in transport performance was higher than the increase in weight, which means that goods were transported over longer distances on average than in 2012. Good results in transport performance for the second half of 2013 inspire optimism when it comes to the continuation of the upward trend of this indicator, but it will depend on the development of the economic situation.

As in previous years, the Polish rail transport was based on bulk goods transport, mainly raw materials. The transport of hard coal and lignite, petroleum, natural gas, metal ores and other mining and quarrying products in 2013 accounted for 67.9% of the total volume (a decrease of 0.6 percentage point) and 58.7% of the transport performance conducted by railway undertakings (an increase of 2 percentage points). The highest share in the market of transported weight, as usual, was held by hard coal (41.9%; 97.6 m tonnes), and this was also the case as regards transport performance (a 32.7% share).

In 2013 a further increase in railway intermodal transport of freight was recorded. 689.3 thousand loading units with a total weight of 8.6 m tonnes were transported, 6.9% and 7.2% more than in 2012, respectively, which means that the upward trend continued, although its dynamics slowed down. The performance of railway companies in intermodal freight transport was at the level of 3.067 bn tonne-kilometres, which means a slight increase of 0.73%. At the end of 2013, the share of intermodal transport, measured by the weight of transported units, amounted to 3.7% of the total volume of freight transport in Poland (an increase of 0.22 percentage point). Taking into account the value of the transport performance, the share of intermodal transport reached 6.03% (in comparison to 6.21% in 2012). This means that there was an insignificant increase in intermodal freight transport distances compared to the freight market in general.

Biomass transport continues to be a dynamically growing market segment. Railway undertakings transported almost 7% more tonnes of biomass, accounting for transport performance higher by almost a quarter.

As in previous years, the Polish rail transport was based on bulk goods transport.

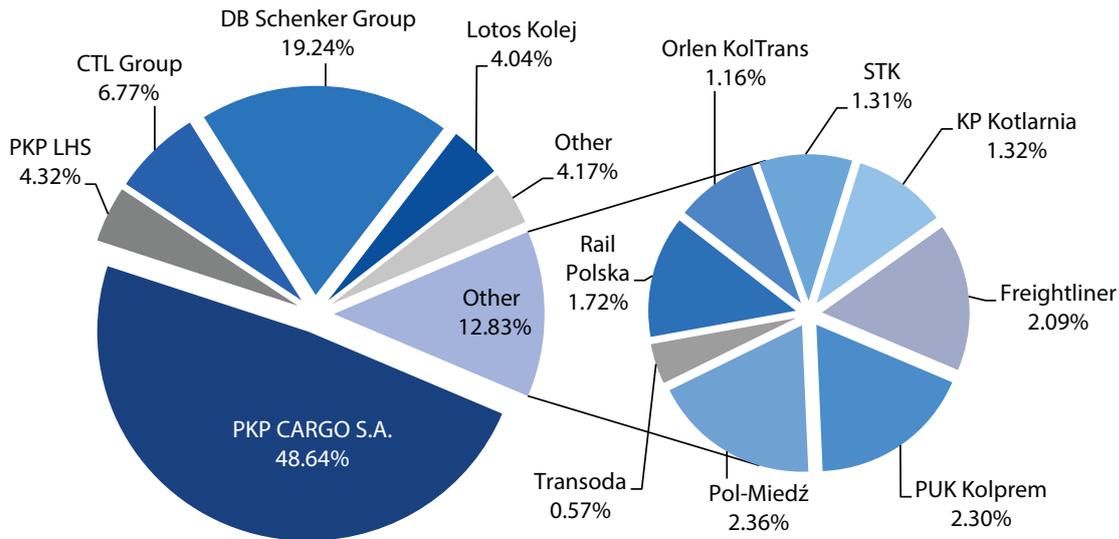
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Biomass transport continues to be a dynamically growing market segment.



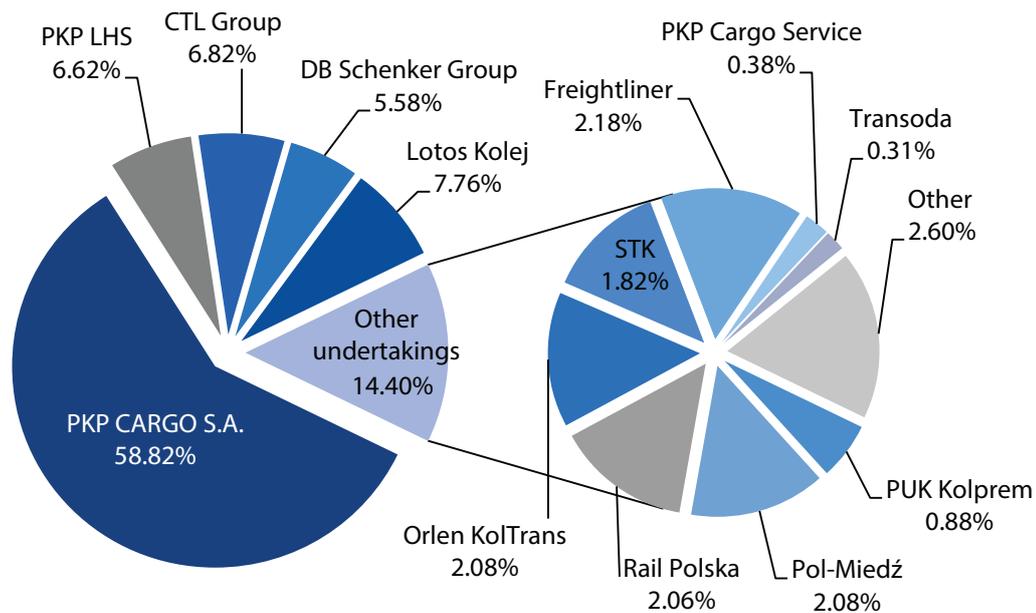
* Until 2009 part of the manoeuvre traffic conducted by licensed railway undertakings was included in the total volume of transport.

Fig. 27: The market share of the largest railway undertakings by weight of transported goods in 2013



Source: prepared by UTK

Fig. 28: The market share of the largest railway undertakings by transport performance in 2013



Source: prepared by UTK

In 2013, most railway undertakings recorded an increase in the volume of freight transport. A decrease for the largest of them, PKP Cargo (1.77 percentage points in weight and 1.46 percentage points in performance), means that the company went below 50% of the market share in terms of weight and 60% in terms of transport performance. Less considerable losses were recorded by the second company in the PKP Group, the broad-gauge PKP LHS. CTL Group, ranked third, slightly increased its shares in both categories (by 0.3 percentage point in weight and 0.13 percentage point in performance). CTL Group was ahead of PKP LHS when it comes to share in terms of performance. The results of Lotos Kolej, which lost 0.55 percentage point in the share in

weight and 0.4 percentage point in performance, were the opposite. The higher decrease for Lotos than PKP LHS means that the latter outdistanced Lotos in terms of the share in weight. The second largest market share in terms of transported weight was held by DB Schenker Group - in total 19.24% of the market (a decrease of 1.12 percentage points). The company is

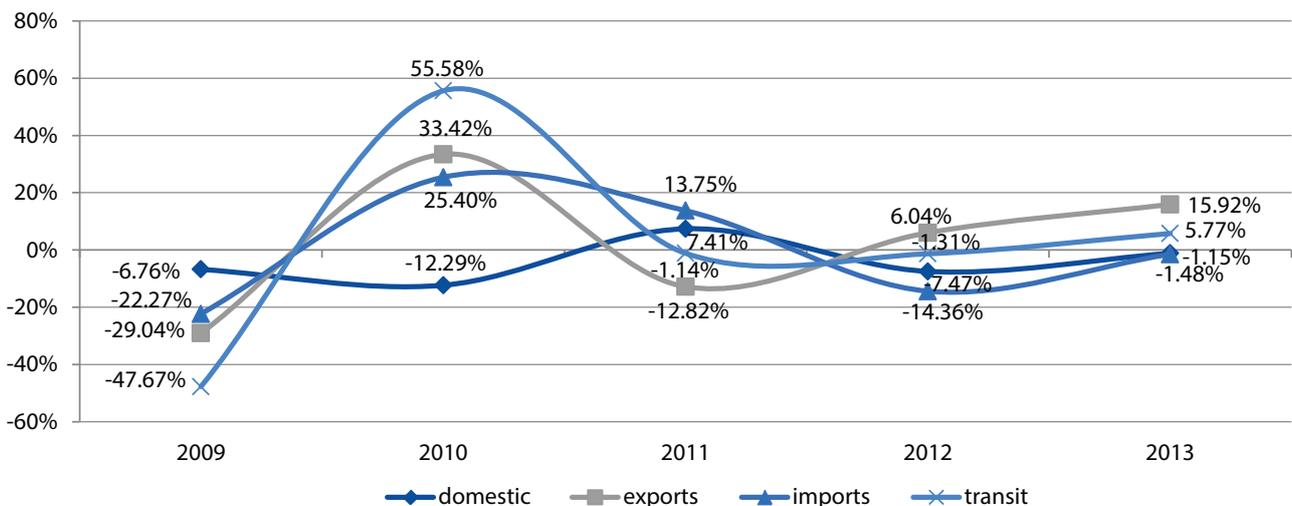
In 2013, PKP Cargo decreased below 50% of the market share in terms of weight and 60% in terms of transport performance.

ranked fifth in terms of share in performance. Worth noticing is the dynamic growth of PUK Kolprem in terms of weight (of 0.56 percentage point) and the fact that small companies with a maximum unit share of 0.5% exceeded the level of 4% of the total share. This resulted from the growing number of undertakings concluding an increasing number of small contracts. The highest increase in the share in transport performance was achieved by PKP Cargo Service (of 0.37 percentage point).

In 2013, when operating freight transport, the railway undertakings ran 74.3 m train-kilometres in total within the network of infrastructure managers, which is slightly (by 0.04%) less than in the previous year. From the point of view of the division of

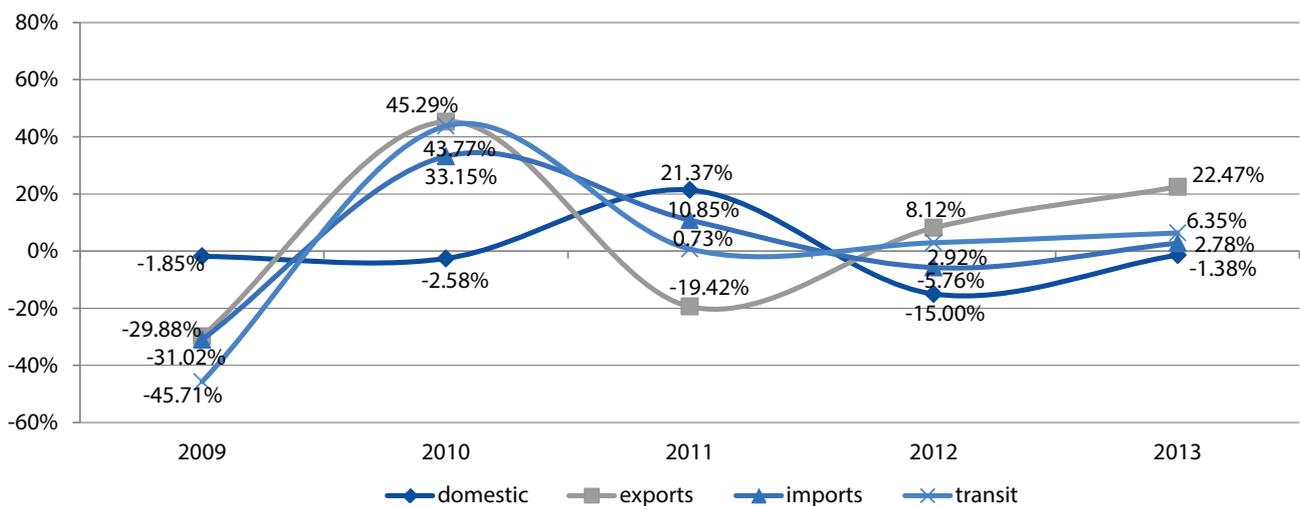
transport in terms of transport directions, it should be stated that domestic transport is the least susceptible to changes caused by external economic and political factors. This is mainly due to the very high demand for raw materials from the Polish energy industry, and in recent years also by numerous infrastructure investments. For this reason, domestic transport has been at a similar, very high, level for years (70% of the total weight and 55% of the total transport performance in 2013). Fluctuations in the internal market, taking into account a year-on-year basis, did not exceed a dozen or so percent, but 2013 brought a further decrease, this time much less significant than in 2012. However, the internal freight transport market by weight decreased to the lowest level in the last 10 years.

Fig. 29: The dynamics of transport in particular types of transport by weight of goods [year-on-year change]



Source: prepared by UTK

Fig. 30: The dynamics of transport in particular types of transport by transport performance [year-on-year change]



Source: prepared by UTK

The most dynamically developing type of transport is exports which recorded an increase of nearly 16% in transported weight and an increase of more than 22% in performance. Exports by rail transport increased by almost 4 m tonnes and 1.8 bn tonne-kilometres. Performance in exports was higher than that in imports. It was the second consecutive year of good export

performance, which results from the fact that exports are currently the leverage of the Polish economic growth. It can be stated that such good results in this segment translated into an increase in weight and transport performance, as recorded by the whole freight transport market.

Transit transport recorded an increase of ca. 6% in weight and performance, while imports recorded a decrease of 1.48% in weight (ca. 0.5 m tonnes), with a simultaneous increase in performance of 2.78%. The share of exports in international transport by performance increased from 38% to almost 42%, while by performance from 39.5% to 43.5%. The share of imports by weight decreased from 54% to 50.6%, and by performance from 45% to 42%. The share of transit changed very slightly it: marginally increased in terms of weight (it is at the level of 7.5%) and decreased in terms of performance (ca. 15% share).

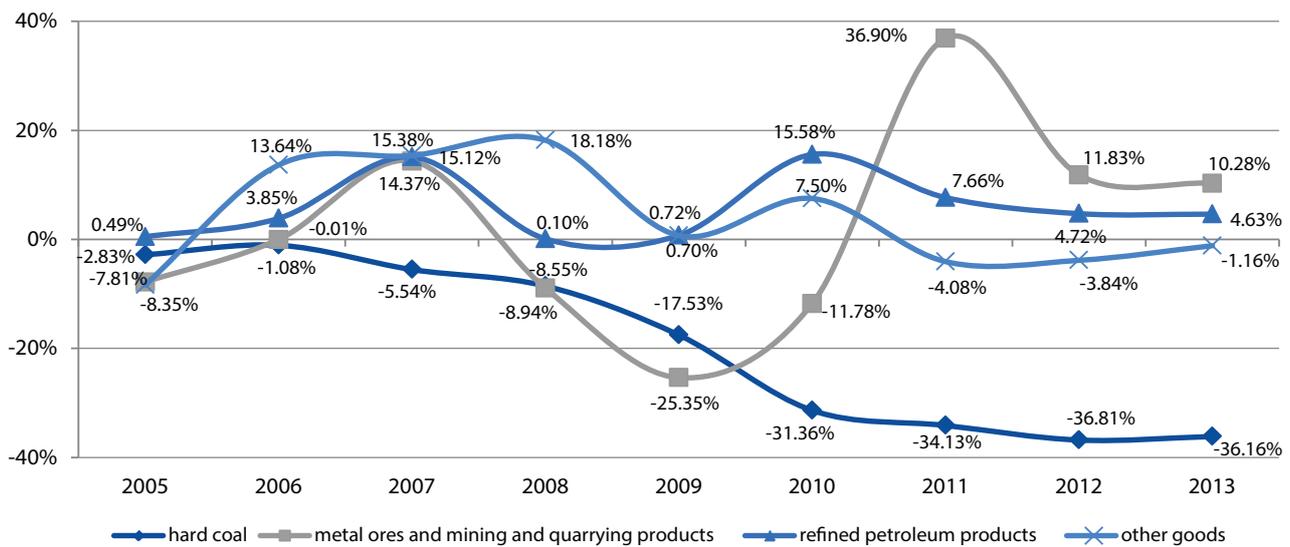
In 2013, the transport of hard coal, metal ores and mining and quarrying products constituted 67.5% of the total volume of transported weight and 58.1% of the transport performance by railway undertakings.

2.3.2. Polish freight rail market structure

Polish rail transport is based on the transport of bulk goods, mostly raw materials. In 2013, the transport of hard coal, metal ores and mining and quarrying products constituted 67.5% of the total volume of transported weight and 58.1% of the transport performance by railway undertakings. The highest market

share with regard to transported weight belonged to hard coal transport – 41.9% (97.7 m tonnes). It should be stressed that the volume of hard coal transport by rail has been dynamically falling for the few recent years. In 2006-2013, the volume of this transport fell by more than 35% (53.7 m tonnes). This was caused by, i.a., a change in the structure of demand for energy raw materials, including the growing importance of lignite, the production of which is relatively cost-effective, thus translating into low costs of electricity production.

Fig. 31: The dynamics of raw material transport by transported weight in 2013/2005 [2004=100%]



Source: prepared by UTK

In 2013 there was a decrease in metal ore and mining and quarrying products transport to the level of 59.8 m tonnes. It was caused by, i.a., the limitation of implementation of numerous infrastructure investments and the high demand, i.a., for aggregates, sand and gravel. Transport in this group of goods in the peak year of 2011 reached the level of 74.2 m tonnes. The growth dynamics in comparison to 2012, measured by the transported weight of goods, involved food products (12.2%), wood and articles of wood, cork (23.7%), as well as secondary raw materials and municipal wastes (54.3%).

As far as the indicator of transport performance in the railway infrastructure network is considered, the highest performance concerned the transport of hard coal, lignite, crude oil and natural gas (33.4%, 17.0 bn tonne-kilometres) as well as metal ores and mining and quarrying products (25.4%, 12.9 bn tonne-kilometres). The growth dynamics of the performance of railway undertakings concerned the transport of secondary raw materials and municipal wastes (59.9%), foodstuffs, beverages and tobacco products (40.4%), wood and articles of wood, cork (22.7%), and transport equipment (31.7%).



The table below includes a detailed analysis of particular groups of goods transported by rail, by weight and transport performance, including narrow-gauge transport.

Tab. 8: The volume of transported weight of goods by groups (in thousand tonnes) and market share in 2013

Weight of goods		
Groups of goods	In total (in thousand tonnes)	Market share [%]
TOTAL	233 196.920	100.00%
Products of agriculture, hunting, and forestry; fish and other fishing products	4180.678	1.79%
of which		
cereals	241.789	0.10%
Hard coal, lignite, crude oil and natural gas	98 533.615	42.25%
of which		
hard coal	97 662.758	41.88%
Metal ores and other mining and quarrying products	59 754.216	25.62%
of which		
iron ores	12 977.400	5.56%
aggregates, sand, gravel, clay	41 809.484	17.93%
Food products, beverages and tobacco products	1711.702	0.73%
Textiles and textile products, leather and leather products	41.895	0.02%
Wood and articles of wood, cork, articles of straw, paper and paper products, printed matter and recorded media	1815.378	0.78%
Coke, briquettes, refined petroleum products, manufactured gas	25 219.484	10.81%
of which		
refined petroleum products	14 756.148	6.33%
Chemicals, chemical products, and man-made fibres, rubber and plastic products, nuclear fuel	10 394.184	4.46%
Other non-metallic mineral products	2983.248	1.28%
of which		
cement, lime, gypsum	2021.765	0.87%
other building materials	782.383	0.34%
Basic metals, fabricated metal products, except machinery and equipment	8038.016	3.45%
Machines, appliances, electrical and electronic equipment	428.190	0.18%
Transport equipment	1014.607	0.44%
Furniture, other manufactured goods n.e.c.	362.246	0.16%
Secondary raw materials, municipal wastes	3947.586	1.69%
Letters, packages and courier's parcels and shipments	0.000	0.00%
Empty packaging	744.694	0.32%
Goods moved in the course of household and office removals, other non-market goods n.e.c.	4.597	0.00%
Mixed goods, excluding food products	865.382	0.37%
Unidentifiable goods	4927.131	2.11%
Other goods n.e.c.	8230.071	3.53%

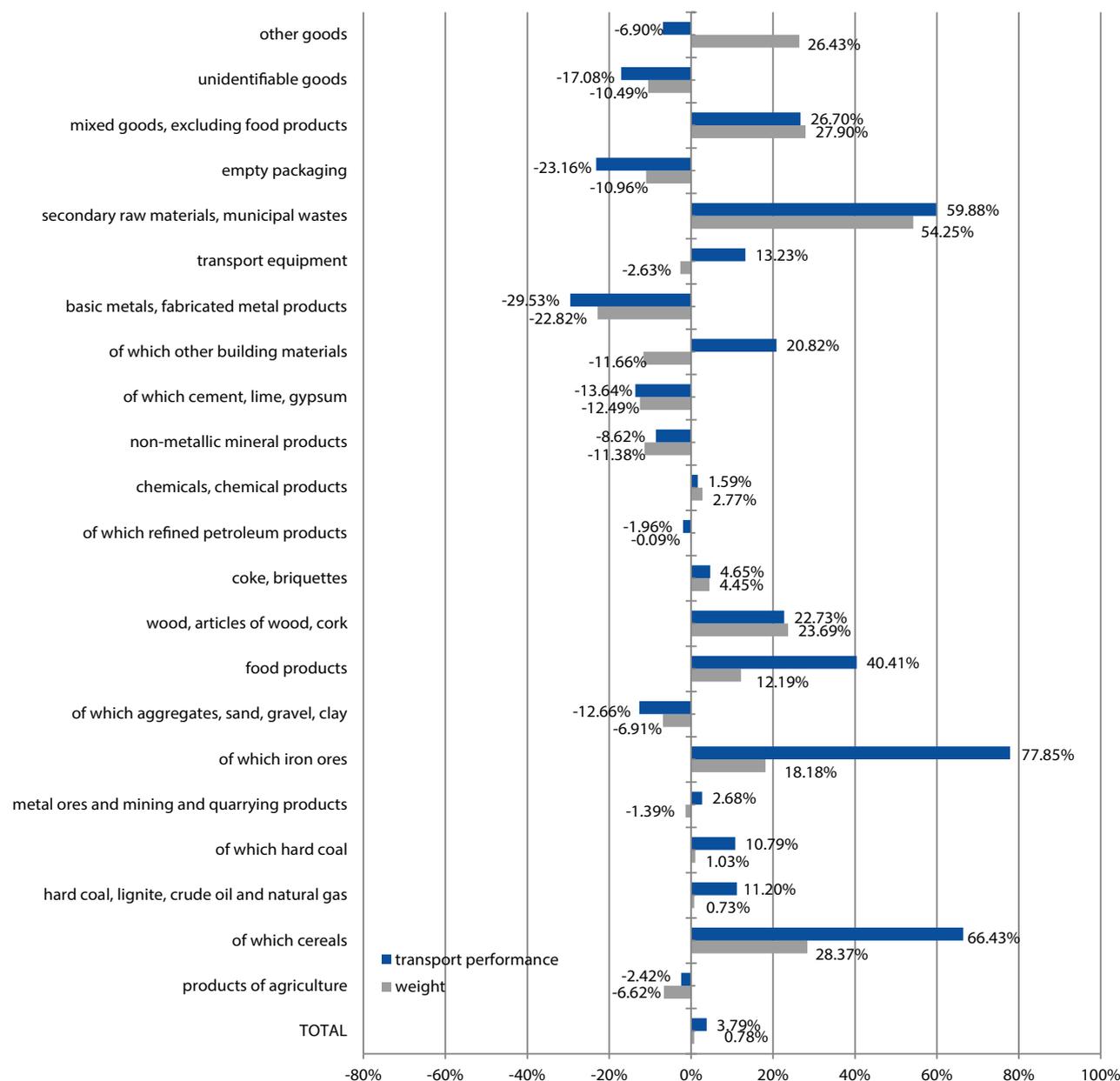
Source: prepared by UTK

Tab. 9: Transport performance by groups of goods (in thousand tonne-kilometres) and market share in 2013

Transport performance			
Groups of goods		In total (thousand tonne-km)	Market share [%]
TOTAL		50 900 254.061	100.00%
Products of agriculture, hunting, and forestry; fish and other fishing products		1 642 693.711	3.23%
of which	cereals	61 805.681	0.12%
Hard coal, lignite, crude oil and natural gas		16 976 616.017	33.35%
of which	hard coal	16 652 643.113	32.72%
Metal ores and other mining and quarrying products		12 909 365.479	25.36%
of which	iron ores	4 336 819.031	8.52%
	aggregates, sand, gravel, clay	7 171 617.917	14.09%
Food products, beverages and tobacco products		419 527.435	0.82%
Textiles and textile products, leather and leather products		7680.455	0.02%
Wood, wooded and cork goods, articles of straw, paper and paper products, printed matter and recorded media		561 206.769	1.10%
Coke, briquettes, refined petroleum products, manufactured gas		7 722 304.025	15.17%
of which	refined petroleum products	5 087 209.012	9.99%
Chemicals, chemical products, and man-made fibres; rubber and plastic products; nuclear fuel		3 254 249.534	6.39%
Other non-metallic mineral products		914 642.917	1.80%
of which	cement, lime, gypsum	664 355.496	1.31%
	other building materials	218 293.244	0.43%
Basic metals, fabricated metal products, except machinery and equipment		1 935 554.433	3.80%
Machines, appliances, electric and electronic equipment		143 523.721	0.28%
Transport equipment		300 549.863	0.59%
Furniture, other manufactured goods n.e.c.		164 417.576	0.32%
Secondary raw materials, municipal wastes		1 002 915.740	1.97%
Letters, packages and courier's parcels and shipments		0.000	0.00%
Empty packaging		261 153.719	0.51%
Goods moved in the course of household and office removals, other non-market goods n.e.c.		861.400	0.00%
Mixed goods, excluding food products		141 640.484	0.28%
Unidentifiable goods		1 838 026.137	3.61%
Other goods n.e.c.		703 324.643	1.38%

Source: prepared by UTK

Fig. 32: Transport volume changes involving particular groups of goods 2013



Source: prepared by UTK

The market structure of Polish freight transport by rail involving transported materials is still dominated by the transport of bulk goods, including energy raw materials. It is important to note the increase in biomass transport in 2013, including biodegradable solid and liquid substances of vegetable and animal origin, derived from the products, waste and remains from agricultural and forestry production as well as from the industry processing these products, and part of the remaining biodegradable waste. The main factor behind the growth of demand for this kind of transport is the increasingly stringent environmental protection standards and the implementation of EU climate policy, requiring a reduction in carbon dioxide emissions, including numerous investments in energy production based on biomass combustion and coal co-combustion. In 2013, railway undertakings transported over 1.9 m tonnes of biomass, which is 125.1 thousand tonnes more than in 2012 (an increase of 6.9%). The biomass transport market meas-

ured by transport performance shows a similar tendency. The transport performance of railway undertakings amounted to 566.8 m tonne-kilometres, which is 109.2 m more than in 2012 (an increase of 23.9%).

The share of biomass transport in the total transport volume at the end of 2013 amounted to 0.83% in terms of transported weight and around 1.11% concerning transport performance. The transport of wood including sawdust and other timber waste (35.6% of the total volume of the transported biomass), vegetable products (33.6%) including oilseed cake and other fat and vegetable oil extraction products (26.4%) dominated in 2013. Other unlisted products constituted 4.4% in terms of the total transported weight. Biomass transport was mainly performed as domestic transport and imports from Eastern European countries.

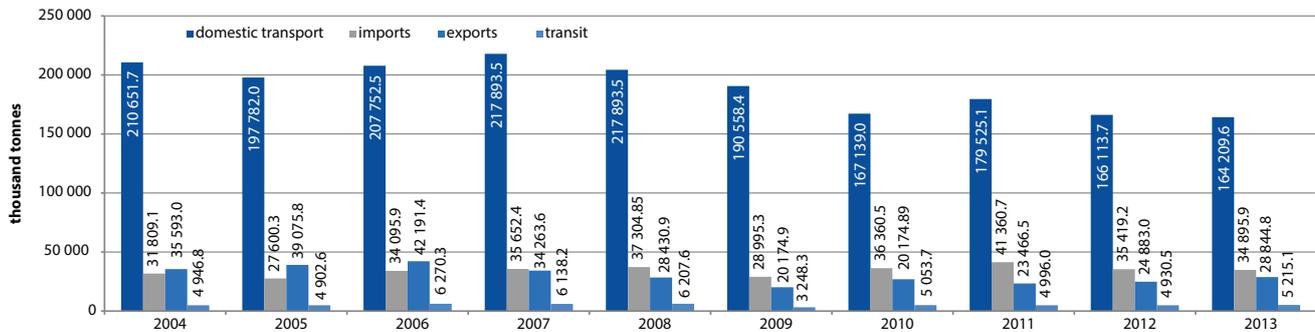
2.3.3. Freight transport in international transport

In this chapter, parcels sent for transport abroad or received from abroad by land or through sea ports (including those transhipped in ports) for further transport to the final terminal situated within the country and transited through the territory

of the country, were included in the volume of rail transport in international transportation. The volume of transport performance was calculated as the sum of the products of particular parcels' weight transported in wagons and the distance of their transport on the territory of the country.

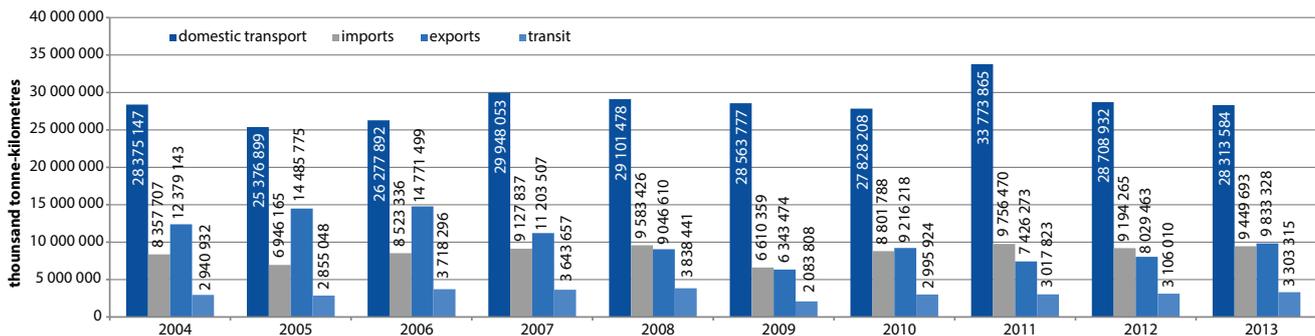
In 2013, freight transport in international transportation was provided by twenty three licensed railway undertakings.

Fig. 33: The weight of transported goods in domestic and international transport in the years 2004-2013



Source: prepared by UTK

Fig. 34: Transport performance in freight transport in domestic and international transport in the years 2004-2013



Source: prepared by UTK

In 2013, in international transport railway undertakings transported nearly 69.0 m tonnes of goods, and their transport performance amounted to 22.6 bn tonne-kilometres. It should be stressed that the volume of goods weight in comparison to the previous year grew by 5.7%, with a simultaneous increase in transport performance of 11.1%.

In 2013, an increase in the transported weight of goods was recorded for exports and transit, of 15.9% and 5.8%, respectively. Taking into account transport performance, it increased by 22.5% and 6.4%. A decrease in weight volume of 1.5% was recorded in imports. Domestic transport recorded a volume decrease in comparison to 2012. Almost 1.9 m tonnes of freight less than in the previous year were transported (a decrease of 1.1%), and the transport performance fell by 0.4 bn tonne-kilometres (a decrease of 1.4%). The share of transport in international transport measured by transported weight of freight is still relatively low. In 2003-2009 it fluctuated at the level of 25-30%, in 2010 it amounted to 29%, in 2011 to 28%, in 2012 to 28.2%, and in 2013 around 29.6%. Due to the distances to cover in this type of transport (in 2013, 328 km on average), its market share concerning transport performance is respectively higher. Until

2006 it fluctuated at the level of 50%, and in the following years there was a gradual decrease in this share. At the end of 2013,

In 2013, international transport railway undertakings transported nearly 69.0 m tonnes of goods, and their transport performance amounted to 22.6 bn tonne-kilometres (increase in transport performance of 11.1%).

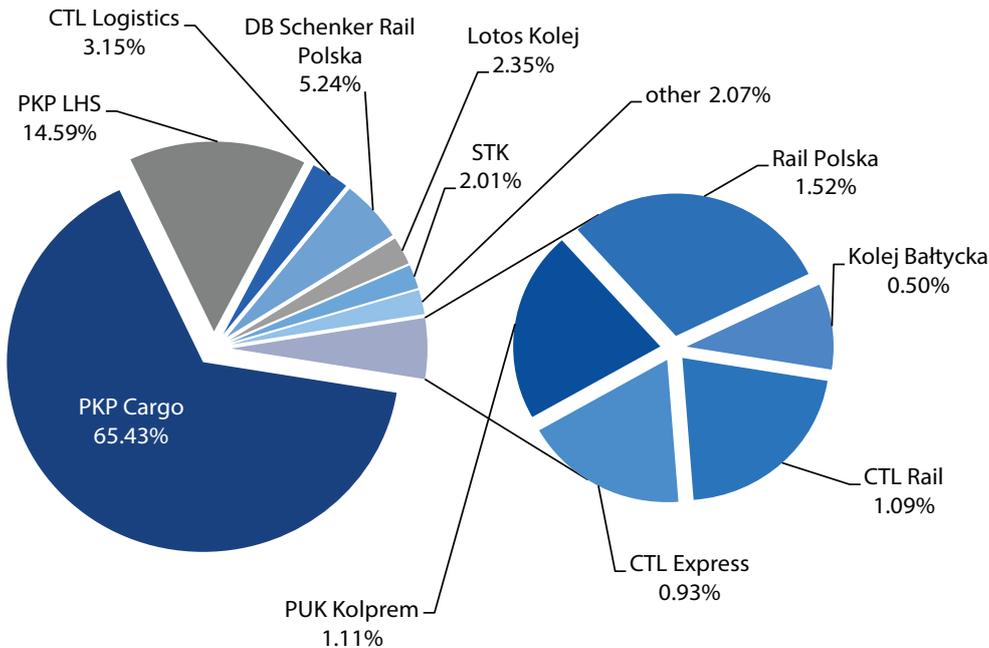
the share of international transport in the market involving transport performance reached the level of 44.4%.

In 2013, the greatest weight was transported in the imports segment – 34.9 m tonnes. By far the lowest result was recorded in transit – 5.2 m tonnes of goods. The highest level of transport performance expressed in net tonne-kilometres was reached in the exports segment, 9.8 bn in total.

The companies of PKP Group still held the largest share in international transport. Their share has fluctuated on a similar level of 85-90% for several years. At the end of 2013, it amounted to 80.0% by weight and 82.5% by transport performance. The market share of other railway undertakings has not changed significantly. The largest market share was held by companies from the DB Schenker and CTL capital groups: 5.3% and 5.2% by weight, and 4.9% and 4.8% by transport performance, as well as the companies of Lotos Kolej, respectively by weight

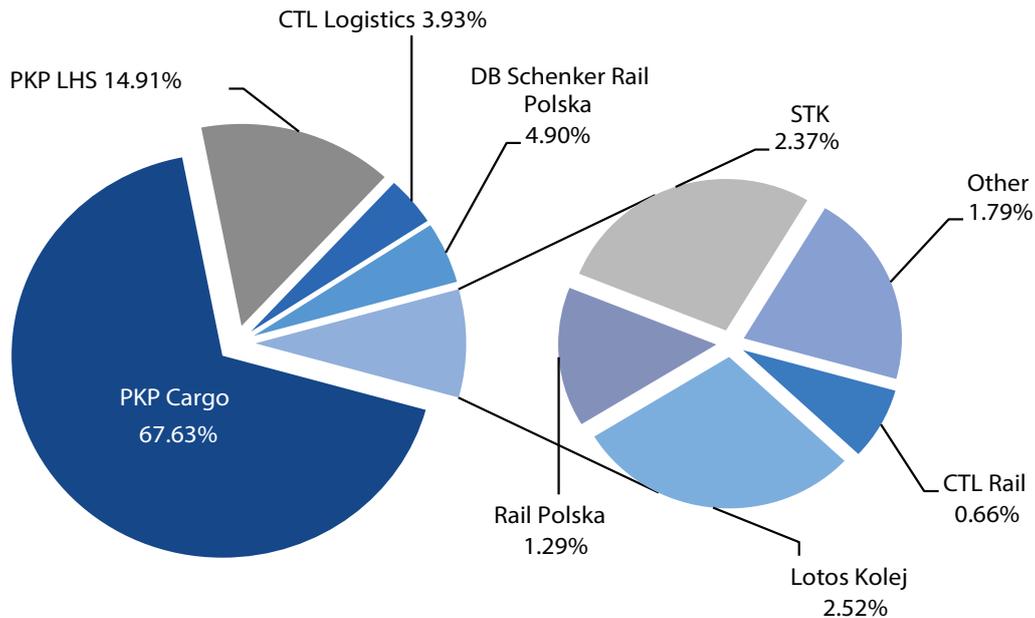
and performance – 2.4% and 2.5%, STK – 2.0% and 2.4% and Rail Polska – 1.5% and 1.3%, and PUK Kolprem 1.1% and 0.3%. The share of other companies in transported weight did not exceed 1%. Through the acquisition of certificates facilitating independent transport in the countries of East-Central Europe, Polish companies such as PKP Cargo S.A. can independently provide transport services in the Czech Republic, Germany, Slovakia, the Netherlands, Belgium, Romania, Bulgaria, Slovenia, Austria and Hungary.

Fig. 35: Railway undertakings' share in international transport in 2013 by weight (over 0.5%)



Source: prepared by UTK

Fig. 36: The railway undertakings' share in international transport in 2013 by transport performance (over 0.5%)

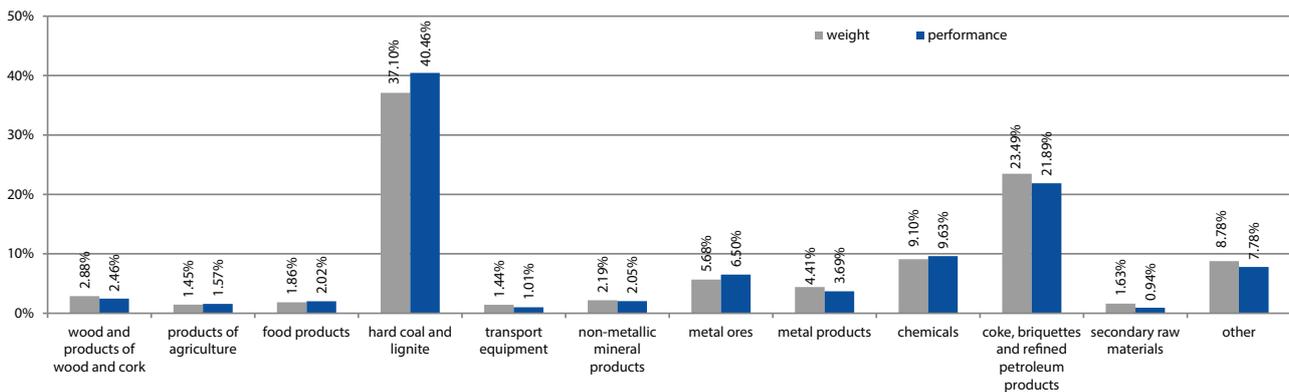


Source: prepared by UTK

While analysing the market structure of international transport, similarly to the previous years, a significant share of hard coal transport can be noticed. In 2013, the overall level of transported weight of coal was 21.1 m tonnes. More than 50% of this (10.7 m tonnes) constituted exports, mainly to Germany, Austria and the Czech Republic. The remaining part consisted of imports mainly from the countries of Eastern Europe, including Russia - almost 47%. In this market segment, the transport of raw materials such as hard coal, coke, briquettes and refined petroleum products

is still predominant. The largest amount of transported freight included coal (hard coal and lignite), with a share of 37.1% by weight and 40.5% by transport performance and freight such as coke, briquettes and refined petroleum products – 23.5% and 21.9%. A large share was also held by the transport of chemicals – 9.1% and 9.6%, respectively. It should be emphasised that the share of highly processed and general cargo goods is still insignificant, i.e. slightly over a dozen percent.

Fig. 37: The structure of goods transported internationally in 2013



Source: prepared by UTK

The largest trading partners for Poland remain Germany, Russia, Ukraine and the Czech Republic. For this reason, the share of rail transport in these directions is also the highest, in total over 60% of transported weight. As regards the place of dispatch and destination of goods (according to waybills), transportation between Poland and Germany constituted the largest share – 19.0% of the total volume of goods. In 2013, more than 12 m tonnes in total were transported between those countries, delivering transport performance at the level of 3.8 bn tonne-kilometres. It should be pointed out that transport to and from Russia, in comparison to 2012, slightly decreased in terms of transported weight, i.e. by 0.11%. In terms of transport performance there was

Transportation between Poland and Germany constituted the largest share – 19.0% of the total volume of goods.

a decrease of 4.3%. An important partner in trade is also Ukraine. The share in transport between Poland and Ukraine by weight amounted to 14.2%, and by transport performance to 14.5%.



2.3.4. Intermodal transport

In 2013, intermodal transport was performed in Poland by ten licensed railway undertakings. It should be emphasised that despite the increase in the number of entities compared to

2012, the total number of railway undertakings performing intermodal transport is still low, which suggests that new railway undertakings are not interested in entering the intermodal transport market; instead they focus on the transport of bulk goods, such as hard coal or aggregates.

Tab. 10: The names and number of undertakings performing intermodal rail transport in the years 2004-2013

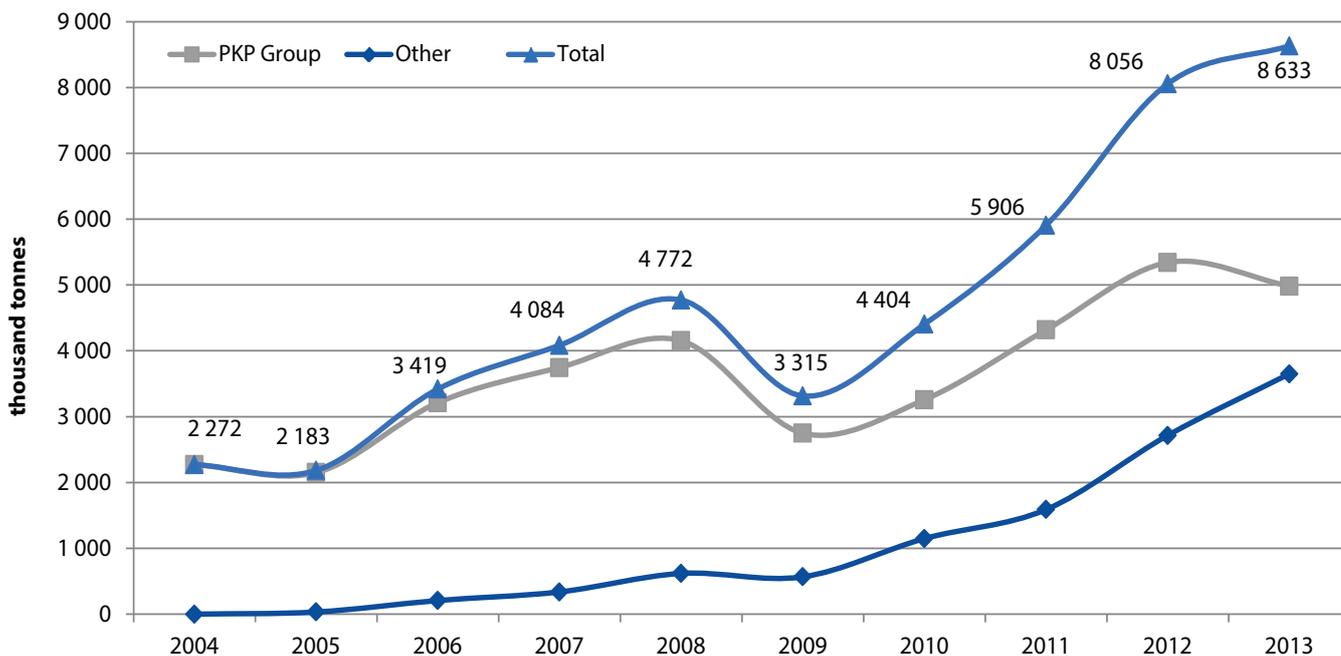
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
PKP Cargo	PKP Cargo	PKP Cargo	PKP Cargo	PKP Cargo	PKP Cargo	PKP Cargo	PKP Cargo	PKP Cargo	PKP Cargo
PKP LHS	PKP LHS	PKP LHS	PKP LHS	PKP LHS	PKP LHS	PKP LHS	PKP LHS	PKP LHS	PKP LHS
	DB Schenker	DB Schenker	DB Schenker	DB Schenker	DB Schenker	DB Schenker	DB Schenker	DB Schenker	DB Schenker
		DB Kolchem	DB Kolchem	DB Kolchem	DB Kolchem				
			CTL Rail	CTL Rail					CTL Rail
			CTL Logistics		CTL Logistics		CTL Logistics	CTL Logistics	CTL Logistics
				CTL Express	CTL Express	CTL Express	CTL Express	CTL Express	
					Lotos Kolej	Lotos Kolej	Lotos Kolej	Lotos Kolej	Lotos Kolej
							STK Wroclaw	STK Wroclaw	STK Wroclaw
								Majkoltrans	
									Ecco Rail
									ITL Polska
								Rail Polska	Rail Polska
2	3	4	6	6	7	5	7	9	10

Source: prepared by UTK

In 2013, railway undertakings transported a record number of cargo units – 689.3 thousand pieces in total, including more than 681 thousand containers (nearly 1.108 m TEU). Compared to 2012, the number of transported units increased by 6.9%. The total weight of transported cargo exceeded 8.6 m tonnes, and the transport performance amounted to 3 bn tonne-kilometres. Comparing the data to the results from 2012, it constituted an increase in transport of 7.2% and 0.7%, respectively. It should be stressed that this is the best outcome recorded in the history of Polish intermodal rail transport.

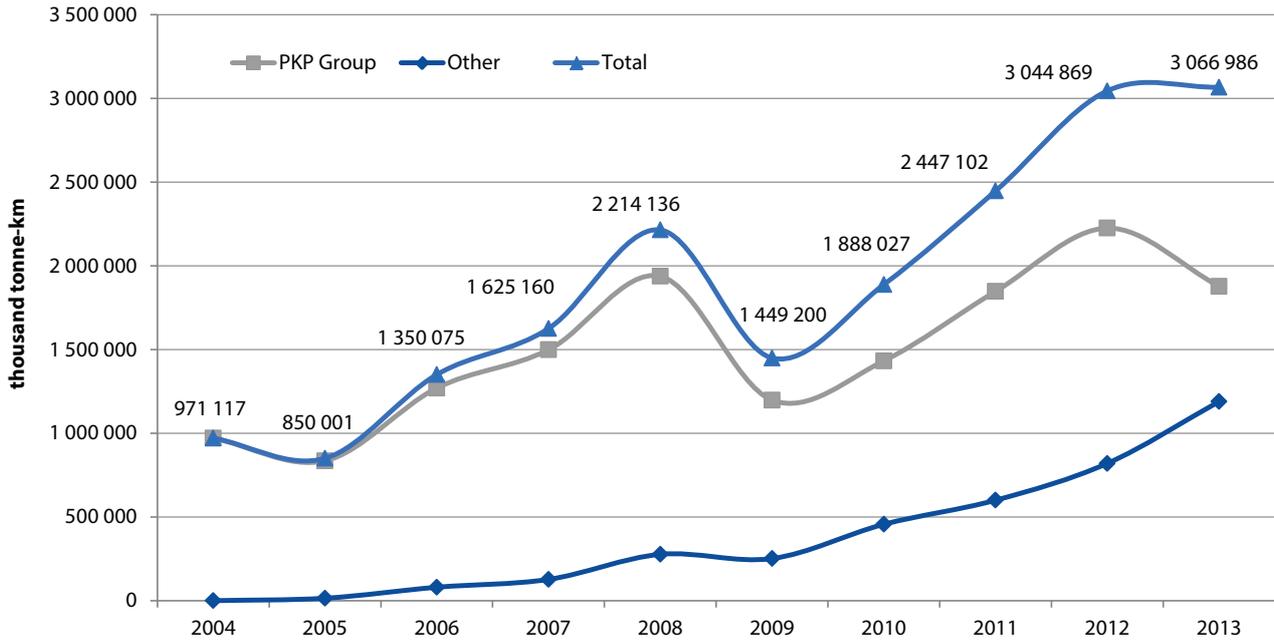
In 2013, railway undertakings transported a record number of cargo units – 689.3 thousand pieces in total, including more than 681 thousand containers - nearly 1.123 m TEU.

Fig. 38: Intermodal rail transport in Poland by weight



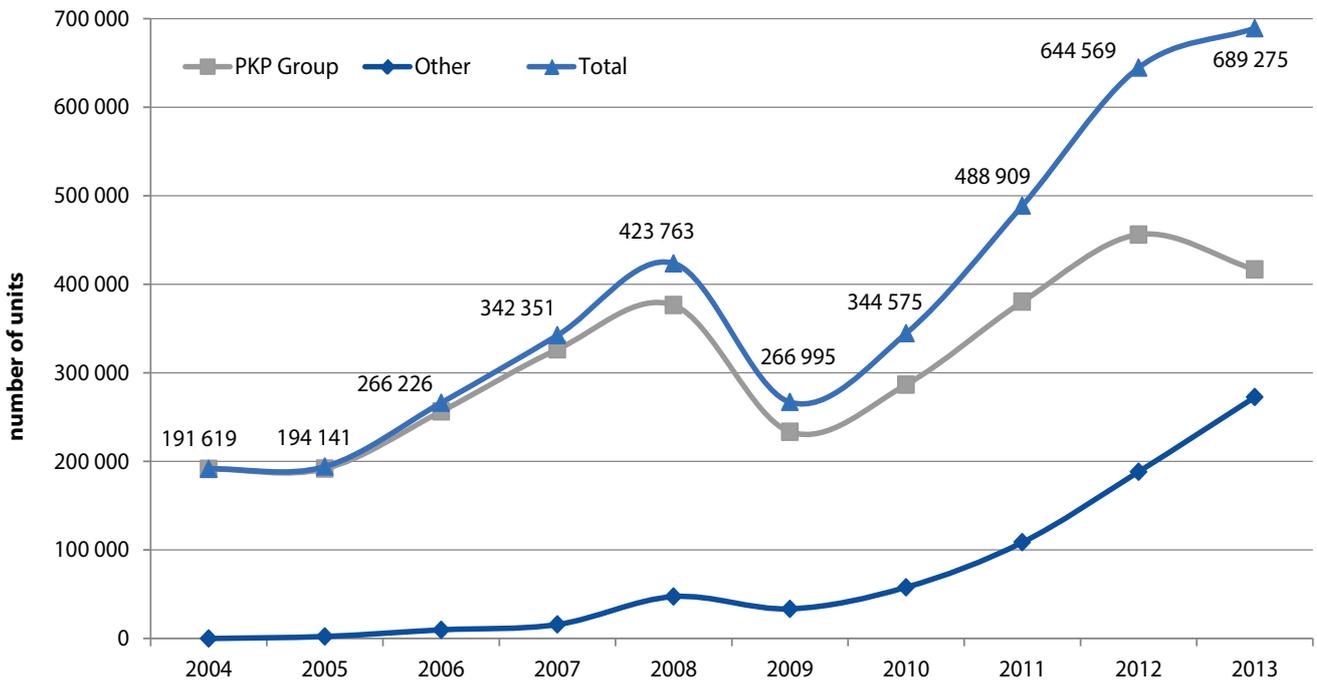
Source: prepared by UTK

Fig. 39: Intermodal rail transport in Poland by transport performance



Source: prepared by UTK

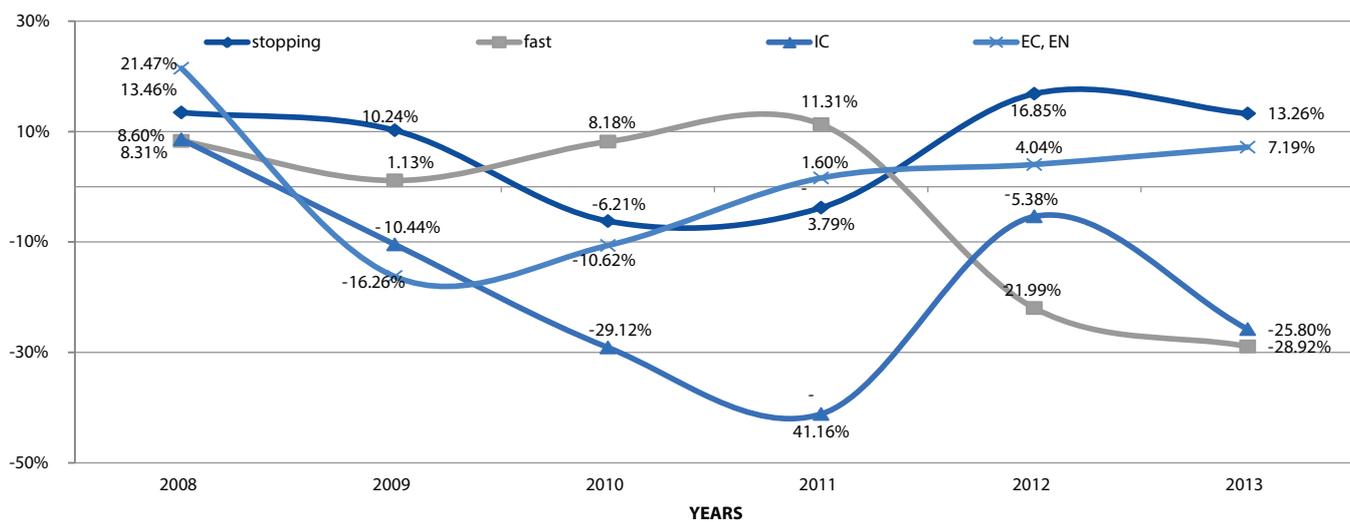
Fig. 40: Intermodal rail transport in Poland by the number of units



Source: prepared by UTK

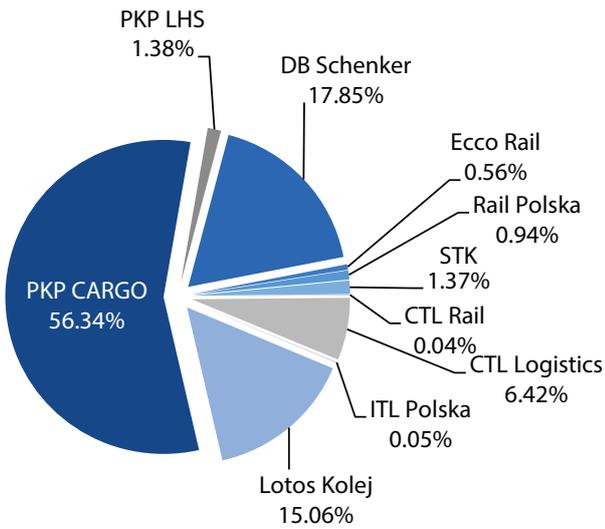


Fig. 41: Intermodal rail transport in Poland by the number of TEUs



Source: prepared by UTK

Fig. 42: The share of railway undertakings in the intermodal transport market by weight in 2013



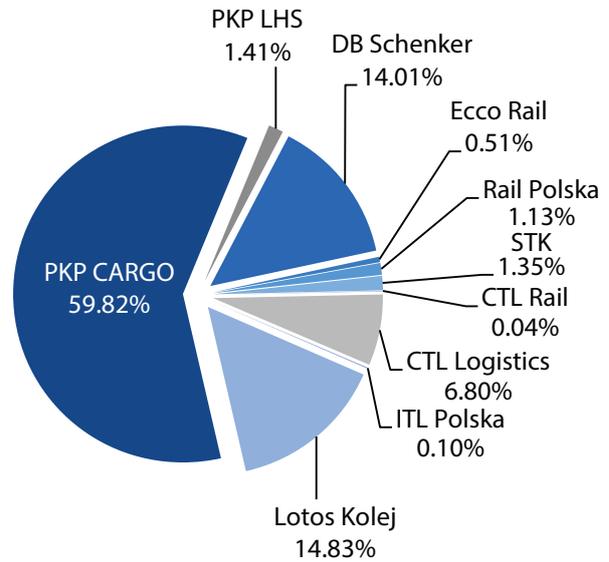
Source: prepared by UTK

Similarly to 2012, the main players in this market segment were the companies in the PKP Group.

Similarly to 2012, the main players in this market segment were the companies in the PKP Group. At the end of 2013, the market share of PKP Cargo and PKP LHS was, in terms of weight of transported units, 57.7% and in transport performance - 61.2%.

The share of international transport is still very high and fluctuates around the level of 71.7% in terms of transport performance.

Fig. 43: The share of railway undertakings in the intermodal transport market by transport performance in 2013



Source: prepared by UTK

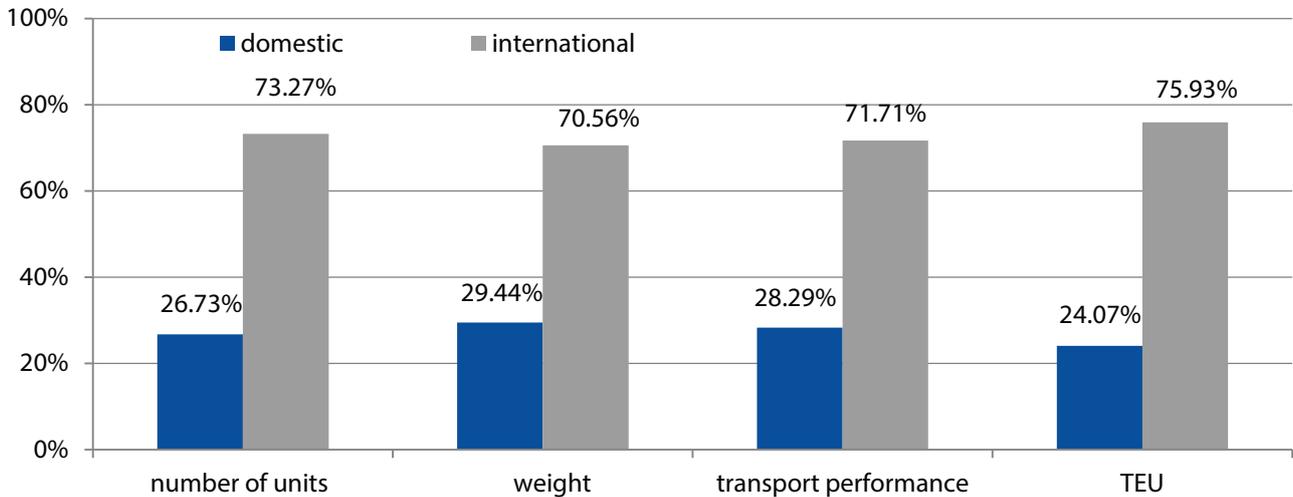
In 2013, DB Schenker Rail Polska and Lotos Kolej also had a significant market position in terms of volume of intermodal transport. Their share in the market, taking into consideration transported weight, was 17.9% and 15.1%. In terms of transport performance it was 14.0% and 14.8%, respectively.



As in the previous years, the share of domestic transport in total intermodal transport was still low; measured by transport performance it was 28.3%. Due to the high costs of transport by rail – disproportionate to road transport costs – and the low quality of the railway track parameters (including the average

commercial speed), the transport of containers on short distances is unprofitable. The profitability of intermodal transport by rail increases with transport distance. The share of international transport is still very high and fluctuates around the level of 71.7% in terms of transport performance.

Fig. 44: Transport share in international transport in intermodal transport in 2013

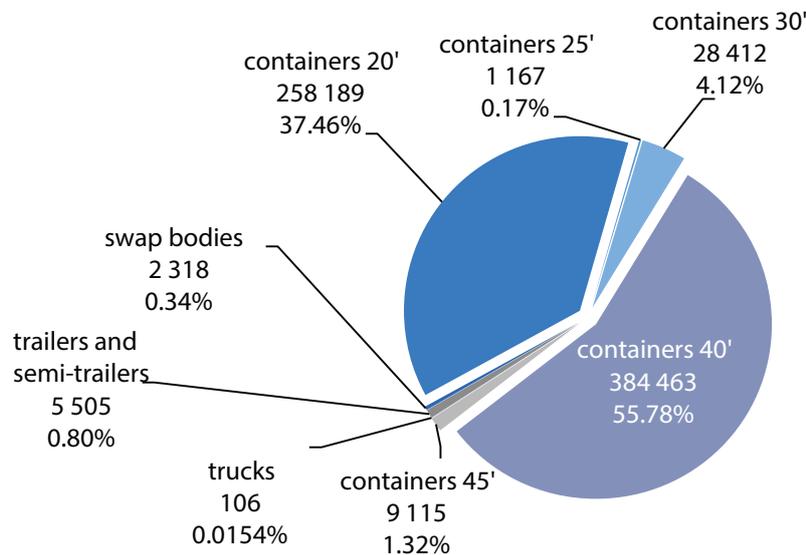


Source: prepared by UTK

Taking under consideration international transport, the share of particular types of transport by the number of transported units amounted to 29.58% in imports, 25.79% in exports and 17.90% in transit. Polish intermodal transport is mostly based

on land transport which constituted almost 75.10% (in terms of transport performance). The share of transport through seaports is still low - in 2013 it amounted to ca. 24.90%.

Fig. 45: The share of specific types of transport units in 2013



Source: prepared by UTK

Intermodal transport is mainly performed with the use of containers, the share of which in the total number of units amounted to 98.85% at the end of 2013. 40-foot unit transport dominated in this segment, constituting 55.78%. The share of other containers amounted to 37.46% for 20-foot and 4.12% for 30-foot containers.

In 2013, the share of intermodal transport in the rail-transport market measured by cargo weight reached almost 3.7%. It was 0.2 percentage point higher than in 2012. Intermodal transport performance amounted to 6.03% - a decrease of 0.18 percentage point in comparison to 2012.

With a stable level of granting discounts for intermodal trains at a sufficiently high level, the intermodal transport share in the rail market may still grow to reach a dozen or so percent by 2020. It should be stressed that in order to reduce the disproportions between Poland and other European Union countries, the share of this segment in the rail market should grow at the rate of around 1-2% per year, which depends on the preferential conditions for railway undertakings to operate on the market, as well as on the introduction of a stable policy of intermodal transport support in a longer time perspective.

2.3.5. The transport of dangerous goods

The transport of dangerous goods is performed mainly in domestic transport which in 2013 constituted nearly 68.5% in terms of weight and 76.8% in terms of transport performance.

In 2013, twenty four licensed railway undertakings conducted economic activity involving the transport of dangerous goods.

In 2013, railway undertakings transported in total over 21.5 m tonnes of dangerous goods, which resulted in transport performance of 5.9 bn tonne-kilometres.

The transport of dangerous goods' share in the rail market amounted to 9.2% in terms of weight and nearly 11.7% in

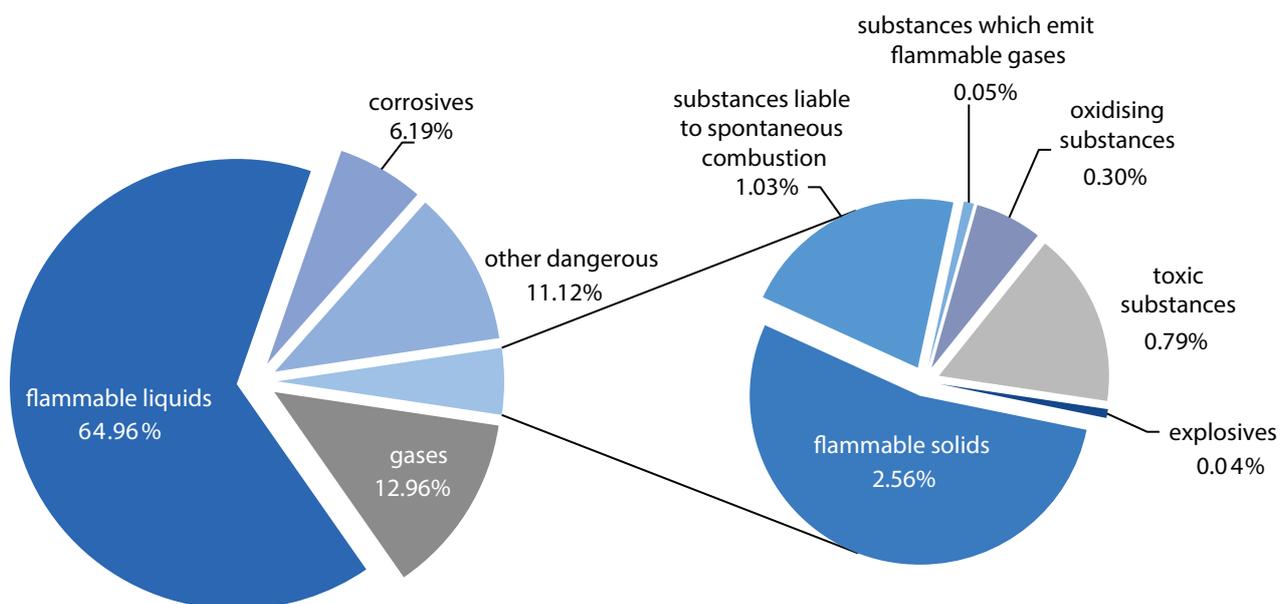
terms of transport performance. In the years 2009-2013, this segment's share decreased from 14.6% to less than 12%. This type of market behaviour is not an effect of a production decrease in the chemical industry, but it results from part of rail transport being taken over by road transport.

The transport of dangerous goods is performed mainly in domestic transport which in 2013 constituted nearly 68.5% in terms of weight and 76.8% in terms of transport performance. International transport in this kind of transport is rather insignificant. For example, the export share fluctuated around 6.1% in terms of transport performance and in terms of transit it was 1.5%.

In 2013, still the most important group of goods in transport was flammable liquid materials (crude petroleum and petroleum products, e.g. fuels, diesel oil), the market share of which was nearly 65%. Nevertheless, in comparison to the previous year it was a decrease of 1.2%. According to the classification of dangerous goods (provided for in the RID regulations for international rail transport of dangerous goods) apart from flammable liquids the largest share in dangerous goods transport was held by goods in class 2 – gases (13.0% by weight and 10.8% by transport performance), class 8 – corrosives (6.2% and 5.8%, respectively) and class 4.1 – flammable solids (2.6% and 2.9%).

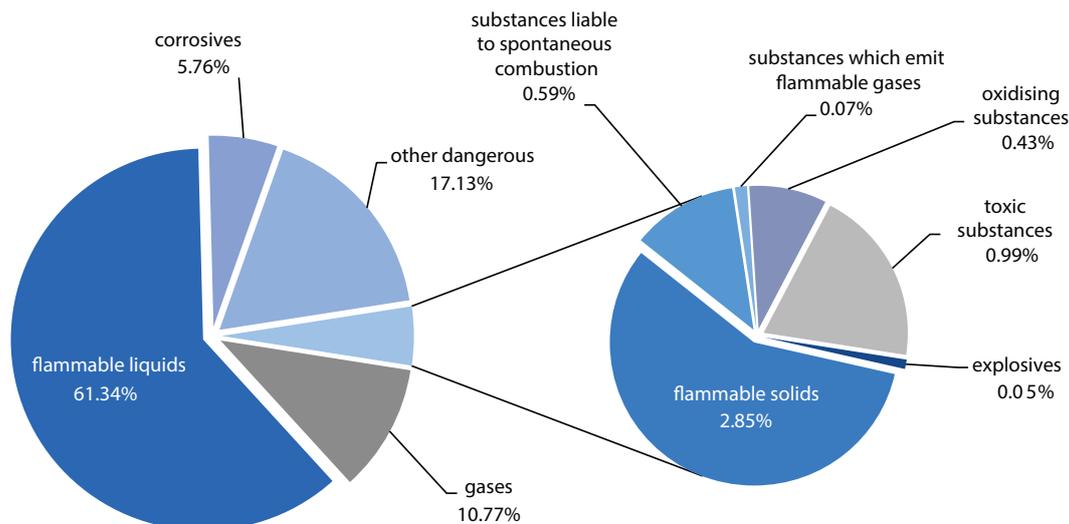
In 2013, the most important group of goods in transport was flammable liquid materials crude petroleum and petroleum products, e.g. fuels, diesel oil.

Fig. 46: The share of transport of particular groups of dangerous goods in 2013 (by weight)



Source: prepared by UTK

Fig. 47: The share of transport of particular groups of dangerous goods in 2013 (by transport performance)



Source: prepared by UTK

Rail transport is currently the most popular form of transport of liquid fuels in Poland. This is mainly due to the fact that rail provides greater transport opportunities, and this has a significant impact on transport safety. The necessity of materials transshipment is one of the elements that, due to human error or a defect in equipment, can lead to life-threatening situations, environmental damage or material losses. For this reason, rail transport seems to be the best option when it comes to the transport of larger quantities of dangerous goods.

Rail transport is currently the most popular form of transport of liquid fuels in Poland due to the fact that rail provides greater transport opportunities, and this has a significant impact on transport safety.

2.3.6. The structure of the rolling stock held by freight railway undertakings

The assessment of data on the rolling stock managed by freight railway undertakings in 2013 showed an increase in the number of locomotives. The total number of locomotives used by RUs grew by 30 to 3707. Compared to the previous year the number

of wagons dropped by 1773 (98 106 in total). Diesel locomotives accounted for 59% of all locomotives (2185, i.e. 27 less than in 2012). The number of electric locomotives grew from 1445 to 1501 (by 3.9%). In terms of wagons, open freight wagons were the most popular and accounted for ca. 59% (57 745). Compared to 2012, their number dropped by 1.3% (755 units). A significant decrease in the number of locomotives managed by freight RUs, as recorded in 2008, was mainly due to PKP Intercity's taking over part of the rolling stock originally owned by PKP Cargo.

Tab. 11: The number of traction and wagon rolling stock managed by freight RUs in the years 2004-2013

Type of rolling stock	Year										
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Lokomotives total	4 467	4 432	4 398	4 462	3 988	3 944	3 699	3 710	3 677	3 707	
Electric locomotives	1 857	1 855	1 884	1 831	1 506	1 512	1 488	1 457	1 445	1 501	
Diesel locomotives	2 590	2 557	2 494	2 610	2 461	2 410	2 189	2 233	2 212	2 185	
Steam locomotives	20	20	20	21	21	22	22	20	20	21	
Wagons total	114 839	111 897	109 487	112 842	112 699	107 795	101 074	101 511	99 879	98 106	
Covered wagons	11 125	10 469	9 754	9 807	8 961	7 609	5 814	4 898	4 563	4 397	
Open freight wagons	68 261	67 169	66 714	67 493	66 281	63 166	58 724	59 978	58 500	57 745	
Flat wagons	13 238	12 945	12 770	12 962	13 312	12 871	12 165	11 958	11 225	11 202	
Tank wagons	15 556	14 702	13 472	13 801	14 877	14 873	15 041	14 665	15 746	15 357	
Refrigerated wagons	95	17	4	0	0	0	0	0	0	0	
Wagons with opening roofs	763	984	1019	954	1015	1 015	1 201	1 197	1 238	1 220	
Special wagons	5 801	5 611	5 754	7 825	8 253	8 261	8 129	8 815	8 128	7 747	
Freight wagons - others	0	0	0	0	0	0	0	0	479	438	

Source: prepared by UTK

The replacement of the rolling stock continues to proceed slowly, thus having no considerable impact on the extension of the transport package.

The replacement of the rolling stock continues to proceed slowly, thus having no considerable impact on the extension of the transport package. Customers continue to focus on the transport of bulk goods such as coal and aggregates. On the Polish market there is a shortage of specialised wagons designed, e.g. for the transport of containers in the intermodal system and of highly processed commodities. The rapid modernisation of the

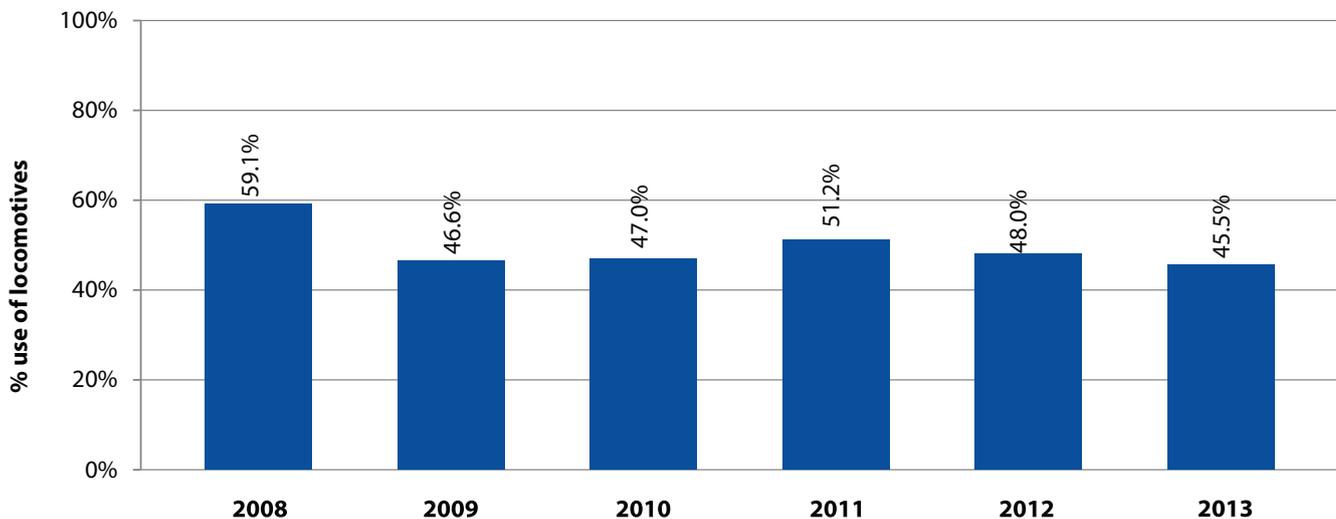
rolling stock would significantly reduce both external costs and transport expenditures, while also improving transport capacity, speed, and safety, and reducing wear on the tracks and noise levels. Railway undertakings have recognised the opportunities offered by intermodal transport and they look forward to procuring advanced rolling stock for combined transport in the near future. It needs to be noted that the great majority of RUs still make their investment plans dependent on winning long-term transport contracts, which is possible only by preparing a long-term development strategy and financial support for this market sector, including the establishment of an allowance and privilege policy for charges levied for access to railway infrastructure.

Poland's freight rolling stock continues to be seriously worn-out, with the average service life of locomotives at the end of 2013 at 33.8 years (0.4 year more than a year before), and that of wagons at 28 years (an increase of 1.0). It needs to be noted that Polish RUs have one of the largest rolling stocks across the European Union, both in terms of the number of wagons and traction units used for freight transport. Unfortunately, a significant part of this stock remains out of service, and the condition and technical parameters of those in service show a considerable deviation from the European average.

Poland's freight rolling stock continues to be seriously worn-out, with the average service life of locomotives at the end of 2013 at 33.8 years, and that of wagons at 28 years.

The above-mentioned data show that despite investments in new rolling stock, the average service life of locomotives and wagons continues to grow. In 2013 the proportion of the rolling stock used by freight RUs dropped to 45.5% at the end of the year (in 2012 it fluctuated around 48%).

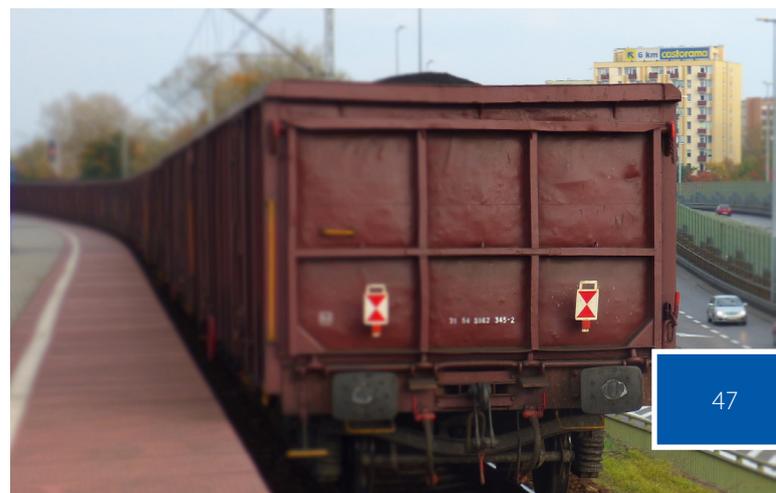
Fig. 48: Locomotive use in the years 2008-2013 by daily stock



Source: prepared by UTK

Compared to the year before, 2013 saw reduced use of freight wagons.

In line with the information provided by freight RUs, a number of investments are scheduled for 2014 to procure and modernise their rolling stock. In 2014, investments in freight rolling stock are to consume PLN 550.9 m (of which ca. 77% for buying new, and the remaining PLN 126 m for modernising the existing rolling stock).



2.3.7. The volume, structure and performance of freight transport

The volume of the Polish freight rail transport market in 2013 can be characterised by the following statistics

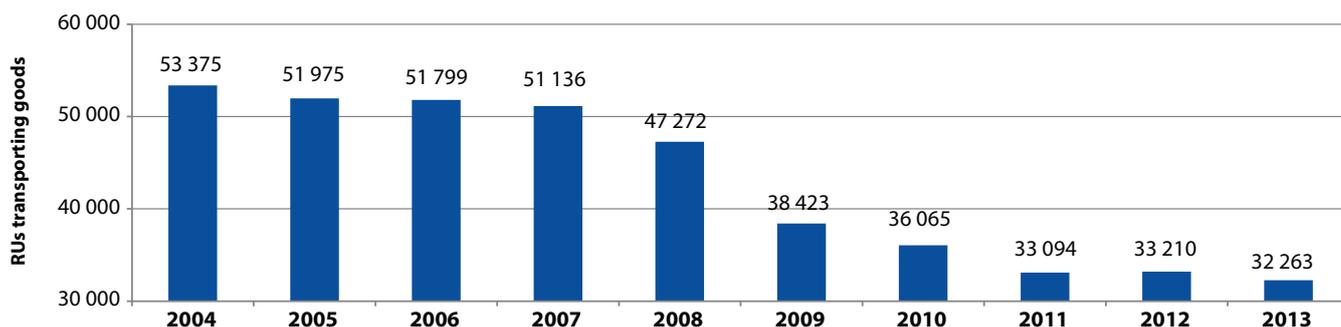
- the number of licensed companies - 82,
- the number of RUs providing transport services - 61,
- annual market revenue - PLN 8.124 bn,
- annual rail service provision costs - PLN 7.962 bn,
- employment in the railway sector - 32 263 people,
- transported commodity volume - 233.2 m tonnes,
- transport performance - 50.9 bn tonne-kilometres,

- operational performance - 75.3 m train-kilometres,
- the number of locomotives - 3707,
- the number of freight wagons - 98 106.

Compared to 2012, in 2013 there was a slight decrease in employment. An overview of employment in freight transport in the past years shows that over the last 10 years companies have gradually reduced their workforce. In 2012 there was a slight increase (of 0.35% compared to 2011), but 2013 recorded a decrease of 2.85% (from 33 210 to 32 263 people).

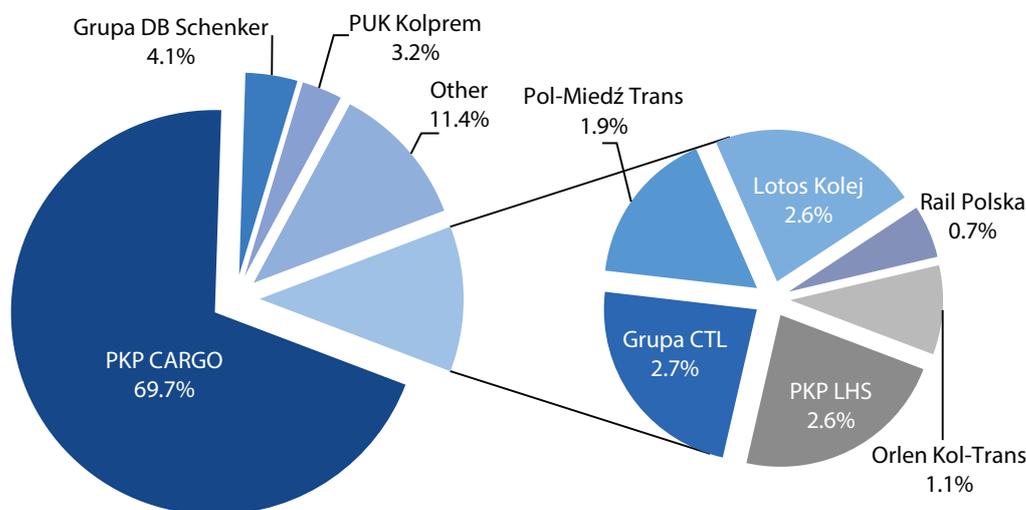
In the overall number of employees 52% were staff directly involved in the management and safety of rail traffic. Their number amounted to ca. 16.8 thousand people, including 8.9 thousand locomotive drivers (of which ca. 1.2 thousand were multi-task locomotive drivers and drivers of heavy units used in railway construction and for railway traction network), 500 locomotive driver's assistants, ca. 2.3 thousand rolling stock auditors, ca. 1.1 thousand shunters and ca. 2.6 thousand shunting masters.

Fig. 49: Employment in freight transport in the years 2004-2013



Source: prepared by UTK

Fig. 50: The employment structure in 2013 (workforce, market share in terms of jobs)

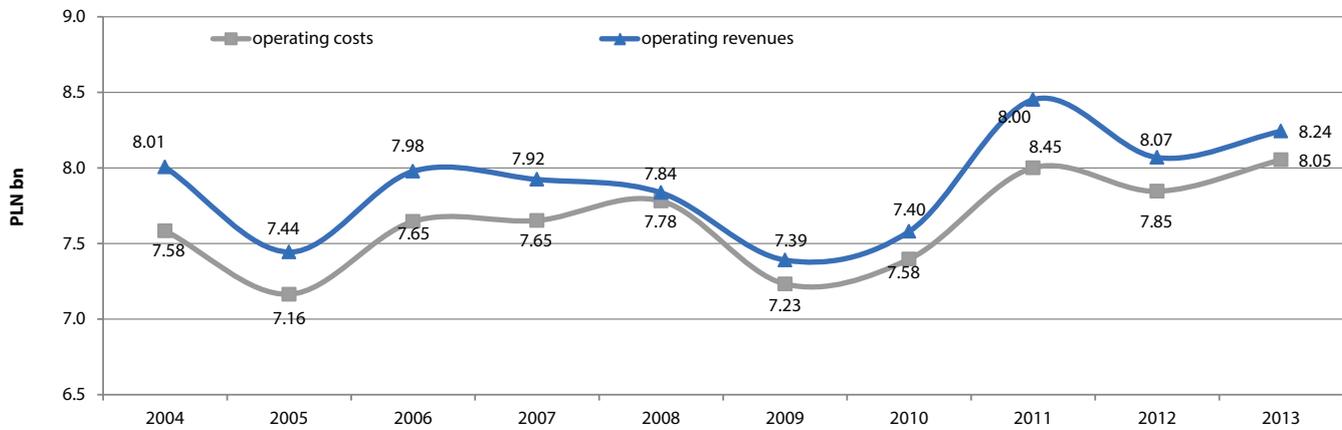


Source: prepared by UTK

The second place in terms of workforce is DB Schenker with an over 4% market share. Thanks to its development and increase in workforce, PUK Kolprem reached a 3.2% market share. No other company or group operating in the market employed

more than 1000 people. Other leaders in employment include the CTL Group (2.7%), PKP LHS (2.7%), Lotos Kolej (2.6%), Pol-Miedź Trans (1.9%), and Orlen Kol-Trans (1.1%).

Fig. 51: The operating performance of freight RUs (in PLN bn) in the years 2004-2013



Source: prepared by UTK

After a temporary drop in the revenue and costs of operations in 2012, 2013 saw a growth in these areas. Compared to 2012, the total revenue of freight RUs increased in 2013 by PLN 170 m (2.1%). The corresponding total costs grew by PLN 200 m (2.5%). Freight RUs made a profit of nearly PLN 190 m (a drop of nearly 18% compared to PLN 223 m in 2012).

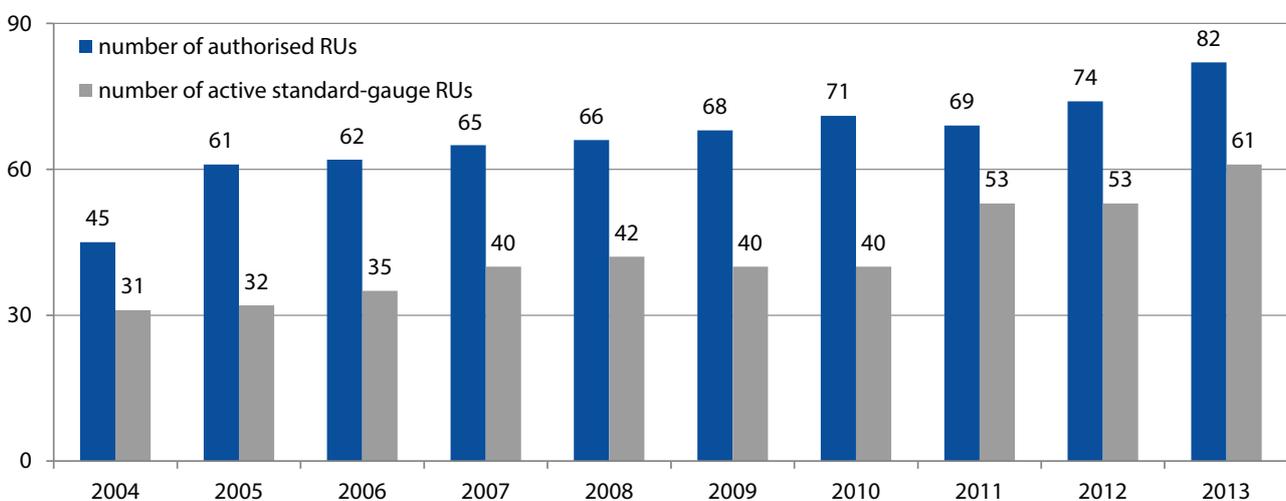
by 82 railway undertakings, including 5 held by narrow-gauge RUs. Since the establishment of the Office of Rail Transport, its President has issued 111 licences for such transport services. The large number of licences issued between 2003 and 2005 was connected with the implementation of the so-called First Railway Package, involving Poland's obligation to issue licences for freight rail transport.

2.3.8. Freight transport licensing

In line with Article 10(1)(2) of the Rail Transport Act, in 2013 the President of the Office of Rail Transport granted 7 licences for the provision of goods transport services. At the end of the previous year, valid licences (suspended excluded) were held

The past years have shown a number of changes in the ownership structure. As a result, despite the emergence of new licensed companies, the number of authorised and operating companies has not changed significantly. In 2013, freight transport services were actually provided by 61 companies (compared to 53 in 2012).

Fig. 52: The number of licensed RUs authorised to provide transport services and actually operating on the rail market in the years 2004-2013



Source: prepared by UTK

The number of railway undertakings with valid licences for goods transport in 2013 was 85, including 3 suspended, 5 narrow-gauge and 1 broad-gauge licences.

In 2013 transport services were provided by 61 companies (over 74% of all with valid licences), which marks a significant growth compared to previous years. This could mean a gradual increase in the interest in and demand for rail transport services and also basing business decisions on the launch of such operations with a view to making profits. Freight rail transport is being more and more frequently perceived as a profitable business.

As a result of administrative proceedings conducted *ex officio* between 1 January and 31 December 2013, the President of UTK made the following decisions regarding the licensing of goods transport by rail:

- 7 licences were issued, including for the transport of goods by rail,
- 4 licences for the transport of goods by rail were suspended,
- 17 licences for the transport of goods by rail were subject to data amendment,
- 5 decisions were made to extend the deadline for the launch of licensed operations in the transport of goods by rail,
- 2 decisions were made to revoke licences for the transport of goods by rail,

In 2013 transport services were provided over 74% of all railway undertakings with valid licences.

- 2 decisions were made to amend or reverse decisions made by the President of UTK, including in respect of transporting goods by rail,
- 1 decision was made to refuse licensing for the transport of goods by rail,
- 10 decisions were made to discontinue proceedings on the suspension of licences for the transport of goods by rail,
- 3 decisions were made to discontinue proceedings on imposing penalties in respect of the transport of goods by rail,
- 7 decisions were made to impose penalties on rail RUs as a result of their failure to submit on time the required certificate confirming compliance with good-standing requirements for the transport of goods by rail,
- 2 applications for licences for the transport of goods by rail were left unexamined.





3. The railway infrastructure

3.1. Changes across the markets of EU Member States

3.1.1. The European railway infrastructure

Since 2012 the Office of Rail Transport has been part of IRG-Rail, the group of independent European rail market regulators.

Since 2012 the Office of Rail Transport has been part of IRG-Rail, the group of independent European rail market regulators. As part of its operations, the group publishes an annual report on the monitoring of rail markets across EU Member States entitled 'IRG-Rail Annual Market Monitoring Report', in which its members present data on the nature of rail markets in their respective home countries. The

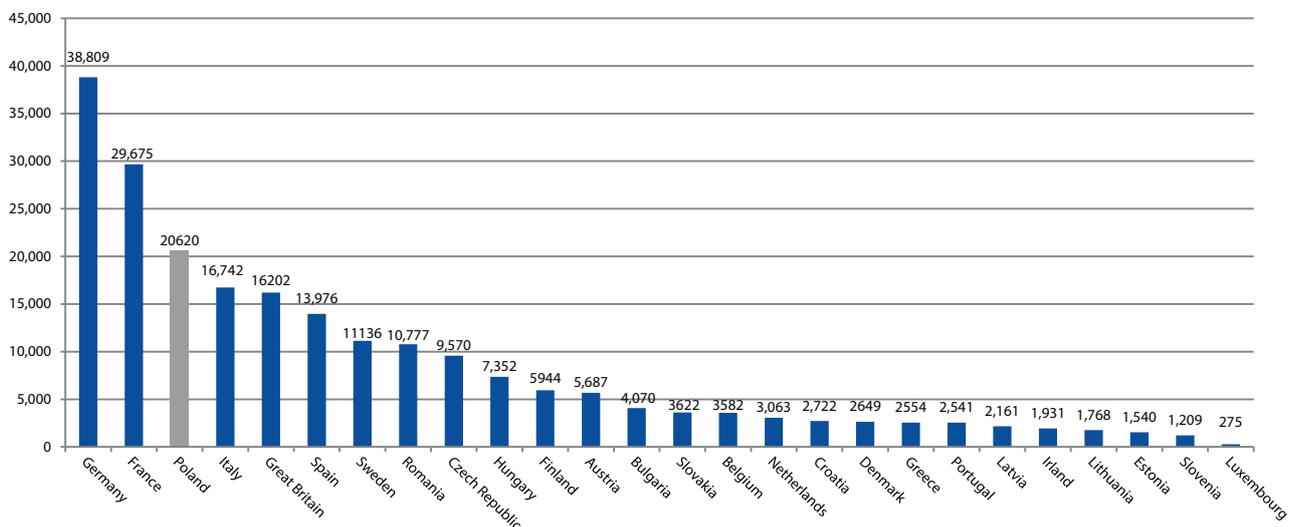
most recent report, published in February 2014, provides data for 2012.

The first parameter to characterise the volume of railway infrastructure is line length. In 2012, the EU Member State to have the longest network of railway lines (excluding Malta and Cyprus, which do not have any operational railway lines) was Germany (38 809 km), followed by France (29 675 km) and Poland (20 620 km). The shortest railway lines were found in countries such as Luxembourg (275 km), Slovenia (1 209 km) and Estonia (1 540 km).

Another parameter is line density measured as the length of railway lines per 100 square km. In this respect, Poland, with 6.59, is ranked 10th. The highest scores were recorded by the Czech Republic (12.13), Belgium (11.73), Germany (10.88) and Luxembourg (10.63). At the other end of the continuum the report listed Finland (1.76) and Greece (1.94).

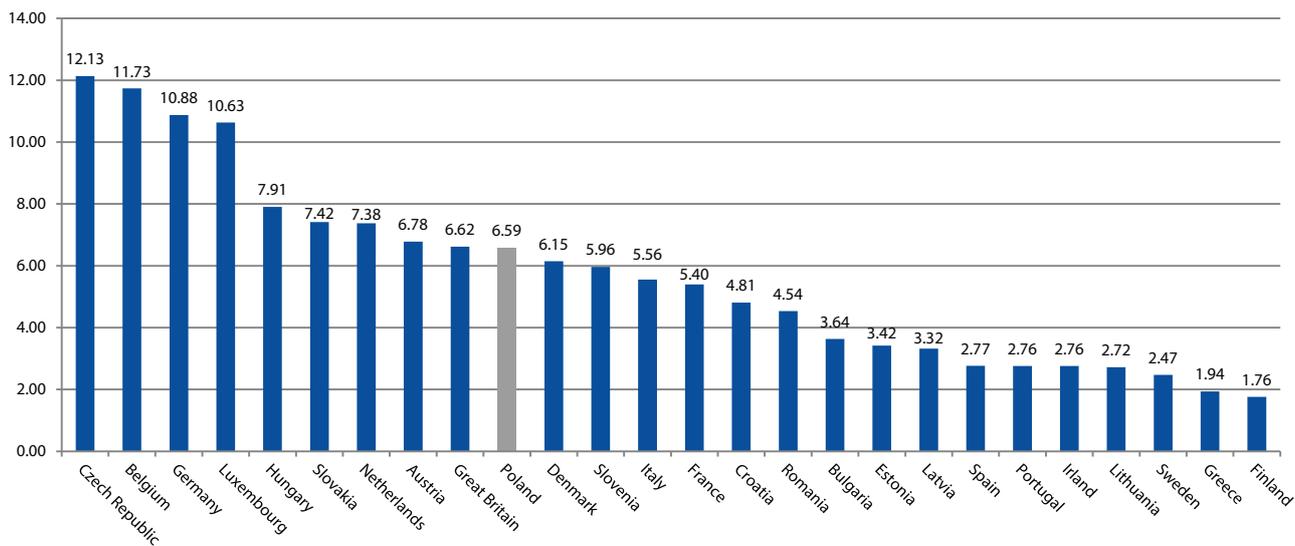
In 2012, the EU Member State to have the longest network of railway lines was Germany – more than 38.8 thousand km.

Fig. 53: The length of railway lines across EU Member States in 2012 (in km)



Source: prepared by UTK using IRG-Rail and Eurostat data

Fig. 54: The density of railway lines across EU Member States in 2012 (in km per 100 square km)



Source: prepared by UTK using IRG-Rail and Eurostat data

In EU Member States operational performance, expressed in train-kilometres, is generally provided by network managers using passenger trains. The average for all EU Member States featured in the IRG-Rail report is 80.8% of the operational performance of passenger trains, compared with 19.2% train-kilometres travelled by freight trains. More than half of train-kilometres are generated by the freight trains of only two countries (Estonia and Latvia, with 62% and 68% respectively). In Poland, the proportion of passenger to freight train-kilometres was 65% to 35%, which indicates a quite significant use of railway lines by freight transport.

A comparative analysis shows that the level of Polish rates for freight ranks Poland well above the European average, which in 2012 was EUR 2.70 per train-kilometre.

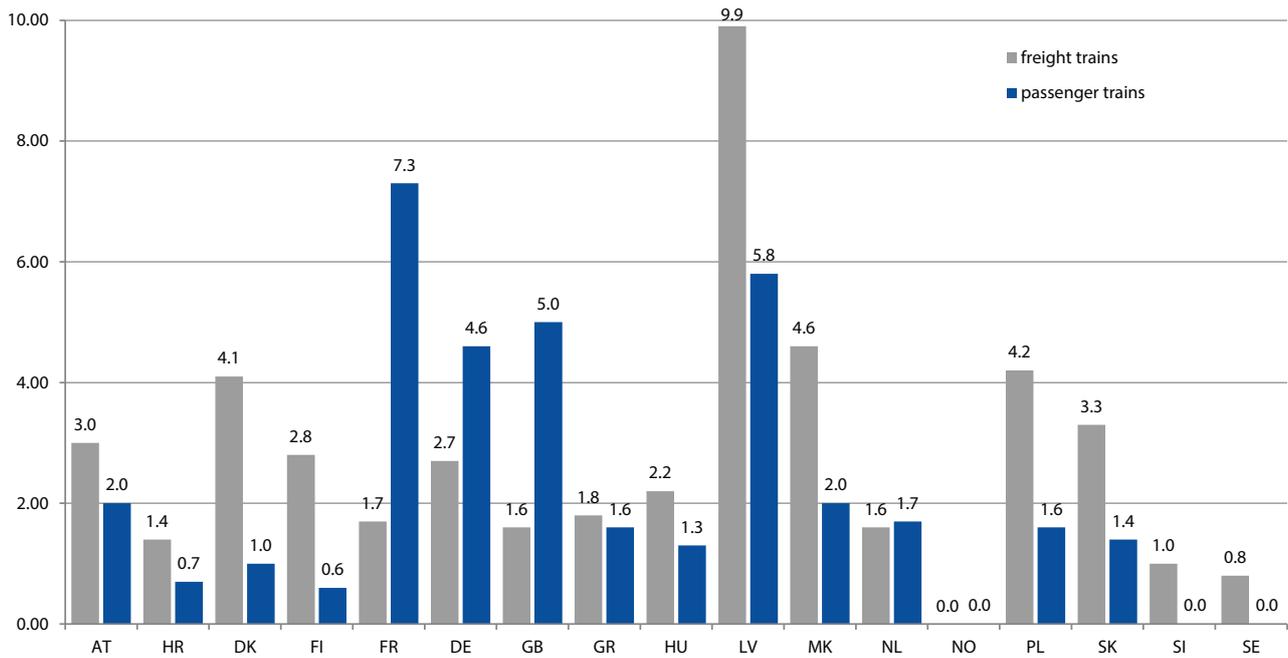
3.1.2. Charges for access to the railway infrastructure across EU Member States

As at the time this document was prepared, the aggregate data for 2012 for individual EU Member States on the average rates for access to the railway infrastructure had been published in the previously mentioned 'IRG-Rail Annual Market Monitoring Report' of February 2014.

A comparative analysis shows that the level of Polish rates for freight ranks Poland well above the European average, which in 2012 was EUR 2.70 per train-kilometre. In comparison, the average basic rate for minimum access to the railway infrastructure in Poland in 2012 was more than twice as high as in France and ca. 50% higher than in Germany (countries with a high volume of freight transport). The highest rates for access to the railway infrastructure were found in Latvia and amounted on average to EUR 9.90 per train-kilometre. The lowest rates were recorded in Sweden and Slovenia - EUR 0.80 and EUR 1.00 per train-kilometre, respectively.



Fig. 55: The average unit rates in 2012 for freight and passenger trains in EU Member States



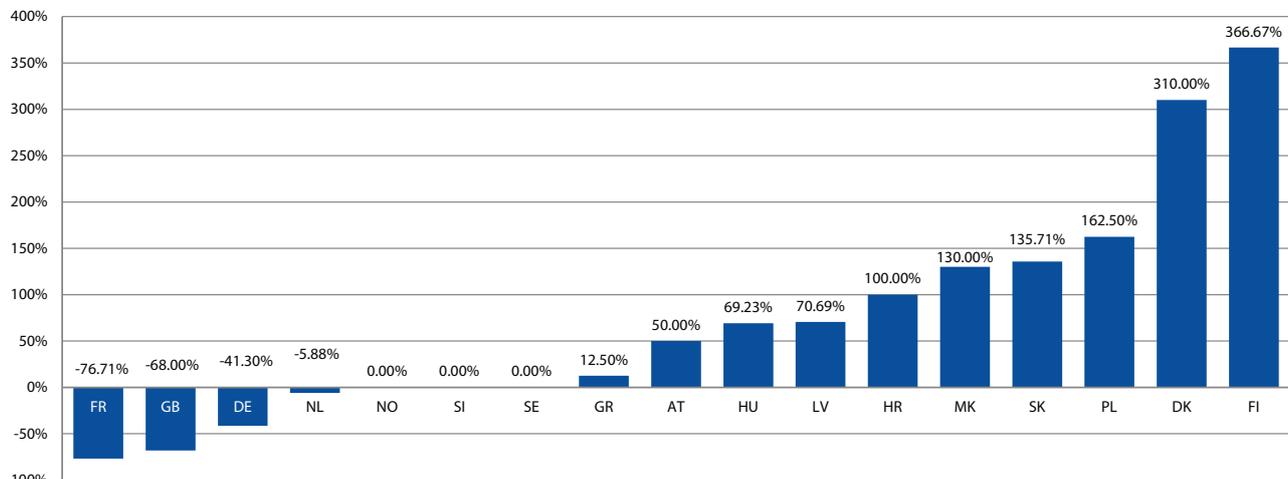
Source: prepared by UTK on the basis of the Annual Market Monitoring Report by IRG-Rail

In Poland, in 2012, the rates for passenger traffic was EUR 1.60 per train-kilometre and was almost three times below the average for EU Member States, which amounted to EUR 4.29 per train-kilometre.

In Poland, in 2012, the rates for passenger traffic was EUR 1.60 per train-kilometre and was 168% below the average for EU Member States, which amounted to EUR 4.29 per train-kilometre. It should be stated that the vital elements to determine the demand for rail services are, in addition to the access fee, the quality characteristics of the offered infrastructure, the scope of the transport services, the speed of transit, and the punctuality and timeliness of the delivery.

It also needs to be noted that in rail transport in Poland, freight RUs face much higher infrastructure access costs than passenger RUs. The ratio of rates for freight trains to passenger trains is one of the highest in Europe. The Polish average rate for access to the infrastructure for freight trains is 162% higher than the average rate for passenger trains.

Fig. 56: The ratio of unit rates for access to railway infrastructure for freight and passenger trains across EU Member States in 2012



Source: prepared by UTK on the basis of the Annual Market Monitoring Report by IRG-Rail

It needs to be emphasised that Poland's infrastructure has fallen behind the majority of other European countries, in particular those with highly liberal rail transport markets. In 2012 in Poland the quality ratio (fees for access to infrastructure / average speed of rail transport) was more than three times lower than in Germany. This situation is likely to improve if the rates are lowered and the proportion of the infrastructure in good technical condition is increased as a result of modernisation projects. This could consequently lead to lower costs of access to the infrastructure, which in 2012 amounted to ca. 35% of all transport costs incurred by some Polish railway undertakings.

- Jastrzębska Spółka Kolejowa Sp. z o.o.,
- CTL Maczki-Bór S.A.,
- UBB Polska Sp. z o.o.,
- PMT Linie Kolejowe Sp. z o.o.

In addition, PKP SKM w Trójmieście Sp. z o.o., as the only company, served both as an RU and the manager of the public railway infrastructure. Another two businesses, including Warszawska Kolej Dojazdowa Sp. z o.o. and PKP LHS Sp. z o.o. (which manages only 1520 mm broad-gauge line), combined the functions of an RU and a manager, although they did not share their infrastructure with any other RUs. Narrow-gauge lines were used by 22 operators, who successfully managed to combine the functions of service providers (mainly passenger transport) and infrastructure users/owners.

At the end of 2013 operations involving the management of railway infrastructure were carried out by 10 companies, 7 of which provided only such services.

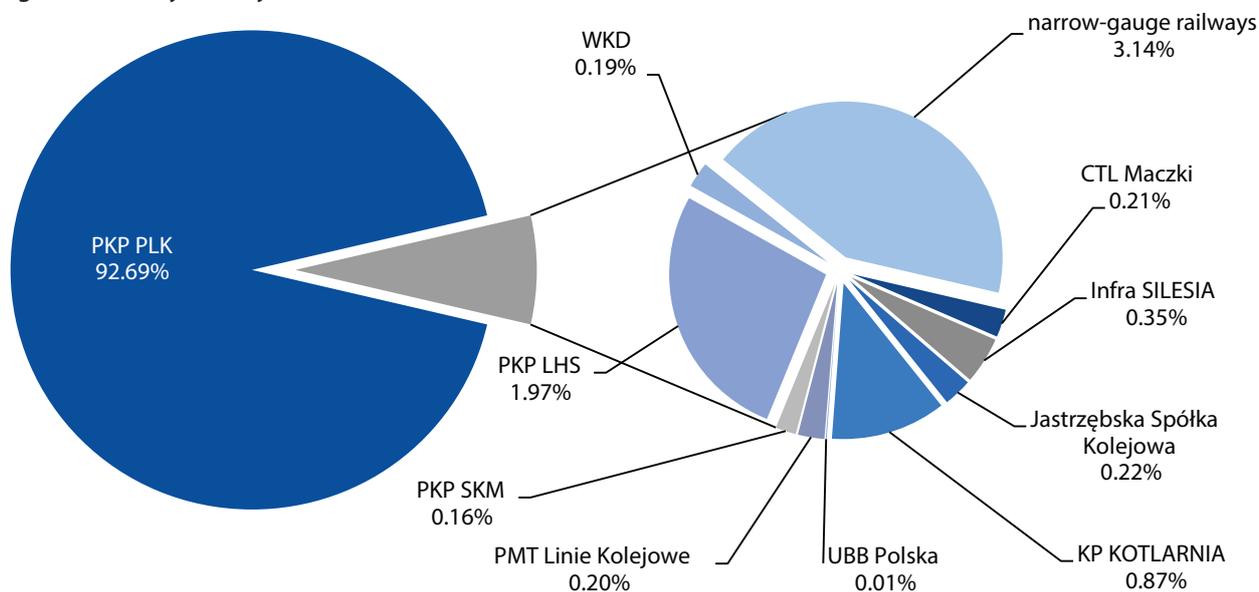
3.2. Polish railway infrastructure

3.2.1. Polish railway infrastructure managers

At the end of 2013 operations involving the management of railway infrastructure were carried out by 10 companies, 7 of which provided only such services:

- PKP Polskie Linie Kolejowe S.A.,
- Infra SILESIA S.A.,
- „Kopalnia Piasku Kotlarnia – Linie Kolejowe” Sp. z o.o.,

Fig. 57: Railway lines by user as at 31 December 2013



Source: prepared by UTK

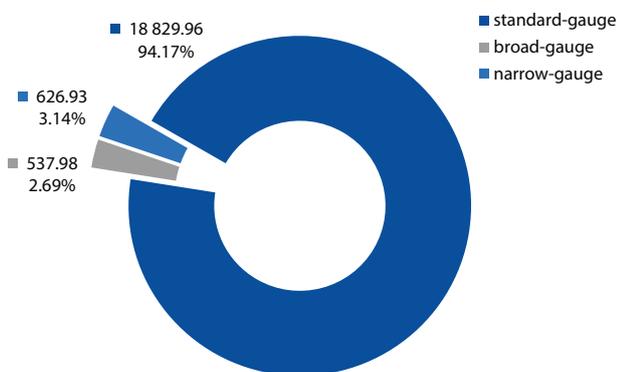
In terms of the length of used railway infrastructure, the greatest share as at the end of 2013 was held by PKP PLK with 92.69%. The market share of other managers was negligible. Excluding

narrow-gauge rail (with 3.14%) the largest share was held by PKP LHS with 1.97% (broad-gauge lines only) and Infra Silesia and KP Kotlarnia with 0.35% and 0.87%, respectively.

3.2.2. Polish railway infrastructure managers market structure

In 2013, the length of railway lines used by all infrastructure managers, including broad- and narrow-gauge rail, was 19 994.86 km. Compared to the previous year, the total length of the rail network dropped by 625.09 km (3.03%). A significant decrease was recorded in the total length of railways used by PKP PLK, the main infrastructure manager (of 658.57 km, i.e. 3.43%), reaching 18 532.65 km at the end of 2013. The significant reduction in the length of used railway lines as at 31 December 2013, compared to the data for 31 December 2012, was due to Resolution No. 957/2013 of 7 November 2013 on the acceptance of the list of lines taken out of service in the timetable for 2013/2014, as implemented by the Management Board of PKP Polskie Linie Kolejowe S.A.

Fig. 58: The types of railway lines used in Poland as at 31 December 2013



Source: prepared by UTK

Some minor changes took place in terms of the share of railway lines with a 1520 mm clearance, which accounted for 2.69% of all lines in 2013. They included the railway lines of two managers: PKP LHS Sp. z o.o. – invariably 394.65 km – and PKP PLK – 143.33 km (147.8 km in 2012).

In 2013, PKP PLK continued to manage 21 696.35 km of lines, i.e. 73.48 km more than in 2012. This included 3163.70 km (14.6%) of lines taken out of service. This company, as the only one in Poland, managed the infrastructure of state importance, which at the end of 2013 comprised 61.68% of all used lines. Their length increased to reach 12 332.08 km at the end of 2013. Compared to 11 497.32 km in 2012, this marked a rise of 834.76 km (7.26%).

The length of electrified railway lines in use across all infrastructure managers in Poland was 11 866.86 km compared to 11 919.3 km (52.44 km less than a year before), which corresponded to 59.35% of the total line length (an increase of 1.55 percentage points). As much as 99.57% of all electrified lines were owned by the PKP Group (PKP PLK and PKP SKM w Trójmieście).

The density of the railway network across individual provinces, as measured in line km per 100 square km in 2011-2013, did not

PKP PLK continued to manage almost 21.7 thousand km of lines, i.e. 73.48 more than in 2012. This included 14.6% of lines taken out of service.

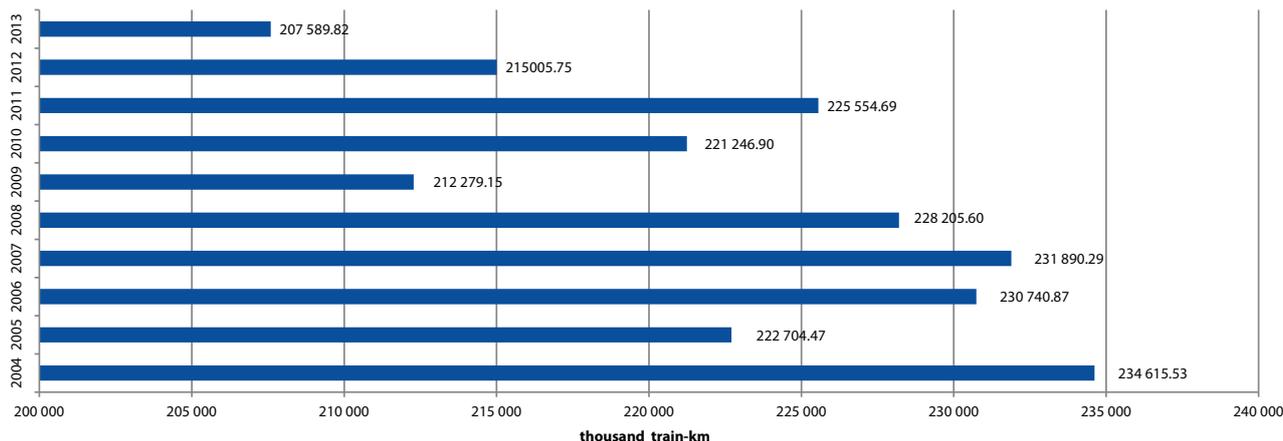
change significantly. In 2013 there was, however, a noticeable decrease in this respect across all provinces except Łódzkie, with densities ranging from 3.57 km per 100 square km in the Podlaskie Province to 16.62 km per 100 square km in the Śląskie Province. At the end of 2013 the average density for Poland was 6.39 km per 100 square km, compared to 6.59 km per 100 square km a year before.

3.2.3. Granting access to infrastructure for railway undertakings

In 2013, services involving the granting of railway infrastructure to RUs were provided by eight infrastructure managers. PKP SKM w Trójmieście Sp. z o.o., as the only company, served both as an RU and the manager of the public railway infrastructure. The main and the largest player on the market of railway infrastructure provision is still PKP PLK. In 2013, all infrastructure managers sold in total 2.66 m paths, with a total length of 210.79 m km. Their total length dropped by 7.22 m km (3.31%). PKP PLK maintained its position as the leading infrastructure manager, selling 2.37 m paths with a total length of 207.6 m km (compared to 2.40 m paths and 215 m km in 2012).



Fig. 59: The length of paths sold by PKP PLK, as the infrastructure manager, in the years 2004-2014



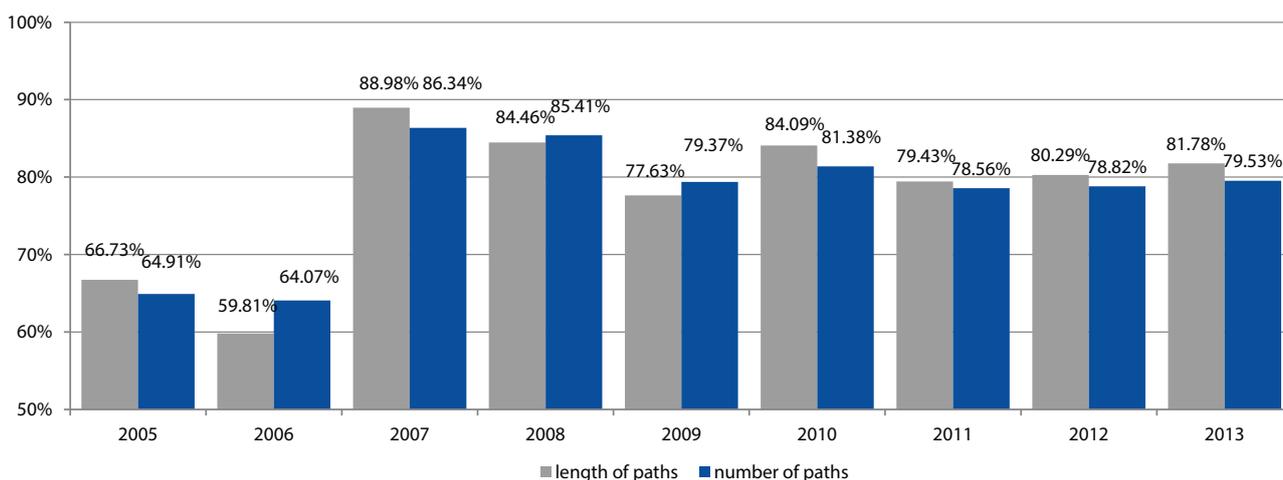
Source: prepared by UTK

The majority of paths provided by PKP PLK had been included in its annual timetable (1.671 m in total compared to 1.756 m connections), which accounted for 70.51% of all launched services (73.26% in 2012). Only 4 paths were provided on an ad-hoc basis, i.e. without being included in the annual or individual timetables. For the minimum access to the infrastructure the manager collected PLN 2.368 bn in fees from RUs, i.e. ca. PLN 43 m less than a year before. The total amount included PLN 28.20 m in booking charges for paths unused by RUs. In addition, the manager collected PLN 78.82 m in fees for the basic access to the systems connected with train management and PLN 21.40 m in additional charges. At the end of 2013 the share of PKP PLK in the infrastructure provision and path-selling market, as measured by operational performance within its network, was 98.5%. It

needs to be noted that over the last few years the share of PKP PLK has not changed much and ranged from 97.5% to 98.6%.

In 2013, for their annual and individual timetables, railway undertakings commissioned from PKP PLK a total of 2.98 m paths (1.97% less than a year before) with a total length of 253.84 m km (a drop of 5.21%). In relation to the total number and length of purchased paths, their utilisation ratio was 79.53% and 81.78%, respectively. Compared to the previous year, the utilisation ratio increased slightly, by 0.71% and 1.49%, respectively. The marked increase in performance, as recorded in 2007, was caused mainly by the introduction of booking fees by infrastructure managers for paths that had been booked but not used by RUs.

Fig. 60: The proportion of paths sold in the total number of paths commissioned by RUs from PKP PLK in the years 2005-2013

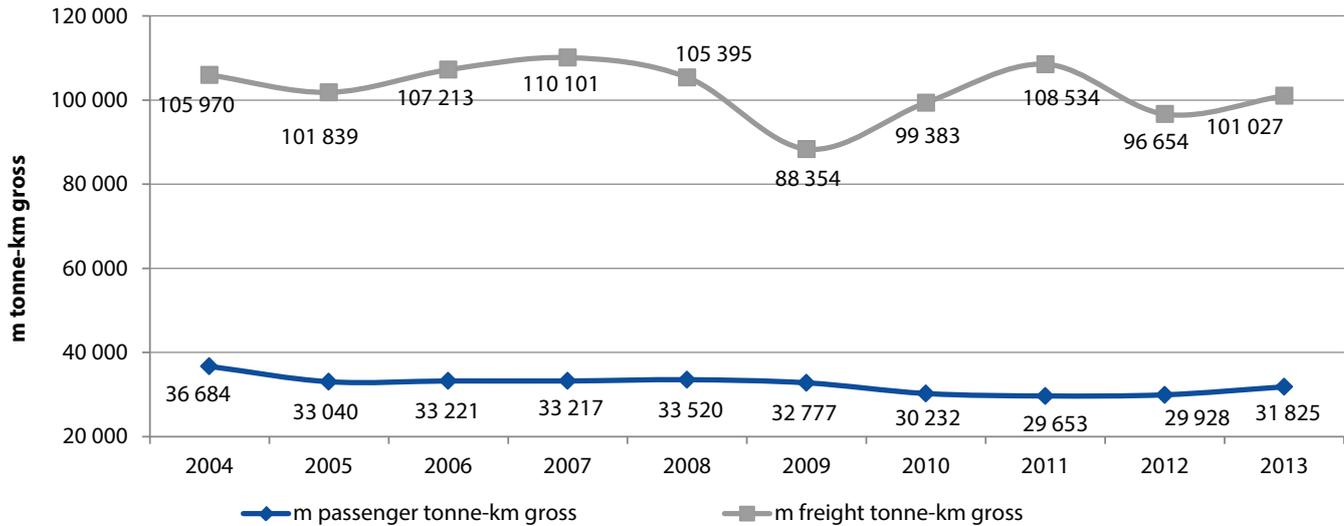


Source: prepared by UTK

In 2013, the PKP PLK network showed a gross transport performance of 132.852 bn tonne-kilometres, which, compared to the year before, constituted a drop of 4.878 bn tonne-kilometres

(3.54%). The gross performance in freight accounted for 76.04% (76.4% in 2012), while the remaining part - a total of 31.825 bn tonne-kilometres - was delivered by passenger RUs.

Fig. 61: Infrastructure load - the volume of transport performance (in m tonne-kilometres gross) in the years 2004-2013

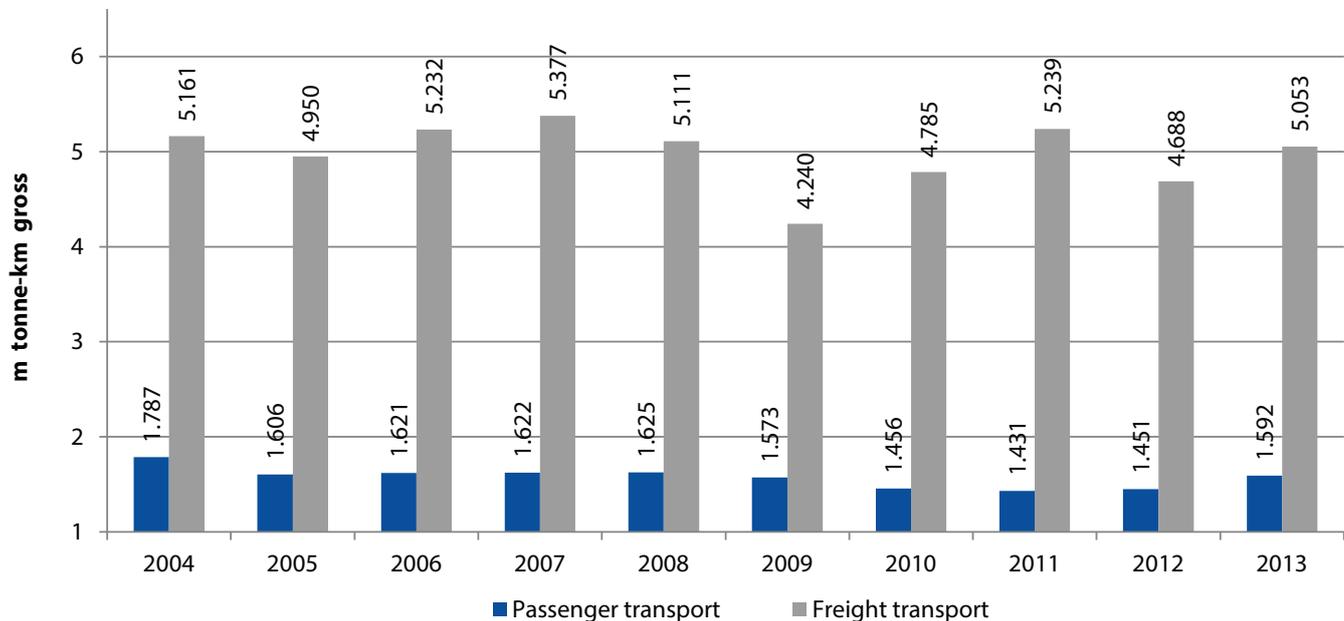


Source: prepared by UTK

The average load per line kilometre in 2013 was ca. 6.64 m tonnes gross, i.e. 0.5 m more than in 2012. This increase was found both in passenger and freight RUs. As per one km of railway line, the transport performance of freight RUs was 141 thousand tonnes higher. In 2013, the average load for this type of transport reached 5.053 m tonnes gross per one line kilometre.

In passenger transport this was 1.592 m tonnes per kilometre. It needs to be noted that over the last years this ratio had been lower in passenger transport. This is mainly due to the fact that smaller and lighter train sets, e.g. on regional transport services (using railbuses and light multiple units), and shorter train sets in transport services between provinces.

Fig. 62: The load of railway lines with transport performance per km (m tonne-kilometres gross per 1 km of line) in the years 2004-2013



Source: prepared by UTK

3.2.4. Fees for access to the railway infrastructure

At the end of 2013, the railway infrastructure was managed by a total of ten companies. These were:

- PKP Polskie Linie Kolejowe S.A.,
- CTL Maczki – Bór S.A.,
- Infra SILESIA S.A.,
- Jastrzębska Spółka Kolejowa sp. z o.o.,
- Kopalnia Piasku Kotlarnia – Linie Kolejowe sp. z o.o.,
- PMT Linie Kolejowe sp. z o.o.,
- UBB Polska sp. z o.o.,
- PKP Szybka Kolej Miejska w Trójmieście sp. z o.o.,
- PKP Linia Hutnicza Szerokotorowa sp. z o.o.,
- Warszawska Kolej Dojazdowa sp. z o.o.

Three entities from this list (PKP LHS, WKD and PKP SKM w Trójmieście) concurrently performed two functions - that of railway undertakings and infrastructure managers.

Two companies, PKP LHS and WKD, did not share their infrastructure with any other RUs. PKP SKM w Trójmieście Sp. z o.o., as the only company, served both as a railway undertakings and the manager of the public railway infrastructure. At the end of 2013, eight managers were required to submit to the President of UTK for approval their unit rates for access to their railway infrastructure.

The rates for access to the railway infrastructure are calculated ex-ante, i.e. on the basis of the data planned for future periods - estimated costs of granting access to railway infrastructure.

The fees for the access to railway infrastructure paid by RUs to infrastructure managers in return for using their infrastructure, are calculated in line with the Act as the product of the number of services provided and the unit rate. The proposed unit rates for fees (basic and additional) are submitted by managers to the President of UTK for approval 9 months before their timetables become applicable.

The rates for access to the railway infrastructure are calculated ex-ante, i.e. on the basis of the data planned for future periods - estimated costs of granting access to railway infrastructure.

On 30 May 2013, the Court of Justice of the European Union (CJEU) in Luxembourg passed a judgment on the complaint made on 26 October 2010 by the European Commission against the Republic of Poland, confirming Poland's failure to fulfil its obligations as a Member State.

Having considered the charge regarding the calculation of fees for the minimum access to railway infrastructure and to the systems connected with train management, the CJEU concluded that, in line with Art. 7(3) of Directive 2001/14/EC, the charges for the minimum access package and track access to service devices shall be set as the cost directly incurred as a result of operating the train service. The CJEU stated that Directive 2001/14/EC did not contain any definition of the term „cost that is directly incurred as a result of operating the train service” and that no provision of European Union law identifies the costs covered by, or those not covered by, that term. Furthermore, as regards a term derived from economics, the application of which raises considerable practical difficulties, it must be concluded that, as European Union law currently stands, Member States have a certain discretion when transposing and applying that term in national law.

In its grounds to the judgment, the CJEU stated that direct costs, including the costs of traffic maintenance or management, as specified in §8(1)(1) items a and b of the Regulation of the Minister of Infrastructure of 27 February 2009 on the conditions of access to and use of railway infrastructure (MI Regulation) connected with signalling, traffic management, maintenance and repairs are liable to vary, at least partially, depending on traffic and, accordingly, may be considered, in part, to be directly incurred as a result of operating the train service. Similarly, depreciation, as defined in §8(1)(1) item c of the aforementioned MI Regulation, calculated in accordance with accounting rules, may be accepted in full, but only to the extent to which it is provided on the basis of the actual wear of the infrastructure attributable to traffic. As regards overhead and financial costs, as defined in §8(1)(2) and (3) of the MI Regulation, the CJEU concluded that these were not directly connected with providing transport services by train. In the grounds to its judgment, the CJEU stated that the provisions of the Regulation indicate that - for the purpose of determining the charges for the minimum access package and track access to service devices - the costs which cannot be considered as having been directly incurred as a result of operating the train service should be taken into consideration.

In compliance with the judgment of the CJEU, in its calculations of the unit rates for the basic fee for the 2013/2014 train timetable, PKP Polskie Linie Kolejowe S.A. as a rail manager, used only the costs of the maintenance, and rail traffic management and depreciation, as defined in §8(1)(1)(a), (b) and (c) of the MI Regulation - and only to the extent to which these are directly connected with operating the train service.

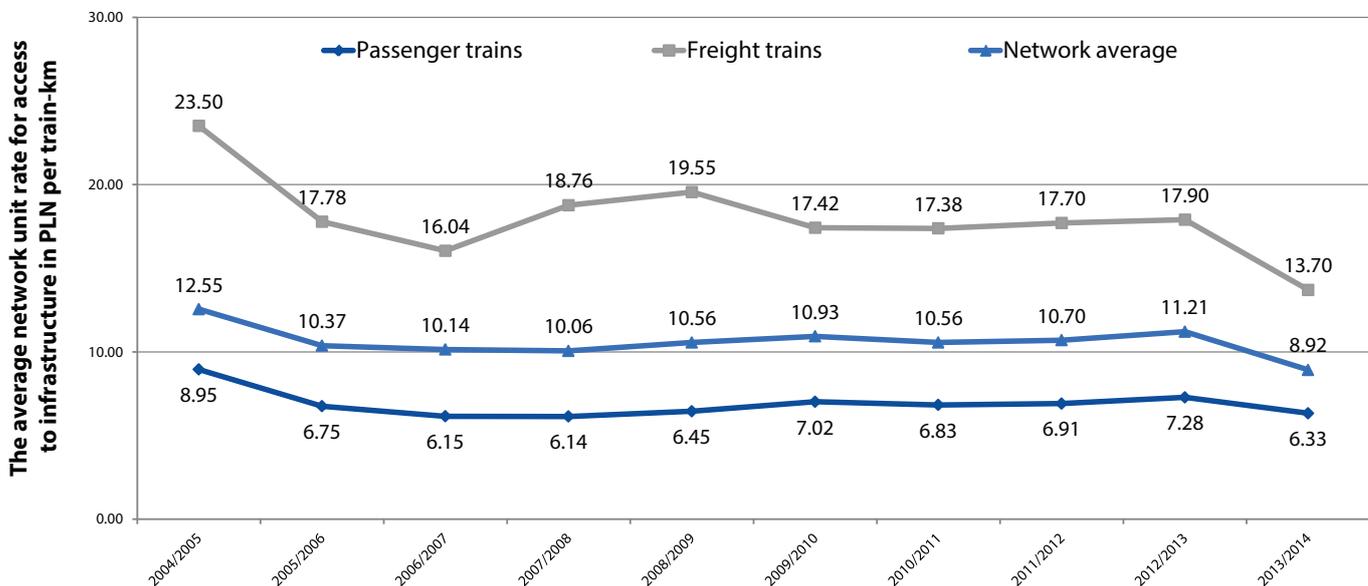
In its calculation of unit rates for its fees, the manager did not include overheads and financial costs, since these had no direct connection with operating the train service.

Furthermore, in its judgment, the CJEU declared that, in accordance with Art. 6(1) of Directive 2001/14/EC, Member States were required to lay down the conditions for ensuring, under normal business conditions and over a reasonable time period, that the income from infrastructure charges, surpluses from other commercial activities, and State funding, on the one hand, and infrastructure expenditure on the other, were balanced. Without prejudice to the potential long-term goal, that is the reimbursement of infrastructure costs across all modes of transport by its user on the basis of a fair, non-discriminatory competition between various modes, and if rail transport is in the position to compete against other modes of transport in terms of overall fees, as provided in Art. 7 and 8 of the Directive, a Member State can require infrastructure managers to balance their accounts without any financial support from the State.

As stipulated in the provisions of Art. 6(2)(3) of Directive 2001/14/EC, EU Member States are to ensure that managers are provided with incentives to reduce the costs of provision of infrastructure and the level of access charges, either through a contractual agreement between the competent authority and infrastructure manager covering a period of not less than three years which provides for State funding, or through the establishment of appropriate regulatory measures with adequate powers.

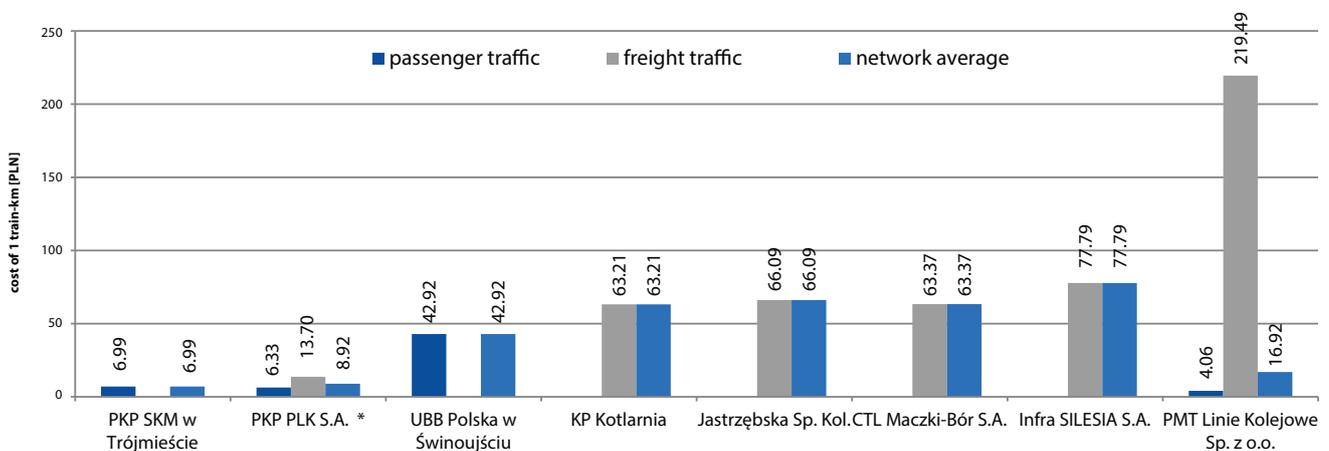
The 2013/2014 timetable was not provided with any funding from the State or the Rail Fund, which would reduce unit rates for the basic fee. At the same time, the manager was assured that the postulated operating costs would be fully financed with public funds earmarked for covering the costs of the manager not covered by railway undertakings with fees for using railway infrastructure.

Fig. 63: The average cost of a train-kilometre for minimum access to the infrastructure granted by PKP PLK S.A. in the years 2005-2014



Source: prepared by UTK

Fig. 64: The average cost of a train-kilometre for minimum access to the infrastructure for all managers providing their infrastructures for use as part of the 2013/2014 train timetable



Source: prepared by UTK

The rapid increase in transport in the years 2010-2011 was mainly due to the demand for aggregate, sand and gravel. In 2012, the drops in freight transport were the result of the lower number of investments in infrastructure.

The rapid increase in transport in the years 2010-2011 was mainly due to the demand for aggregate, sand and gravel. In 2012, the drops in freight transport were the result of the lower number of investments in infrastructure, and, consequently, a decrease in the transportation of goods used during its construction. The last few years have shown a marked downward

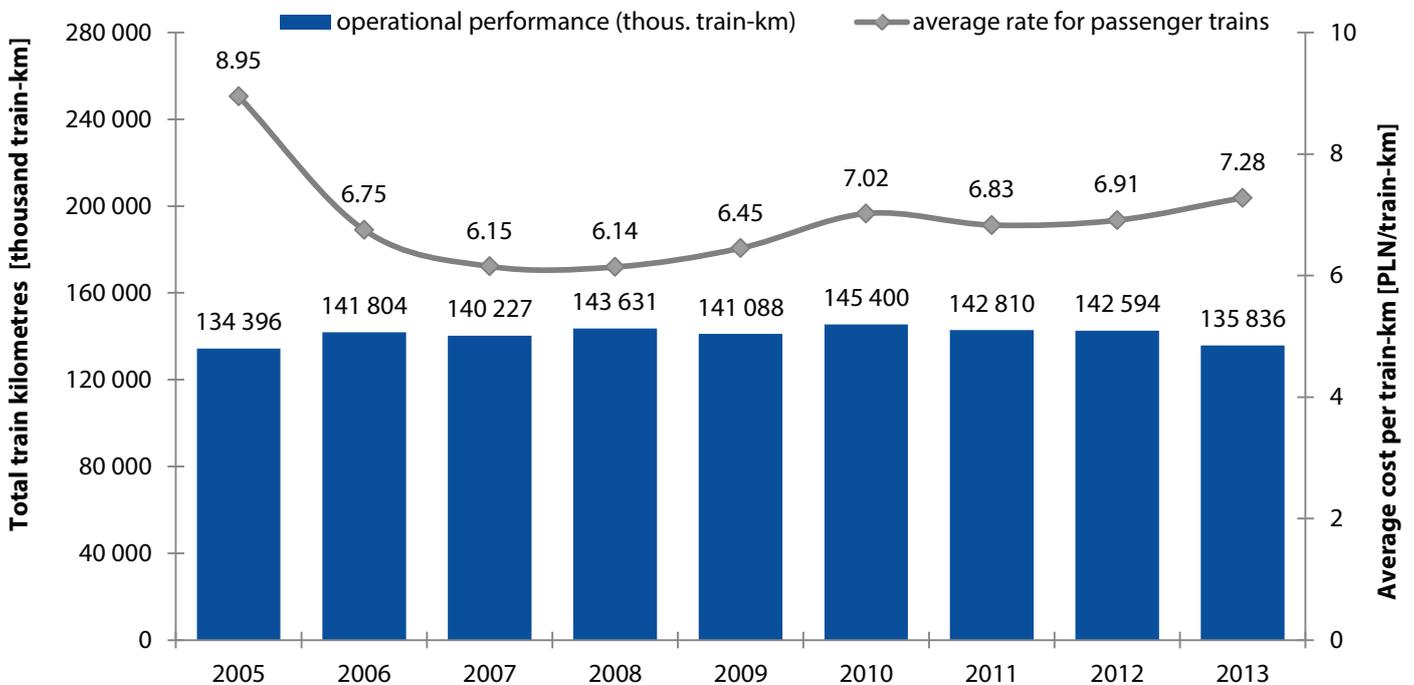
trend in the demand for the rail transportation of coal. A reverse trend has been observed for intermodal transport. It needs to be noted that, despite the lack of any significant correlations between the rates and volumes of transport in annual or multi-annual terms, in the long term a decrease in access fees may

cause rail transportation to rise in importance and market share in relation to other modes of transport. This trend could be initiated by reducing rates for access to infrastructure.

In passenger transport, the decrease in the volume of transport, as recorded in the first half of the last decade, was primarily the effect of the development of individual transport. Major factors to affect the volume of passenger transport in rail transport include economic considerations, such as economic development, unemployment rate, and fuel prices.

In passenger transport, major factors to affect the volume of passenger transport in rail transport include economic considerations, such as economic development, unemployment rate, and fuel prices.

Fig. 65: The rates for access to the infrastructure in view of the volume of passenger transport in the years 2005-2013



Source: prepared by UTK

In the 2012/2013 timetable, PKP PLK S.A., as the manager, maintained a 25% discount for the rates for trains providing intermodal transport services. Similarly to the previous timetable, the discount was exclusively for transport services provided by block trains, which included full or empty wagons designed for the transport of intermodal units.



3.2.5. The volume, structure and performance of the infrastructure provision market

The size of the Polish freight rail transport market in 2013 can be characterised by the following statistics:

- the number of infrastructure managers - 10
of which:
 - infrastructure providers - 8

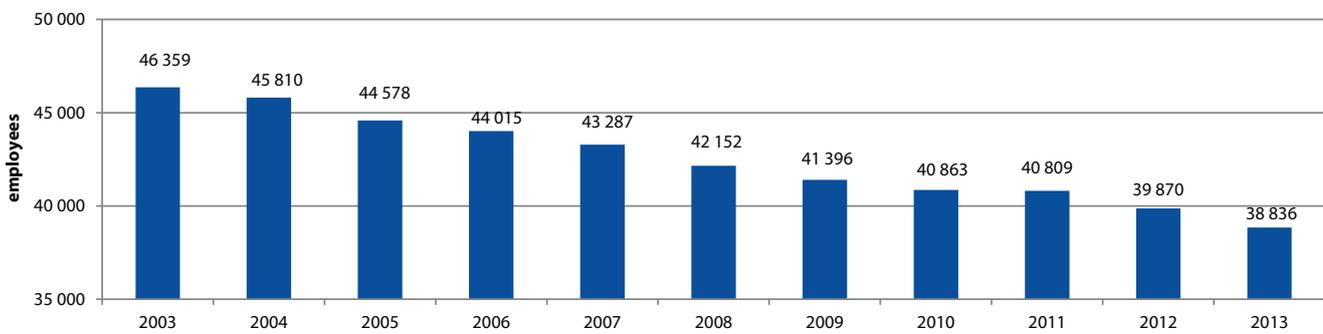
(managers which do not provide their infrastructures are PKP LHS and WKD)

- annual market revenue - PLN 4.15 bn,

- annual rail service provision costs - PLN 5.10 bn,
- employment in the railway sector - 38 836 people,
- operational performance - 210.79 m train-kilometres,
- the number of paths sold - 2.664 m.

In 2013, the employment in the infrastructure management sector continued to undergo reduction. At the end of 2013, the number of employees amounted to 38 836 people, i.e. 2.59% less than in 2012 and 16.23% less than in 2003. The greatest drop in workforce took place in the company which was the leading infrastructure manager - 1038 people. As many as 96.85% employees of infrastructure managers were those hired by PKP PLK (37.61 thousand people).

Fig. 66: Employment by infrastructure managers in the years 2004-2013

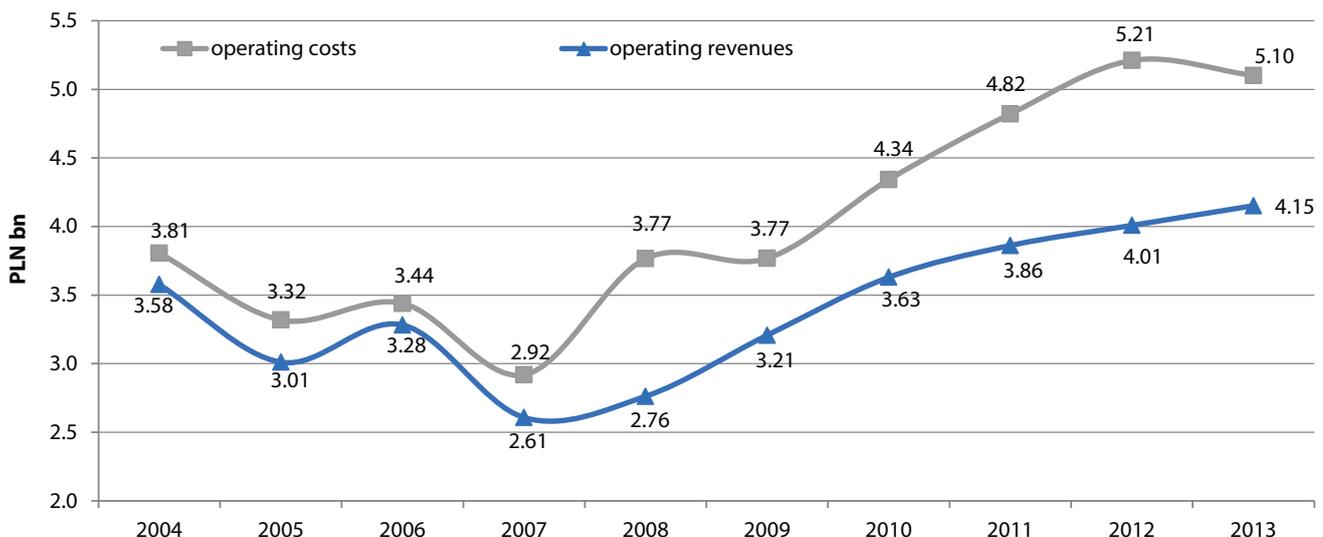


Source: prepared by UTK

In 2013, the operating costs dropped by 2.11% from PLN 5.21 bn to PLN 5.10 bn. Revenue showed an increase of 3.49% from PLN 4.01 bn to PLN 4.15 bn. Therefore, the difference between

the revenue and the operating costs was negative at PLN 0.95 bn. Nevertheless, the loss recorded in 2013 was lower by PLN 0.25 bn compared to 2012.

Fig. 67: The operating performance of infrastructure managers (in PLN bn) in the years 2004-2013



Source: prepared by UTK



4. Summary

The year 2013 was very important for the railway infrastructure, which continued to undergo modernisation and repairs. Indeed, it was the condition of railway infrastructure that was of vital importance to the summary of this assessment of rail transport performance in 2013, since, compared to road and air transport, it impacted more heavily on successful traffic management. Consequently, due to repairs, the provision of transport services was hampered for both passenger and freight RUs. This is due to the fact that the Polish railway system is almost exclusively used for the parallel transport of passengers and goods along the same railway lines.

Moreover, it is important to note the recently unparalleled and disturbing decrease in the length of used lines, as recorded by the main infrastructure manager. Compared to 2012, it amounted to 658.57 km (3.43%). The taking of railway lines out of service by PKP PLK stirred up agitation in the industry, especially given that the trend to reduce the number of lines in service has been going on for many years, thus further widening the gap separating rail from other transport systems.

In 2013, on its website the Office of Rail Transport published a report entitled 'An economic and legal analysis of the development potential of low-profitability railway lines' which presented methods for managing railway lines that had been

In Poland, the number of train journeys per line kilometre was only ca. 30 a day. For comparison, in the Netherlands it was ca. 130.

closed or temporarily taken out of service, and thus rendered unprofitable (not used or rarely used, thus loss-making). By exploring the opportunities for Poland to draw on the experiences of other countries worldwide, the report can be useful for implementing appropriate solutions to remedy such lines.

The data on the operation of Polish railway infrastructure are also unfavourable. Unfortunately, for years the dominant

group across all lines in operation (32% in 2013) had been the lines whose transport load was no higher than 3 m tonnes a year. On these lines, the maximum number of trains had been up to 3-4 pairs a day. This shows tremendous reserves and poor usage of the railway infrastructure. The comparison of the usage rate of the Polish railway infrastructure in relation to other European countries is also unfavourable. Even though Poland was ranked third in terms of railway length and tenth in terms of railway density across all EU Member States, the number of train journeys per line kilometre was only ca. 30 a day. For comparison, in the Netherlands it was ca. 130.

Nevertheless, the prospects for the quality of infrastructure are promising. Slowly but surely, repairs have improved its condition. PKP PLK data show that the proportion of lines operated in good condition, i.e. which only require maintenance or some occasional surface replacements, and

The prospects for the quality of infrastructure are promising.

which have no speed limits, increased this year to 47% (compared to 36.3% in 2010). This, in turn, contributed to an increased proportion of lines which allow train traffic at 120 km/h or 160 km/h, and which can accommodate freight trains with maximum axle loads.

Extensive infrastructure repairs were particularly reflected in passenger transport performance in 2013. For the first time in three years, Poland's passenger market recorded a decrease in the number of transported passengers. Compared to 2012, their volume dropped by as many as 3.5 m passengers, which corresponded to 1.28%. In relation to 2012, there was also a 5.95% drop in transport performance to the lowest level recorded since 1989. These data show a marked and growing outflow of passengers and the dwindling of long-distance service packages.

Przewozy Regionalne, the leading railway undertaking in terms of number of transported passengers, lost 16% of its passenger volume and recorded its all-time low. This decrease was in part due to new companies developing in various provinces and taking over some transport services. These included Koleje Śląskie, with an increase in transport services of 7.2 m, Koleje Wielkopolskie with slightly over 2 m, and Koleje Dolnośląskie with 0.6 m. In total, however, these companies recorded less than 10 m passengers. Therefore, given that Przewozy Regionalne showed a loss of 16.3 m passengers, it can be concluded that the remaining 6 m passengers completely gave up using rail services. A very large drop in the number of passengers (of 12.8%), amounting to over 4.5 m, was also recorded by PKP Intercity, a long-distance train railway undertaking.

The assessment of the current situation on the passenger transport market should also take into account its long-term performance.

Since 1995 the decrease in transport performance in Poland has exceeded 60%.

the European Commission, which has examined a representative sample of respondents from EU Member States (including Poland) and, on the basis of its indicator, ranked their overall satisfaction with travelling by train in Poland as 4th from bot-

Extensive infrastructure repairs were particularly reflected in passenger transport performance in 2013.

Compared to 2012, the number of passengers dropped by as many as 3.5 m passengers, which corresponded to 1.28%.

Since 1995 the decrease in transport performance in Poland has exceeded 60%. This suggests some serious transformations in society, which seems to have changed its travelling habits. While Poles have become more mobile, they have given up rail services largely in favour of individual transport. The reasons for such a shift can be found, e.g., in the conclusions of

tom with a 64% negative feedback, while the EU average is 55% positive responses. Eurobarometer's *Europeans' satisfaction with rail services* report also identifies Poles as the most dissatisfied with the punctuality and reliability of rail services (as much as 40% of respondents). These two factors, along with prices, seem to be the most crucial. Passengers are also discouraged from travelling by rail by the obsolete rolling stock, even though it is being gradually renovated and subject to many upgrades. It seems that under the present conditions it might be difficult to win back the passengers who have given up using rail services in their future journeys.

On the other hand, regional (short-distance) transport services show promising prospects. Passengers are encouraged by such factors as integrated package and traffic jams in urban agglomerations. This is what happened in the Mazowieckie Province, where the number of passengers grew in 2013 by ca. 10%. The choice of rail as a mode of transport was encouraged by the Warsaw City Card, as well as by the congested streets of Warsaw during rush hours. What is interesting is that these proved to be insufficient arguments for changing the habits of passengers travelling to or from F. Chopin Airport in Warsaw - despite the modern rolling stock and new railway opened in 2012, they did not show much interest in this new service.

It is even more difficult to persuade passengers to return back to using rail for their long-distance travel, since in addition to

trains they can opt for individual transport or choose from a number of competitive bus undertakings which often provide such amenities as free wi-fi access and air-conditioning. This higher standard of service is frequently missing even from first-class wagons. To some extent, long-distance trains also have to compete against national air transport providers. The standards of service for passengers with disabilities or limited mobility, who sometimes are not provided with appropriate, necessary assistance during their journey, are yet to make the grade.

A comparison of passenger rail transport in Poland against other EU Member States shows that in the long term, with an over 60% decrease in its transport performance since 1995, Poland is ranked on a par with such countries as Lithuania, Estonia, Bulgaria and Romania. A reverse trend can be seen in the UK, Sweden, France and Belgium. This is, for instance, due to the fact that Western

Passengers are also discouraged from travelling by rail by the obsolete rolling stock, even though it is being gradually renovated and subject to upgrades.

European countries are developing high-speed rail systems, while the majority of those in our region have focussed on the construction of new roads.

To sum up, in the assessment of passenger rail transport in Poland, it needs to be noted that all the aforementioned factors which have contributed to the historical low of passenger transport services, unfortunately paint an unfavourable picture of rail in society. Following the successful completion of modernisation projects, rail needs new initiatives to make a difference. In its long-term endeavours rail should therefore focus on restoring its former rank. Passengers should be convinced that the price they pay goes hand in hand with quality. They must be considered as

clients who subject the market to strict assessment to check whether services such as rail transport meet their needs (e.g. in terms of suitable timetables) and requirements concerning punctuality, acceptable price-to-quality relationship, adequate number of seats, cleanness, etc.

Moving on to the assessment of the operation of the freight rail transport market in 2013, it needs to be noted that the data show increases in both the volume of the transported goods and transport performance. In 2013 rail RUs transported 233.2 m tonnes of goods. Compared to 2012, this corresponded to an increase in the transported volume of 0.78%.

This means that Poland's commodity market has become stable after an over 7% drop in 2012, although the level at which this stabilisation took place was the lowest in the last over 10 years.

In 2013, the transport performance of freight railway undertakings was 50.9 bn tonne-kilometres, which corresponds to an increase of 3.8% (for the PKP Group it was 1.8%). The increase in transport performance was therefore greater than the increase in weight, which means that the goods were generally transported over greater distances than in 2012. The favourable transport performance in the second half of 2013 inspires optimism for the continued increase in this respect, although it will depend on economic developments.

It is also important to note the continued annual (since 2009) increase in the volume of intermodal transport. In 2013, this type of rail transport generated an unprecedented 1.1 m TEU. However, such transport is profitable for distances of several hundred kilometres. Freight over smaller distances,

The standards of service for passengers with disabilities or limited mobility, who sometimes are not provided with appropriate, necessary assistance during their journey, are yet to make the grade.

which could be provided by rail if the profitability were higher, is being taken over by road transport providers, which in theory should only deliver containers directly over final, short distances.

Despite the unprecedented volume of intermodal transport in 2013, the upward trend of this development has slowed down considerably. Only steady reliefs for intermodal trains, set at sufficiently high levels, can make the market share of intermodal transport grow to reach by the year 2020 a dozen or so percent in the overall volume of commodities transported by rail. Currently, however, the proportion of intermodal transport in the total volume of transport services is much lower than in other EU Member States.

For the third time in a row, the PKP Group has recorded a drop their shares but still remains at more than 50%. The increase in the transport performance of the Group was less prominent than that for the market as a whole, but PKP companies continued to account for over 65% of it. The decline in PKP Cargo, on the other hand, means that the company's market share went down below 50% in terms of weight and 60% in terms of performance.

It is important to bear in mind that goods transport is an arena for competition between rail and road transport, and statistics show that the former is at a disadvantage. Road and motorway users continue to enjoy a competitive advantage, with over 80% of freight transport (by weight) being performed by trucks. The improving road infrastructure is a powerful incentive to use the more and more efficient and rapid road transport, as opposed to the inefficient and repair-stricken railway infrastructure.

Moreover, rail transport is nearly always dependent on the possibility of delivering cargo to the client or changing the mode of transport. Only effective cooperation with other modes of transport involving the coordination of multiple modes of transport can boost the volume of freight rail transport. This coordination can be exemplified by the efforts of the Office which approached the

The decline in PKP Cargo means that the company's market share went down below 50% in terms of weight and 60% in terms of performance.

Statistics show that the rail transport is at a disadvantage in the intermodal competition.

Passengers must be considered as clients who subject the market to strict assessment.

Poland's commodity market has become stable after an over 7% drop in 2012.

In 2013, intermodal transport generated an unprecedented 1.1 m TEU.

problem of the limited flow capacity in the Tri-City junction (on the way to the ports) by establishing a team composed of the representatives of railway undertakings, operators and container terminals. The RUs proposed that line No. 201 be modernised, including the electrification and construction of a second track to take over a considerable part of the cargo traffic to this line. On the basis of its assessment, UTK prepared a study entitled “The analysis of the need for increased flow capacity across railway junctions in Tri-City and Silesia” which also addressed another serious capacity problem at the Katowice junction. The document explored the present and future situations, and the results of the assessment of the need for train services in Tri-City, identified bottlenecks and suggested solutions.

Compared to road transport, rail generates much lower external costs of transport, which are rarely included in any calculations for the transport of goods.

In contemplation of the freight rail transport by rail it is also important to consider the aspect of eco-friendliness. Compared to road transport, rail generates much lower external costs of transport, which are rarely included in any calculations for the transport of goods. Similarly to passenger transport, which matters in contractor selection is cost-effectiveness. This last factor determines the time of transport or the amount of transported goods. Under present conditions, it is difficult for rail

to compete against road transport in terms of punctuality and transit time. As a result, clients tend to prefer road transport, sometimes even if the price is higher. Rail wins with road transport only in respect of the transport of high volumes of goods over long distances. For this reason rail continues to be used mainly for bulk loads. Nearly 42% of the transported cargo is hard coal. Rail also plays an important role in the transportation of dangerous goods, being an alternative and much safer form than road transport. Rail transport is currently Poland's most popular form of transport for such commodities as liquid fuels.

The replacement of the rolling stock continues to proceed slowly, which, in consequence, does not have any significant impact on expanding the transport package to attract customers. At the moment railway undertakings have at their disposal a heavily worn-out rolling stock, whose average service life (both for locomotives and wagons) is much more than 30 years. The lack of comprehensive investments in new rolling stock results from the RUs' uncertainty as to development prospects for the rail market. Both development opportunities and challenges were described in a study entitled “*Freight rail transport in Poland – conditional growth*”, published in July 2013 on UTK's website. The study includes a forecast for the development of the freight transport market and for the impact of selected actions on the extent and intensity of this development in the future.

The issue of the external transport costs and solutions that will reduce them was addressed in a document presented on UTK's website in 2012: “*Barriers to the development of intermodal transport – solutions and tangible benefits*”. It is necessary to

make every effort to save the State and society any external costs, especially that Poland can do this by tapping into the opportunity to manage train traffic in the near future via thoroughly renovated and upgraded infrastructure and through EU funding for the modernisation of its rolling stock.

Finally, it is important to note that in its White Paper of 2011 the European Commission established clear and achievable long-term objectives:

- By 2030, 30% of road freight over 300 km should shift to other modes such as rail or waterborne transport.
- By 2050, 50% of road freight over 300 km should shift to other modes such as rail or waterborne transport.
- By 2050, the majority of medium-distance passenger transport should be provided by rail.

The above-mentioned modal-split framework reflects a sustainable development policy where road transport is not dominant, and which should be pursued by Poland through determined efforts made on time to meet the deadlines set by the Commission.

Moreover, when renovations are completed, as anticipated by the participants in the rail market, the infrastructure should be easily accessible and modern. If this change is followed by effective and sound management, the Polish rail market will overcome its greatest barrier, which has seriously limited the volume of passenger and freight transport due to the extensive renovations which have taken place recently, and many years of negligence before that.

It is also important to bear in mind the costs of access to infrastructure, which, to some extent, determine the situation on the passenger and freight rail transport market. In this respect 2013 marked a breakthrough, since PKP Polskie Linie Kolejowe S.A., as a manager, used only the costs of maintenance, traffic management and depreciation as the basis for calculating unit rates for the basic fee for the 2013/2014 train timetable, to the extent that these were directly connected with operating the train service. In accordance with the judgment of the EU Court of Justice of 30 May 2013, the calculations of unit rates made by the manager did not include any overheads or financial costs, since these were not directly connected with operating the train service. This is an opportunity for freight and passenger railway undertakings to boost their turnover in 2014 and improve the performance of the entire market, because this change reduced the average cost of a train-kilometre for minimum access to the infrastructure managed by PKP PLK S.A. by 23.5% for freight trains and by 13% for passenger trains.



PART II
AN ASSESSMENT OF RAIL
TRAFFIC SAFETY IN 2013

Background

This part of the report provides an overview of safety in the national railway sector in 2013. For more clarity, the findings are grouped into several key subject areas, including:

- Considerations underlying the rail system's safety;
- Railway event analyses;
- Events involving unauthorised persons on railway premises;
- Safety at level crossings;
- Vandalism-related damage to the rail system;
- Rail companies' supervision.

This report places particular emphasis on third-party vandalism-related damage to rail companies (including the theft and damage of railway infrastructure and the unauthorised use of rail telecommunication jammers), as they have a potential, and often underrated, impact on the safety of the rail system. In addition, which the report highlights as well, this wanton conduct generates substantial losses on the part of rail companies and their clients. The President of UTK first recognised this problem and analysed it as part of the 2012 assessment review, using data from the Railroad Guard Headquarters. It was also then that he started collecting data on third-party damage to rail companies. These data were subsequently used for the present analysis.

Another important issue related to railway safety and discussed in this report is the high rate of events involving third parties, including level crossing users and unauthorised persons on railway premises. In 2013 these events accounted for almost three quarters of all accidents on railway lines in Poland. The President of UTK had already deemed it important to analyse the statistics for these two groups of events in the 2012 assessment review. These data are identified in the present report as well. This is because the responsibility for such events extends beyond rail companies and employees. Hence it is of great importance that we all consider this problem and counteract disruptive behaviour by, for instance, reporting illegal crossings to relevant authorities. Each of us can contribute to reducing casualty rates through safety culture and prompt emergency response. It should be noted that of a total of 228 individuals who died and 103 who were injured in 2013 as a result of accidents on railway lines, only one seriously injured individual was a rail "insider".

The section devoted to railway safety was compiled primarily by means of the statistical analyses of data accumulated in the Railway Event Register kept by the President of UTK. Rail companies are required to supply these data under applicable laws. Also used is a range of additional information gathered as a result of carrying out certain railway safety procedures

which fall within the competence of the President of UTK. Some chapters use data from organisations external to the Polish rail system, including in particular the European Railway Agency and the Railroad Guard Headquarters, to provide a full picture of some trends and put them in a broader, European perspective.

Statistical data on events on railway lines are described in line with the national classification which distinguishes between serious accidents, accidents and incidents. The only exception is made in the section on monitoring events at the European level, where reference is made to significant accidents and related serious accidents. Introducing the concept of "significant accident" makes it easier to analyse the events in question from a Europe-wide perspective. These data are used to set Common Safety Targets (CST) to see the level of safety in individual Member States in the context of their respective objectives in this area and compare the statistics between individual States.

This document covers data on operational activities on a line that is operated in total by ten infrastructure managers, both required to grant access to the infrastructure to railway undertakings, and managers of separate infrastructure. This information on entities covered by the report is particularly important, as other entities responsible for monitoring railway safety in Poland provide data that, in most cases, involve primarily the main infrastructure manager (PKP PLK S.A.) or the infrastructure networks of only those managers who are required to grant access to their infrastructure. By extension, individual railway safety institutions use different annual data, as further discussed in the chapter devoted to railway event analysis.

Recognising the broad scope of entities that this report covers, for some areas with the limited availability of 2013 data, the President of UTK presented information that covers only selected parts of the national rail system.

5. Considerations underlying the rail system's safety

Before providing an overall picture of railway safety in Poland, it is essential to outline the basic legal and organisational considerations which underlie safety in this sector of transport and have a major impact on its public perception.

Responsibility is one of the key principles for the railway sector. Both national and European laws stipulate that **the full responsibility for the safe operation of the rail system lies with all entities operating within this system**. Of central importance are, however, managers of railway infrastructure and railway undertakings whose operations are essential to the sector's safety at large. This does not mean, however, that other rail entities bear no responsibility for their respective functions and tasks. The rail system's safety is also the responsibility of side-track users, vehicle manufacturers and entities in charge of maintenance.

The principle of responsibility as outlined above is implemented using specific tools. In order to ensure safe operations, railway infrastructure managers granting access to this infrastructure to railway undertakings and railway undertakings using this infrastructure to provide services, are required to develop, obtain certificates for and implement **Safety Management Systems (SMS)**. Such a system is a set of procedures governing the key areas of a company's operations with regard to safety. Irrespective of their area of interest (management, compliance with requirements, staff competency development, etc.), these systems employ and implement risk identification (taking into consideration risk generated by contractors and third parties) and management measures for different aspects of operation and ensure effective information flow. Developing and implementing Safety Management Systems is a prerequisite for securing the required approvals to operate in the railway sector: parts A and B of a safety certificate for railway undertakings and a safety authorisation for infrastructure managers. Based on risk estimation, assessment and acceptance, Safety Management Systems are fully consistent with the principle of responsibility for conducted

The full responsibility for the safe operation of the rail system lies with all entities operating within this system. Of central importance are, however, managers of railway infrastructure and railway undertakings whose operations are essential to the sector's safety at large.

operations, including for safe interaction with other entities operating both inside and outside the rail system.

Railway undertakings and infrastructure managers which are not required under the applicable law to obtain safety certificates and authorisations (managers of separate infrastructure and entities using only this infrastructure to provide services), as well as side-track users, operate in the rail transport sector on the basis of the so-called safety attestations. Such an approach ensures a certain degree of safety in operations. As opposed to the SMS-based approach, however, it does not rely on processes. Applying varied legal and organisational solutions does not, however, release any entity within the rail system from the responsibility for ensuring safe operations.

As already mentioned in Part I of this report, there were 60 railway undertak-

ings in Poland in 2013, including both passenger and freight transport operators. The infrastructure was managed by 10 entities, including:

- PKP Polskie Linie Kolejowe S.A.;
- PKP SKM w Trójmieście Sp. z o.o.;
- PKP LHS Sp. z o.o.;
- Infra Silesia S.A.;
- CTL Maczki-Bór Sp. z o.o.;
- Jastrzębska Spółka Kolejowa Sp. z o.o.;

- Kopalnia Piasku Kotlarnia – Linie Kolejowe Sp. z o.o.;
- PMT Linie Kolejowe Sp. z o.o.;
- Warszawska Kolej Dojazdowa Sp. z o.o.;
- UBB Polska Sp. z o.o.

Most of these companies, eight, operated under safety authorisations (the system approach), with the remaining two (Warszawska Kolej Dojazdowa Sp. z o.o. and UBB Polska Sp. z o.o.) being approved under safety attestations.

Since 2012, solutions applying to railway undertakings and infrastructure managers, have also been binding on rolling-stock maintenance entities. Prior to entering service, each vehicle must be assigned an Entity in Charge of Maintenance (ECM). For freight wagons, these entities are mandatorily required to have a certificate. In order to obtain an ECM certificate, a Maintenance Management System (MMS) must be developed, under which full responsibility for the maintenance of a vehicle (including process planning and management, and maintenance) lies with a specialised entity.

To ensure uniform safety management rules in different countries, given especially the growing liberalisation of the rail transport market, with new (increasingly cross-border) players entering, the so-called Common Safety Methods (CSM) have been developed to apply across Europe. This concept comprises mandatory legal regulations which set out a uniform code of conduct for certain processes that are critical to maintaining safety. These methods are addressed to both rail entities (infrastructure managers, railway undertakings, entities in charge of maintenance) and the so-called national safety authorities, as discussed below. In addition, one method is intended solely for the European Railway Agency which supports the establishment of a uniform approach to safety management within the European railway sector. Critical processes supported by common safety methods include:

- Risk evaluation and assessment (Commission Regulation (EC) No. 352/2009, soon to be replaced by Commission Regulation (EU) No. 402/2013),
- Reviewing conformity with the requirements for obtaining railway safety certificates (Commission Regulation (EU) No. 1158/2010) and safety authorisations (Commission Regulation (EU) No. 1169/2010),
- Monitoring the appropriate application and effectiveness of the implemented management systems (Commission Regulation (EU) No. 1078/2012),
- Supervising entities that hold safety certificates or safety authorisations (Commission Regulation (EU) No. 1077/2012).

When considering the relationship between railway sector entities and public administration bodies, it is important to note some important considerations underlying a mutual under-

Due to the ongoing liberalisation of the railway sector, with its wide range of different entities, public authorities cannot and will not be able to assume responsibility for the safety of both individual enterprises and the railway sector as a whole.

standing of the concept of the rail system's safety. As mentioned above, contrary to common belief that government bodies are accountable for safety in the railway sector, the railway sector entities bear full responsibility in this area. Relevant public administration bodies are essentially responsible for three issues:

- **Providing the appropriate legal framework** to allow enterprises to operate in the rail transport sector;
- **Verifying entities for their capacity to fulfil the applicable legal** requirements and operate in a safe manner within the rail transport sector, before they enter the market;
- **Supervising ongoing compliance** with market entry requirements.

Due to the ongoing liberalisation of the railway sector, with its wide range of different entities, public authorities cannot and will not be able to assume responsibility for the safety of both individual enterprises and the railway sector as a whole. This stems from the fact that the risks within the system are generated by individual entities, and thus can be effectively managed and identified by these entities alone, by means of Safety Management Systems, as well as uniform and mandatory tools, such as the aforementioned common safety methods.

The National Safety Authority (NSA) is the primary regulator of rail transport safety. In Poland this function is assigned to the President of UTK who has a number of responsibilities in the area of the rail system's safety. These are defined by both national and EU laws and can be categorised as follows:

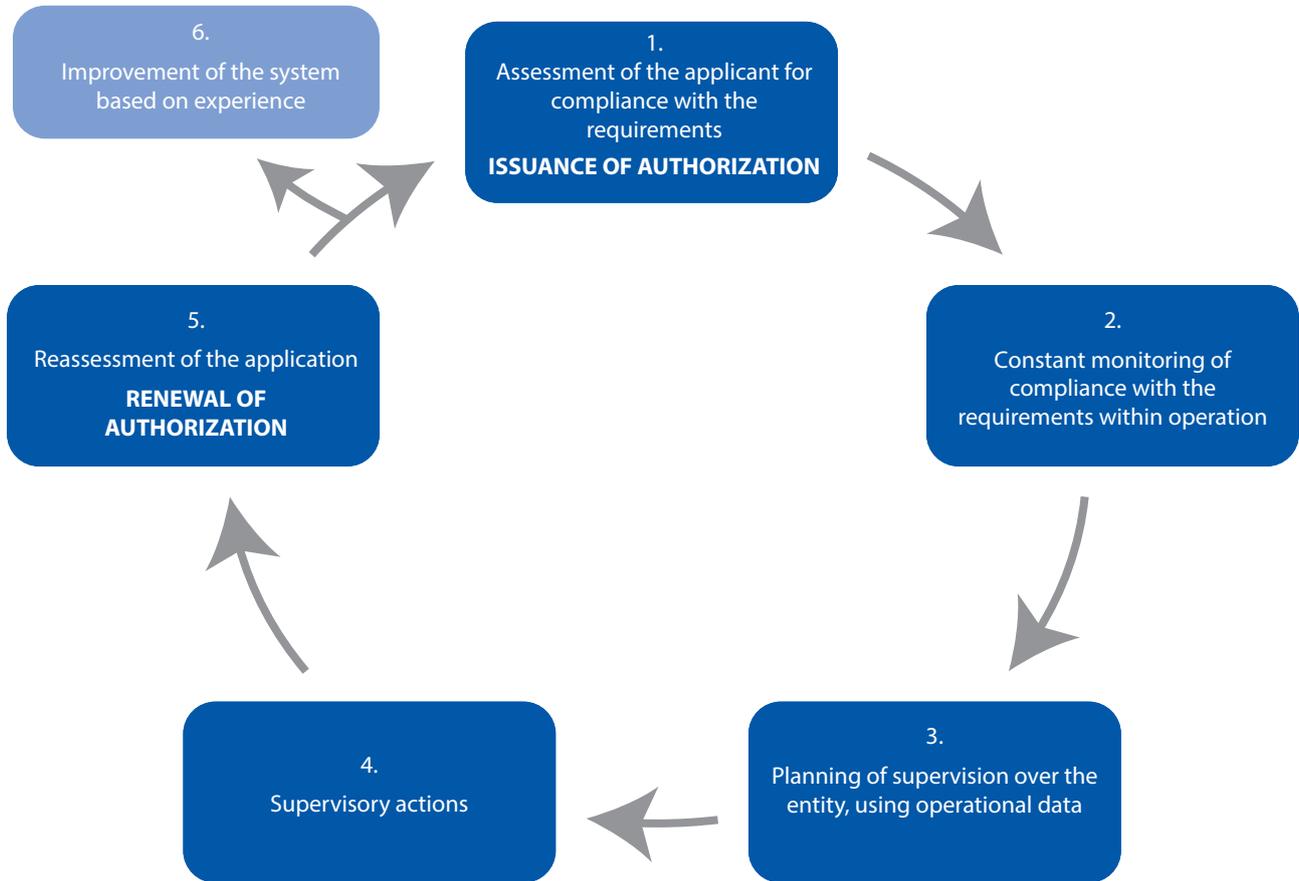
- Issuing authorisations to entities and approving internal documents,
- Monitoring the safety levels of entities and the rail system at large,
- Supervising railway sector entities,
- Improving the railway sector's safety.

The above-mentioned safety-related responsibilities of the President of UTK can be illustrated by a flowchart. This chart shows the six core stages at which public administration can support the level of safety of individual rail enterprises and the

rail system at large. The chart is based on the assumption that a rail enterprise has a certain life cycle on the market. This cycle includes the stages of market entry (public administration's assessment of qualifications), day-to-day operations (administrative supervision) and authorisation renewal to continue operating on the market. One particularly important aspect, which is regrettably often underestimated, involves the continuous

improvement of the safety requirements system. Indeed, the model is based on the assumption that the information gathered by public administration throughout the successive stages of the cycle (experience from the certification and supervision) should be used for the continuous improvement of the legal requirements system.

Fig. 68: The cycle of the safety authorities' influence on the rail system



Source: prepared by UTK



6. Railway event analysis

In line with the national law, **railway events** include accidents, serious accidents and incidents within a railway network.

An accident, as defined in the Rail Transport Act, is an unintended sudden event or sequence of events involving a rail vehicle with an adverse impact on human health, property or the environment. Accidents include in particular any collisions, derailments, level crossing accidents, accidents to persons caused by rolling stock in motion, and fires in rolling stock. The definition of an accident is, therefore, very broad.

A serious accident is an event that fits the definition of a railway accident, but fulfils additional, specific criteria. Serious accidents include situations caused by collision, derailment or any other similar event with an evident impact on safety regulations or safety management, and which involve:

- At least one killed or at least five seriously injured persons, or
- Significant damage to a rail vehicle, the railway infrastructure or the environment, the cost of which the railway committee can immediately estimate to be at least EUR 2 m.

An incident is any event other than an accident or serious accident that involves train traffic and impacts on its safety.

At the European level, the classification of railway events is slightly different. Not all railway accidents within the Community are monitored – only those which result in a specific amount of damage or number of casualties or which disrupt the operation of the rail system. Thus, instead of covering all events, the European classification includes only significant accidents and related serious accidents.

According to the EU classification, a **significant accident** is any accident involving at least one rail vehicle in motion and resulting in:

- At least one killed or at least one seriously injured person, or
- Significant damage to rolling stock, infrastructure, installations or the environment, estimated at EUR 150 thousand or more;
- Extensive disruptions to traffic, which result in suspending train services on a main railway line for six hours or more.

However, accidents in workshops, warehouses and depots are not included in the definition of a significant accident.

The analysis of the above definitions of significant and serious accidents allows the conclusion that any serious accident is also a significant accident, whereas not all significant accidents are serious accidents.

The term of significant accident, as defined by the EU, was incorporated into the Regulation of the Minister of Infrastructure of 20 July 2010 on common safety indicators. The definition of a serious accident used in the European classification is identical to the definition adopted in the national law, as provided above. Under the national law, therefore, railway events are divided into three categories: accidents, serious accidents and incidents. European law uses two categories: significant accidents and serious accidents. In addition, European statistics takes into account events preceding accidents or causing accidents (precursors), which have not been sufficiently incorporated into the national law.

Statistical data on the rail system's safety are collected by various institutions at the national and European levels. These institutions use slightly different procedures in this area, which is

directly attributable to differences in applicable laws. This leads to different types of annual data being used by individual railway safety institutions. These differences result primarily from:

- The geographical coverage of the data (parts of the system or the entire system);
- Different rules for adjusting historical data.

The divergence between the data collected by the UTK and the National Railway Accident Investigation Committee (PKBWK) is a clear example of the legally sanctioned differences with regard to the data coverage. **The UTK is required to process and report information on events within the public rail system and the separate network. PKBWK processes and reports data only on events within the public rail system (excluding the separate network).**

In the view of the President of UTK, these differences are irrelevant, as the two institutions have different functions and responsibilities, and they collect and process data for the purpose of monitoring trends in the railway protection system. **It is important, however, to promote public awareness about the differences in which individual institutions collect and process data, and how and for what purposes they do this.**

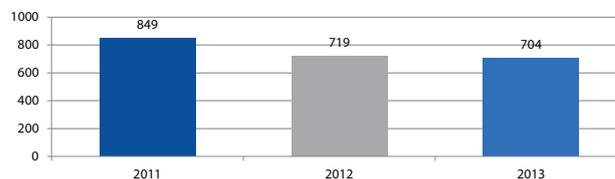
The statistical part of this report makes use of ongoing accident data that the President of UTK receives over the year from railway sector entities. These accidents are registered in the Railway Event Register. The data were reviewed and revised as part of the formal safety reporting procedure which is binding on rail sector entities under the applicable law.

6.1. Railway accidents

The rail system's safety slightly improved compared to the year before, as reflected in less events recorded and also less deaths and serious injuries related to accidents on railway lines.

Statistical data accumulated in the Railway Event Register show that the rail system's safety slightly improved compared to the year before, as reflected in less events recorded and also less deaths and serious injuries related to accidents on railway lines.

Fig. 69: An overview of railway accidents in the years 2011-2013



Source: prepared by UTK using the Railway Event Register data

Compared to 2012, **there were 2.1% less accidents and serious accidents within the national public rail network and the separate network** (the whole infrastructure was managed by 10 entities) in 2013. More specifically, there were **719** and **704** accidents in 2012 and 2013, respectively.

For monitoring purposes, the President of UTK classifies railway accidents, as defined above, into the following primary types of accident:

- Collisions;
- Derailments;
- Level crossing and pedestrian level crossing accidents;
- Accidents to persons caused by rolling stock in motion;
- Fires in rolling stock.

Most rail network accidents (36.2%) happen at level crossings. Only two less accidents (35.9%) are accidents to persons caused by rolling stock in motion, with as much as 91.7% of these being trespassing accidents. The primary causes of these events include poor safety culture and the lack of basic awareness among third parties (persons and entities) of how the rail system works. It is not only rail sector entities that are responsible for minimising the risks in this area.

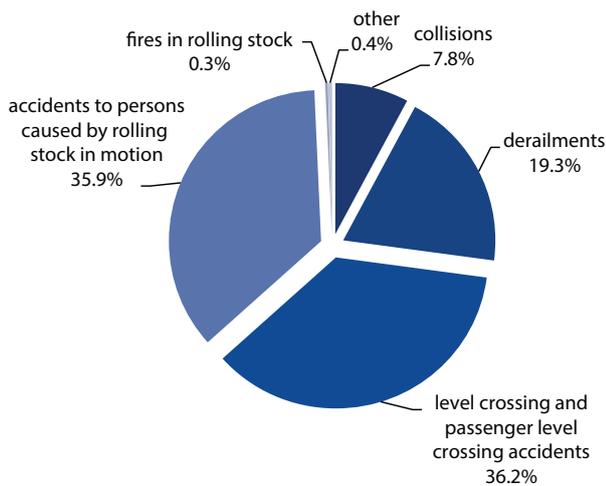
Tab. 12: Types of events in the years 2011–2013

No.	Type of event	2011		2012		2013	
		accident	serious accident*	accident	serious accident	accident	serious accident
1.	Collisions	27	0	41	1	55	0
2.	Derailments	104	1	112	0	136	0
3.	Level crossing accidents	226	27	272	0	254	1
4.	Accidents to persons caused by rolling stock in motion	324	53	286	0	253	0
5.	Fires in rolling stock	4	0	1	0	2	0
6.	Other	82	1	6	0	3	0
7.	TOTAL	849		719		704	

* The difference in the number of accidents in 2011 as compared to subsequent years is caused by some of railway committees' misinterpreting the definition of „serious accident“ as used before 2012

Source: prepared by UTK using the Railway Event Register data

Fig. 70: Rail network events in 2013 broken down by type of event



Source: prepared by UTK using the Railway Event Register data

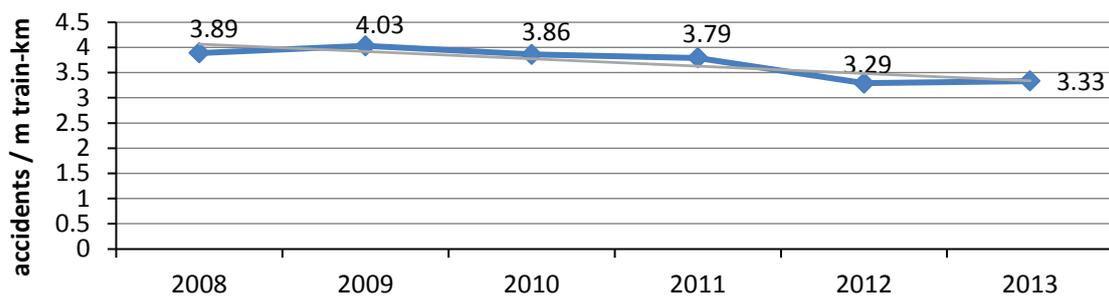
The next two chapters offer a broader discussion of level crossing and pedestrian level crossing accidents and accidents to persons caused by rolling stock in motion, as these are the

most frequent and primarily involve third parties (unrelated to the rail sector).

Another two categories of accidents, derailments and collisions, which accounted for ca. 27.1% of all accidents in 2013, are usually caused by the broadly defined rail system, including technology malfunctions, ineffective procedures or the human factor on the part of railway undertakings and infrastructure managers. The potential to reduce these two types of events lies directly with railway sector entities – infrastructure managers and railway undertakings. Equally important, though, are also designers, manufacturers, and suppliers, as well as construction and maintenance companies.

For a clearer picture of safety data and trends, the President of UTK uses the available data to derive, on an annual basis, the so-called **accident index** by drawing a relationship between the number of accidents on railway lines in a given year and operational performance. As mentioned at the beginning of this chapter, the number of accidents in 2013 slightly decreased, as did operational performance. This makes the 2013 accident index slightly higher (by 0.04) than the year before and means that the level of safety remains relatively constant.

Fig. 71: The accident index in the years 2008–2013



Source: prepared by UTK using the Railway Event Register data and reports from railway undertakings

6.2. Accidents within the rail system and third-party accidents

As indicated above, when analysing statistical data on rail system safety, one should remember that some of the events are inherent to the rail system while other are substantially or fully caused by extraneous factors and third parties. As such, all railway events can be classified into two groups:

- accidents within the rail system;
- accidents resulting from the interaction of the rail system and third parties.

Notably, about a quarter of all accidents in 2013 were caused by internal systemic factors, while the remaining events overlapped between the rail system and third parties. Events **within the rail system** were primarily caused by:

- a damaged or poorly maintained superstructure or engineering structures;
- a prematurely cleared signalling block section and a shift of the switch under a vehicle;
- a train passing a “Stop” or “No Shunting” signal;
- a poorly maintained wagon;
- a train being dispatched to an inappropriately laid out and unprotected signalling block section;
- a train running into another rail vehicle or other obstacle.

These events resulted in no deaths, with one seriously injured person.

Accidents involving third parties (in principle, rail-unrelated):

- are caused at level crossings;

- involve unauthorised persons on railway premises (a trespasser illegally entering railway premises);
- involve malicious mischief to the rail system;
- involve passengers (train hopping and jumping out of the train);
- involve vehicles standing on tracks outside level crossings.

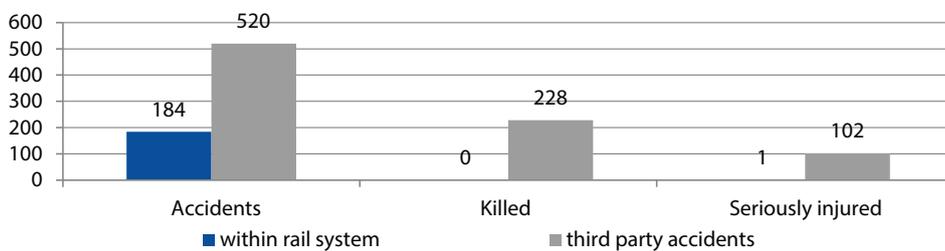
A total of 520 such events, with 228 deaths, were reported in 2013. These events are generally not related to the rail system and often the rail system alone has a limited ability to effectively counteract them. Regrettably, statistics on this issue lead the public to believe that the bulk of blame is on rail traffic, although the majority of these events are caused entirely by third parties, mostly level crossing users and unauthorised

persons on railway premises. The events in question make up ca. **73.9% of all events**.

A particularly noteworthy accident took place on 30 September 2013 at a level crossing in Kozerki. It was classified as a serious accident, with one person killed and two seriously injured. While the primary and secondary causes of this accident were partly attributable to the rail system, the direct cause was a train colliding with a car standing in the danger zone of an A-category level crossing. Consequently, this report qualifies this serious A18-category accident as not being caused by the rail system. The statistical data on this accident are therefore presented in the section on events involving third parties.

The above broken-down data clearly indicate that the rail system as such is safe, with the large bulk of events involving the rail system being caused by third parties.

Fig. 72: Events and their consequences in 2013 by rail-related and rail-unrelated



Source: prepared by UTK using the Railway Event Register data

6.3. Casualties of railway accidents

The number of casualties within the general and separate network of the rail system was 331, of which 228 were killed and 103 seriously injured.

The number of deaths is directly correlated to the number of the individual types of event. **Unauthorised persons on railway premises** (166 deaths, which makes up **72.8%** of all killed persons) and **level crossing and pedestrian level crossing users** (52 deaths, which makes up **22.8%** of all killed persons) accounted for the large bulk of deaths in accidents in 2013.

A similar pattern applies to seriously injured persons. **Unauthorised persons on railway premises** formed the largest group (56 in-

jured persons, which makes up 54.4% of all seriously injured persons) in these terms. **Level crossing and pedestrian level crossing users** were the second largest group of seriously injured persons (35 seriously injured persons, which makes up **34.0%** of all serious injuries).

2013 saw a decrease in the number of killed and seriously injured persons across all categories of injured persons. Compared to 2012, there were **16.1%** less deaths among level crossing and pedestrian level crossing users and **10.3%** less casualties among unauthorised persons on railway premises in 2013. The downward trend for serious injuries includes a decrease of **2.8%** for level crossing users and **12.5%** for unauthorised persons on railway premises.

About a quarter of all accidents in 2013 were caused by internal systemic factors, while the remaining events overlapped between the rail system and third parties.

Tab. 13: Persons killed in accidents in the years 2011–2013

No.	Category	Killed			Seriously injured		
		2011	2012	2013	2011	2012	2013
1.	passenger	10*	14*	6	58*	81**	8
2.	employee or contractor	2	15***	2	11	6***	4
3.	level crossing or pedestrian level crossing user	60	62	52	48	36	35
4.	unauthorised person	246	185	166	93	64	56
5.	other	4	0	2	1	1	0
6.	Total	322	276	228	211	188	103

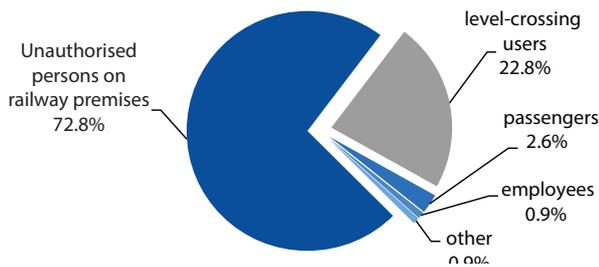
* including a serious accident at the Baby Station, with 2 persons killed and 33 seriously injured

** including a serious accident near Szczekociny, with 11 passengers killed and 59 seriously injured

*** including a serious accident near Szczekociny, with 5 employees killed and 2 seriously injured

Source: prepared by UTK using the Railway Event Register data

Fig. 73: The proportion of individual groups of persons killed in railway accidents in 2013 (excluding suicides)



Source: prepared by UTK using the Railway Event Register data

6.4. The causes of railway accidents – an analysis

The category denoting the nature and direct cause of an event, in line with the list included in Appendix 6 to the Regulation of the Minister of Transport of 30 April 2007 on serious accidents, accidents and incidents on railway lines, is assigned by a railway committee and, if necessary, verified by PKBWK. The event categories are identified according to an XYY pattern, where X defines the seriousness of the event with a letter (A is a serious accident, B is an accident, and C is an incident) and YY is a numeric category related to the cause classification.

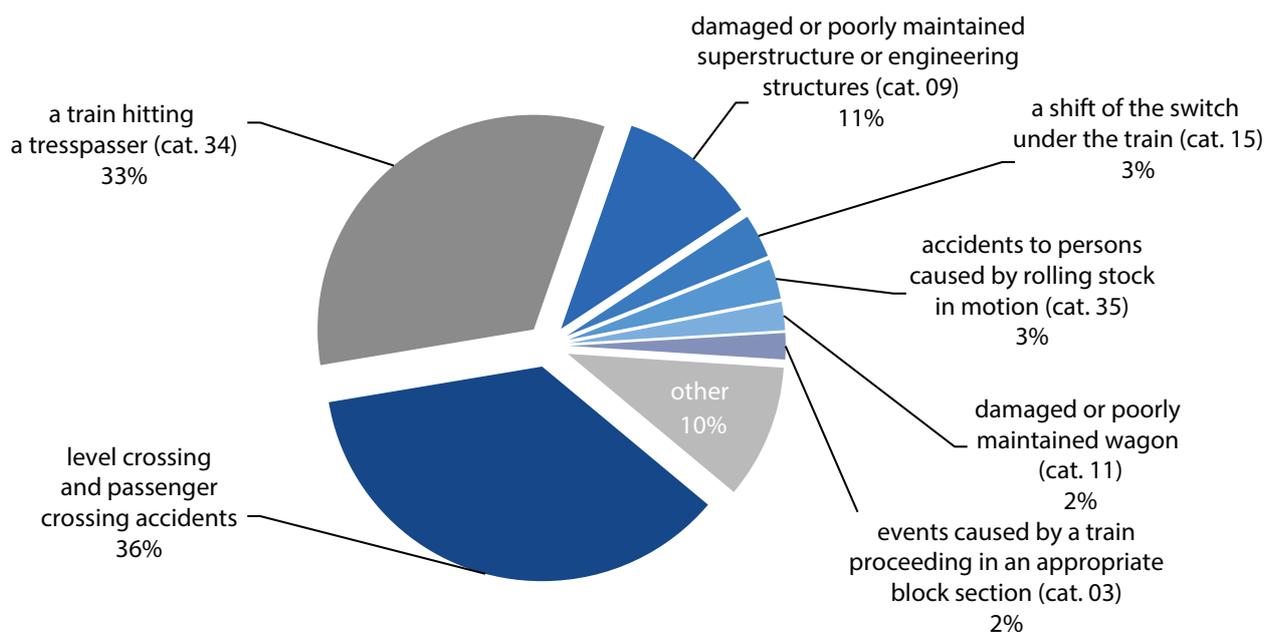
The categories of serious accidents and accidents that occurred in last two years, according to the Railway Event Register data, are presented in the tables below, accordingly, and broken down as required by the aforementioned Regulation.

In the analysed year 2013, most accidents were caused by a rail vehicle colliding with a road vehicle at a level crossing or outside a level crossing (categories 18-23 and 31-33), or by a train hitting a trespasser (category 34). Accidents involving road vehicles and individuals hit at and outside level crossings and pedestrian level crossing accounted for **69.2% of all rail network accidents**.

The remaining 30.8% of events were attributable to other causes. These primarily included accidents caused by a damaged or poorly maintained superstructure or engineering structure (category 09), accidents caused by a shift of the switch under the train (category 15), accidents to persons caused by rolling stock in motion (category 35), accidents caused by a train's failure to stop or its unauthorised movement (category 04), accidents caused by a damaged or poorly maintained wagon (category 11), and also caused by a train proceeding in an inappropriate block section or by mishandling rail traffic control devices (category 03) and a rail vehicle colliding with another rail vehicle or any other obstacle (category 13).

Unauthorised persons on railway premises (166 deaths, which makes up 72.8% of all killed persons) and level crossing and pedestrian level crossing users (52 deaths, which makes up 22.8% of all killed persons) accounted for the large bulk of deaths in accidents in 2013.

Fig. 74: The percentage share of events in 2013 by category



Source: prepared by UTK using the Railway Event Register data

The table below compares changes in the number of accidents for individual categories in the years 2012-2013. The accident categories include those most frequent. Also, some categories

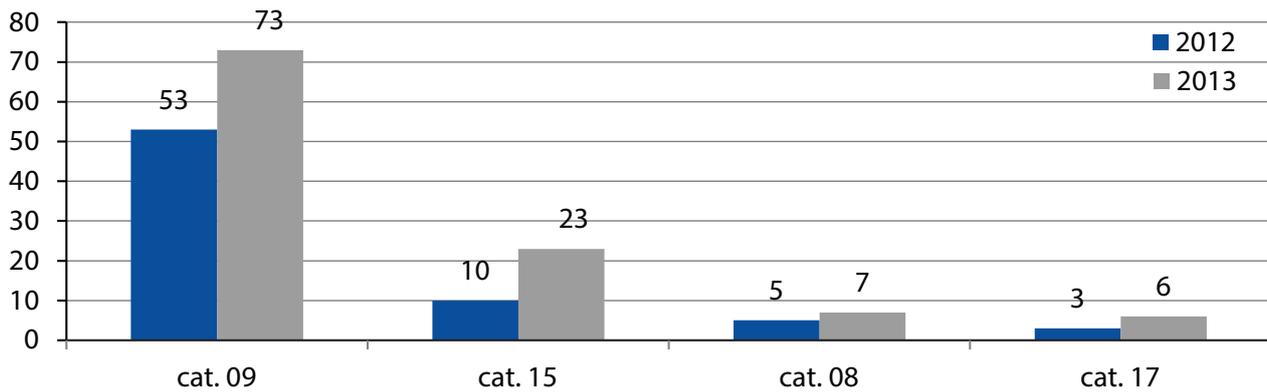
in 2013 show substantial deviations from 2012 in terms of the number of events. The figures below the table show selected categories of downward- and upward-trending accidents.

Tab. 14: The number of accidents in the years 2012-2013 by numeric categories

No.	Numeric category	Cause description	2012	2013	Change	
1.	01	Dispatching a rail vehicle into an occupied or closed track, or a track which runs opposite to the main track, or directing the rail vehicle in the wrong direction	2	1	-50.0%	
2.	03	Dispatching or allowing a rail vehicle towards or into an inappropriately laid-out block section or mishandling rail traffic control devices	16	14	-12.5%	
3.	04	Passing a "Stop" signal or any point in which the train is required to stop, or an unauthorised starting of the train	17	16	-5.9%	
4.	06	Exceeding the maximum speed allowed	1	0	-100.0%	
5.	07	Manoeuvring in a way that puts the safety of rail traffic at risk	1	1	0.0%	
6.	08	Rail vehicle runaway	5	7	+40.0%	
7.	09	A damaged or poorly maintained superstructure, bridge or viaduct, including negligence such as the improper unloading of materials or superstructures, or leaving materials or equipment lying on the track or within the loading gauge	53	73	+37.7%	
8.	10	A damaged or poorly maintained rail vehicle with traction or a designated-purpose rail vehicle (including running into a structural component of a rail vehicle or a designated-purpose rail vehicle)	0	6	-	
9.	11	A damaged or poorly maintained wagon (including running into a structural component of a wagon)	21	15	-28.6%	
10.	12	Damaged or malfunctioning rail traffic control devices	2	2	0.0%	
11.	13	A rail vehicle running into another rail vehicle or other obstacle (e.g. brake skid, luggage trolley, mail trolley, etc.)	11	13	+18.2%	
12.	15	A prematurely cleared signalling block section and a shift of the switch under a train;	10	23	+130.0%	
13.	17	Improper loading, unloading, load securing or any other cargo-related irregularities	3	6	+100.0%	
14.	Collisions with road vehicles and accidents involving pedestrians at level crossings and pedestrian level crossings	18	A rail vehicle running into a road vehicle or vice versa at a full-barrier level crossing (category A according to the crossing specification)	9	9	0.0%
15.		19	A rail vehicle running into a road vehicle or vice versa at a half barrier automated level crossing (category B)	16	15	-6.3%
16.		20	A rail vehicle running into a road vehicle or vice versa at a level crossing with an automatic signalling system, without full and half barriers (category C)	52	40	-23.1%
17.		21	A rail vehicle running into a road vehicle or vice versa at a level crossing without an automatic signalling system and without full barriers (category D)	158	167	+5.7%
18.		22	A rail vehicle running into a road vehicle or vice versa at a private level crossing (category F)	2	2	0.0%
19.		31	A rail vehicle running into a pedestrian at a guarded level crossing or pedestrian level crossing	9	4	-55.6%
20.		32	A rail vehicle running into a pedestrian at a level crossing with an automatic signalling system (category B, C)	10	4	-60.0%
21.		33	A rail vehicle running into a pedestrian at other level crossings and pedestrian level crossings	16	14	-12.5%
22.		Total collisions with road vehicles and accidents involving pedestrians at level crossings and pedestrian level crossings		272	255	-6.3%
23.	23	A rail vehicle running into a road vehicle or vice versa outside level crossings, at stations, rail paths or side-track connection tracks	7	4	-42.9%	
24.	24	Fire in a train	1	2	+100.0%	
25.	28	Natural disasters (e.g. flood, snowdrifts, ice dams, landslides)	0	4	-	
34.	30	Malicious mischief, vandalism or reckless behaviour (e.g. throwing stones at trains, placing obstacles on tracks, vandalising power facilities, communication or traffic control devices or superstructures, or tampering with such devices)	6	4	-33.3%	
26.	34	A rail vehicle running into a pedestrian outside level crossings at stations or rail paths	255	232	-9.0%	
27.	35	Events involving people and caused by rolling stock in motion (train hopping and falling out of a train or a rail vehicle, a fast approach or an abrupt braking of a rail vehicle)	31	21	-32.3%	
28.	37	A train uncoupling without a wagon runaway	2	1	-50.0%	
29.	38	Theft-related malfunctioning of rail traffic control buildings and devices or level crossings	1	0	-100.0%	
30.	No category	The category has not been determined or the event cause is being investigated	2	3	-	

Source: prepared by UTK using the Railway Event Register data

Fig. 75: The number of events in selected categories compared with the upward trends in the years 2012 and 2013



Source: prepared by UTK using the Railway Event Register data

In 2013 a substantial increase was recorded in accidents caused by damaged or poorly maintained infrastructure (category 09, a 37.7% increase) and prematurely cleared signalling block sections, and a shift of the switch under a train (category 15, a 130% increase). There were also more cases of rail vehicle runaways (category 08, a 40% increase) and loading-related negligence (category 17, a 100% increase). Compared to 2012, there were less accidents involving people hopping on or jumping out of trains in motion (category 35, a 32.3% decrease), accidents caused by poorly maintained or damaged wagons (category 11, a 28.6% decrease) and also accidents caused by a train pro-

ceeding in an inappropriate block section or by mishandling rail traffic control devices (category 03, a 12.5% decrease).

The largest increase in events was recorded for the category of poorly maintained and damaged railway infrastructure. The President of UTK undertook some extraordinary supervisory measures in this area in 2014, which led to, among other things, administrative decisions to limit the use of the infrastructure. For more on this topic, please see the chapter on supervisory measures.

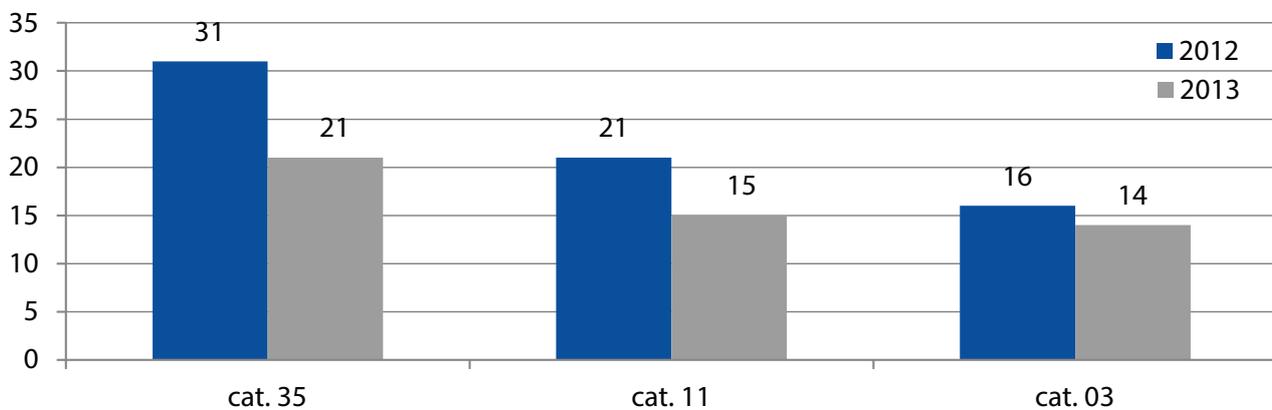


Fig. 76: The number of events in selected categories compared with the downward trends in the years 2012 and 2013

Source: prepared by UTK using the Railway Event Register data

6.5. Monitoring railway events at the European level

To monitor the level of safety in the EU rail sector, the ERA collects data on railway events in individual Member States. These data come in the form of common safety indicators (CSI) and are submitted to the EU by individual Member States. As already mentioned, common safety indicators incorporate information on significant accidents and related serious accidents in a reporting year.

Based on these indicators, the ERA defines so-called National Reference Values (NRV) for individual Member States. NRVs represent the minimum levels of safety that different components of a rail system, as well as the system at large, need to achieve. These levels are expressed as risk acceptance criteria. The NRV for Poland and other EU Member States are set out by the Commission Decision 2012/226/EU of 23 April 2012 on the second set of CSTs as regards the rail system, as amended by the Commission Implementing Decision 2013/753/EU.

Tab. 15: Common safety targets as implemented in 2013

Common safety targets (CST)		NRV for Poland	Calculated indicator value	Achieved indicator value
1.1. NRVs for passenger risk (x 10⁻⁹)				
CST 1.1.	Fatalities and weighted serious injuries (FWSI) among passengers per bn train-kilometres of passenger trains	116.1	49.387	42.5%
CST 1.2.	Fatalities and weighted serious injuries (FWSI) among passengers per bn passenger-kilometres	0.849	0.408	48.1%
1.2. NRV for employee risk (x 10⁻⁹)				
CST 2.	Fatalities and weighted serious injuries (FWSI) among employees per bn train-kilometres	17.2	11.059	64.3%
1.3. NRV for level crossing user risk (x 10⁻⁹)				
CST 3.1.	Fatalities and weighted serious injuries (FWSI) among level crossing users per bn train-kilometres	277.0	255.287	92.2%
CST 3.2.	Fatalities and weighted serious injuries (FWSI) among crossing users per bn passenger-kilometres (track kilometres) multiplied by the number of journeys	no data	124.335	-
1.4. NRV "other" risk (x 10⁻⁹)				
CST 4.	Fatalities and weighted serious injuries (FWSI) among others per bn train-kilometres	11.60	9.216	79.4%
1.5. NRV risk for unauthorised persons on railway premises (x 10⁻⁹)				
CST 5.	Fatalities and weighted serious injuries (FWSI) among unauthorised persons per bn train-kilometres	1210.0	785.675	64.9%
1.6. NRV for whole society risk (x 10⁻⁹)				
CST 6.	Fatalities and weighted serious injuries (FWSI) in the whole society per bn train-kilometres	1590.0	1092.572	68.7%

Source: prepared by UTK

All the indicators for 2013, as calculated for the defined groups of risk using statistical data in the form of common safety indicators, are within acceptable risk limits and reference values as defined for Poland. By extension, the required level of safety of the national rail system is achieved, with the CSI for the general public in Poland being 68.7%. Notably, however, at as much as 92%, the risk group comprising level crossing users had the highest CSI. This means that this area is still problematic and fits in with the above-mentioned national statistics, which show level crossing accidents as being the largest group of events, which is also the second accident group in terms of casualties, behind events involving unauthorised persons on railway premises.

All the indicators for 2013, as calculated for the defined groups of risk using statistical data in the form of common safety indicators, are within acceptable risk limits and reference values as defined for Poland. Notably, however, at as much as 92%, the risk group comprising level crossing users had the highest CSI.



7. Events involving unauthorised persons on railway premises

The category of unauthorised persons on railway premises includes trespassers on railway premises.

These are primarily individuals who take short cuts by crossing railway lines in random, unmarked locations (“wildcat crossings”) or individuals who are suicidal.

Trespassing on railway lines is very dangerous and the “wildcat crossing” statistics are alarming. It is important for accident-related statistics to classify certain events as suicides or accidents involving unauthorised persons on railway premises. Indeed, it is often difficult to properly classify an event and the decision in this regard is made on the basis of a ruling by a prosecutor’s office.

This means that suicide-related events are also included in the primary category of events involving trespassing on railway tracks. It is only after a prosecutor’s office has qualified an event as a suicide that such an event is excluded from the said category. Consequently, the number of events involving unauthorised persons on railway premises relative to the number of suicide-related events changes over the year.

As well as being family tragedies, accidents involving pedestrians being hit by trains disrupt the rail system, making it difficult to keep to the timetable and generating financial losses for rail enterprises and their clients. Such disruptions usually last for several hours and effectively disorganise traffic. Some major delays might arise due to the need to use single-track traffic or bypass the section which is being processed by the police. Occasionally, the RU might need to arrange for buses to provide substitute transport for the passengers.

Fig. 77: Illegal (“wildcat”) crossings



Source: <http://tustolica.pl/>.

Due to the tragic statistics, the UTK-supported “Safe crossing – stop for your life” social campaign that has been in place for a number of years was extended in October 2012 to include counteracting trespassing on rail tracks. The “Zero tolerance for rail trespassers” effort was initiated as part of this campaign. The scale of the problem of railway track trespassers is reflected in the results of the said social campaign in its initial months. It took only five months to identify as many as 3326 illegal crossings, identify, admonish and fine (a total of PLN 73 100 in fines) 370, 2000, and 1270 trespassers, respectively. In six cases courts were applied to penalise trespassers³. This shows the great need for a social campaign to make the public more aware of the dangers and instil in it socially desirable attitudes and behaviour.

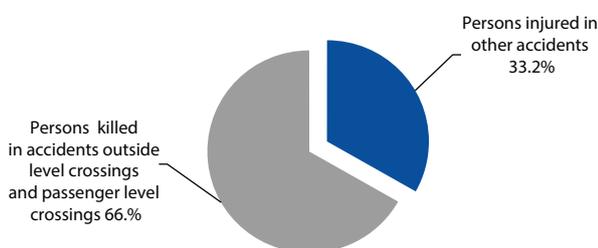
³ Wildcat crossings still a problem, Kurier Kolejowy, <http://kurierkolejowy.eu/aktualnosci/13092/Dziki-przejscia-wciaz-sa-problemem.html>



7.1. Events involving pedestrians outside level crossings and on stations and rail paths

The figures on deaths and serious injuries are clearly correlated with accidents to persons caused by rolling stock in motion. 2013 saw a total of 232 accidents in which rail vehicles ran into pedestrians outside level crossings on stations or rail paths, which makes up ca. 33.0% of all registered events. These events resulted in 221 injuries, 166 of which were deaths. Railway line trespassers represent a substantial proportion of all persons injured in railway track accidents.

Fig. 78: The proportion of killed and seriously injured persons as a result of crossing rail tracks outside level crossings and pedestrian level crossings on stations or rail paths in 2013 (excluding suicides and attempted suicides)



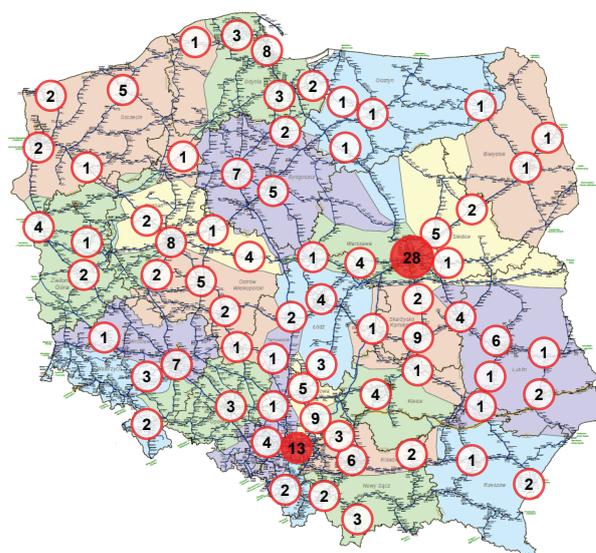
Source: prepared by UTK using the Railway Event Register data

The behaviour of crossing tracks outside level crossings at stations and rail paths and using the illegal crossings is found almost equally throughout Poland. Naturally, most of these accidents were recorded in the area of major agglomerations with high population and railway-track densities. Particularly notable is the Warsaw agglomeration, which recorded as many as 29 events involving trains running into pedestrians crossing tracks outside level crossings on stations and rail paths. 15 such cases were recorded in Warsaw alone, which makes up 6% of all events recorded last year throughout Poland. These events resulted in 14 injuries, the bulk of which (12) being deaths. This behaviour was also quite prominent in Katowice, Tri-City, Poznań and Wrocław.

It is important to note, however, that the analysed data are insufficient to draw definite conclusions as to how many illegal crossings there are in Poland and where they are located. The data presented in this report include only recorded cases in which trains ran into pedestrians crossing tracks, resulting in railway events. In actuality, however, rail-track trespassing is much more widespread, as indicated at the beginning of this chapter. It should also be added that according to Railway Event Register data, there was not a single specific location with more than one event recorded.

2013 saw a total of 232 accidents in which rail vehicles ran into pedestrians outside level crossings on stations or rail paths, which makes up ca. 33.0% of all registered events. These events resulted in 221 injuries, 166 of which were deaths.

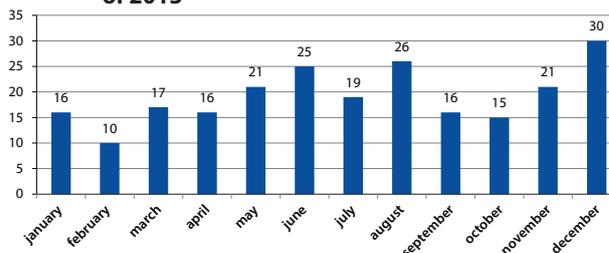
Fig. 79: The locations where rail vehicles ran into pedestrians outside level crossings on stations or rail paths in 2013



Source: Prepared by UTK based on the Railway Event Register and using the map drawn by PKP Polskie Linie Kolejowe S.A., www.plk-sa.pl.

The following figure shows the occurrence of these events throughout the year. 2013 saw the least events in question in February, whereas the most happened in June, August and December.

Fig. 80: The number of events with rail vehicles running into pedestrians outside level crossings on stations or rail paths in the respective months of 2013



Source: Prepared by UTK using the Railway Event Register data

7.2. Suicides and attempted suicides

Suicides and attempted suicides represent another serious problem within the rail network. Statistically, they constitute a separate group which is not included in serious accidents and accidents. As indicated in the background to this chapter, each event involving a rail vehicle running into a pedestrian is initially qualified by railway committees as a B 34 category accident, i.e. "a rail vehicle running into a pedestrian outside a level crossing on a station or rail path." It is only after a prosecutor's office has found the event to be a suicide that such event is reclassified from the B 34 category to a suicide.

The analysed 2013 saw 79 such events, of which 71 resulted in death, and 8 resulted in serious injuries. Compared to 2012, in which 82 events were qualified as suicides or attempted suicides, there were 3.7% less events of this type in 2013. The growth in suicide-related accidents, as compared to 2012, stems from the increased cooperation between railway committees, the police and the prosecutor's office. This facilitates the flow of information on qualifying events as suicide-related and, consequently, leads to their reclassification in the Railway Event Register kept by the President of UTK.

Tab. 16: Table 16. An overview of suicides and attempted suicides in the years 2011-2013

No.	Event	2011	2012	2013
1.	Suicides and attempted suicides	28	82*	79**

* including 2 attempted suicides

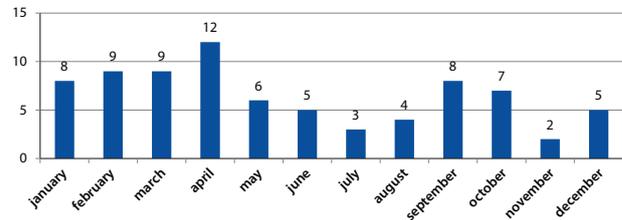
** including 8 attempted suicides

Source: Prepared by UTK using the Railway Event Register data

Railway Event Register data were used to determine where and how frequent the problem at hand occurred throughout 2013. Like with the events involving rail vehicles running into pedestrians outside level crossings on stations and rail paths, the locations of these events are generally random and almost equally prevalent throughout Poland. The most suicides and attempted suicides were recorded on the Warsaw-Zyrardów path. In contrast, the Podlaskie and Kujawsko-Pomorskie Provinces recorded no such events in 2013. The number of suicides and

attempted suicides across Poland varied throughout 2013. The bulk of cases were recorded between January and April and in September, accounting for almost 59% of all such events in the year. July and November saw the least suicide-related events.

Fig. 81: The number of suicides and attempted suicides in 2013 by month



Source: Prepared by UTK using Railway Event Register data

Fig. 82: Rail suicides and attempted suicides in 2013 by location



Source: Prepared by UTK based on the Railway Event Register and using the map drawn by PKP Polskie Linie Kolejowe S.A., www.plk-sa.pl.



8. Safety on level crossings

Level crossings, that is intersections where railway lines cross public roads at the same level, are among the most dangerous locations within the rail system due to the interaction between the two kinds of transport (rail and road).

The large bulk of level crossing events is caused by the inappropriate (i.e. illegal) behaviour of road users (drivers and pedestrians).

Also, rail sector entities have limited capabilities for minimising the risk generated by level crossings, as the bulk of this risk is attributable to third parties (road users and pedestrians). Level crossing events result in substantial damage to property, traffic delays and disruptions and, sadly, very often lead to deaths and serious injuries.

The large bulk of level crossing events is caused by the inappropriate (i.e. illegal) behaviour of road users (drivers and pedestrians). Partly to blame, though much less, are also maintenance works related to devices and infrastructure within level crossings, including their failures, and errors made by rail personnel.

To ensure a satisfactory level of safety for level crossing users, these facilities are fitted with varied-class safety devices designed to warn road users about an approaching train and to block the level crossing with gates. These devices are activated either manually by rail personnel or automatically in response to the approaching train.

8.1. Level crossing safety devices in Poland by category and type

The national solutions for one-level intersections of railway lines and vehicle roads correspond to the requirements set out in the Regulation of the Minister of Transport and the Maritime Economy of 26 February 1996 on the technical conditions to be met by intersections of railway lines and public roads, and the location of such intersections. This Regulation allows the use of six level crossing and pedestrian level crossing categories on railway lines with the maximum allowed train speed of 160 km/h. According to the said Regulation, level crossings and pedestrian level crossings are classified into specific categories depending on the road category and the traffic factor (the number of road

vehicles multiplied by the number of rail vehicles going through a level crossing per 24 hours). Moreover, the Regulation provides for certain active and passive safety devices:

- Barrier devices
- Road signal lights
- Barrier lights
- Sound signalling devices

Given the above-mentioned traffic considerations and protection measures, the following level crossing categories can be identified:

- **Category A** – public level crossings with or without barriers, in which road traffic is controlled by signals given by rail personnel, or signal lights; personnel-controlled level crossings (controlled on-site or remotely, from a distance of up to 1000 m); remote control relying on a CCTV system, which enables the gatekeeper to monitor the crossing zone as the barriers are closing and avoid “trapping” between the barriers a user who has ignored signal lights (a red flashing light) and entered the crossing;
- **Category B** – public level crossings with automatic signal lights and half barriers; these devices are activated by a train running over track detectors, which are located at such a distance as to make sure that the fastest train on a given line reaches the crossing not earlier than within 35 seconds after it has been closed (once the detectors have been activated, signal lights begin to flash and 5 seconds later, half barriers begin to close down – the process lasts 10–15 seconds, depending on the barrier type);
- **Category C** – public level crossings with automatic or personnel-controlled signal lights work the same way as B-category crossings, except for half barriers (which are unavailable in the crossings in question);
- **Category D** – public level crossings without full or half barriers and automatic signal lights (no rail traffic control devices);

- **Category E** – public pedestrian level crossings, some equipped with warning devices (signal lights), mazes and personnel-controlled barriers;
- **Category F** – private level crossings and pedestrian level crossings equipped with user-controlled barriers (e.g. by property, plant, field owners).

Tab. 17: The number of active level crossings within public and separate networks at the end of 2013

No.	Infrastructure manager	Crossing type						Total
		A	B	C	D	E	F	
1.	PKP PLK S.A.	2539	812	1289	7386	594	500	13 120
2.	WKD Sp. z o.o.	1	10	9	17	1	1	39
3.	PKP SKM w Trójmieście Sp. z o. o.	0	0	0	1	1	0	2
4.	PKP LHS Sp. z o. o.	34	4	7	196	9	12	262
5.	Infra SILESIA S.A.	15	0	1	19	1	2	39
6.	CTL Maczki – Bór Sp. z o. o.	6	0	0	19	1	2	28
7.	Jastrzębska Spółka Kolejowa Sp. z o. o.	11	0	0	16	2	2	31
8.	Kopalnia Piasku Kotłarnia – Linie Kolejowe Sp. z o. o.	8	0	0	78	2	7	95
9.	PMT Linie Kolejowe sp. z o.o.	1	4	2	24	1	0	32
10.	UBB Polska sp. z o.o.	0	0	0	0	1	0	1
11.	Total	2615	830	1308	7756	614	526	13 649

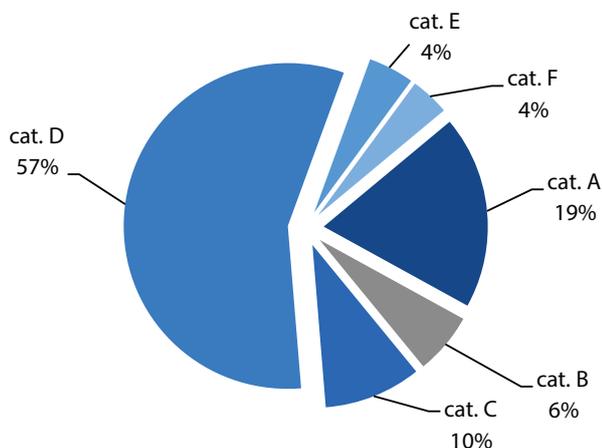
Source: prepared by UTK using data from 2013 safety reports

In addition, to improve traffic safety on level crossings, the rail network features warning signs for engine drivers to advise them of the protection status of level crossings. These warning signs are placed before level crossings within the braking distance of the fastest train which may be operated on a given line.

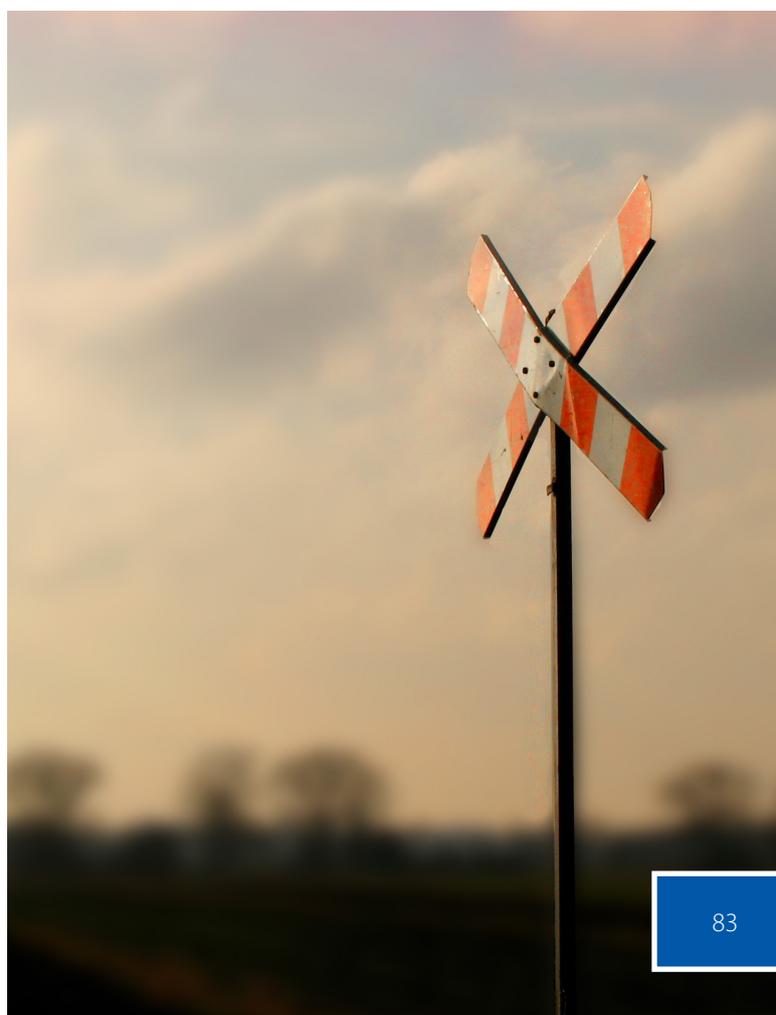
As at 31 December 2013, the national rail network, managed by 10 infrastructure managers, had 13 649 active level crossings and pedestrian level crossings. D-category crossings are by far the most prevalent (7756) and account for 57% of all crossings. The second largest category of crossing is A (2615 crossings), which accounts for 19% of all crossings, and the third is C-category (1308), which accounts for 10% of all crossings. There are 830 B-category (6%) and 526 F-category (4%) crossings in Poland. E-category pedestrian level crossings (614) account for 4% of all level crossings.

The number of level crossings should be analysed in relation to the length of railway lines used within the public rail network (excluding the separate rail network, as it is a distinct form of network). The resultant ratio shows that in Poland the average distance between intersections at the level of tracks is 1.42 km. Compared to the European average, which is ca. 2 km, this puts Poland among the European leaders in terms of level crossing density.

Fig. 83: Level crossings on public and separate networks broken down by category



Source: prepared using infrastructure managers' data as presented in 2013 safety reports



Tab. 18: Level crossing density within the public network (excluding the separate network)

No.	The number of level crossings used on railway lines	Frequency
1.	All level crossings including pedestrian crossings	13 609
2.	Level crossings per 1 km of railway line	0.71 per 1 km of line

Source: prepared using infrastructure managers' data as presented in 2013 safety reports

Relatively few level crossings are protected by devices that were designed in the 21st century and comply, technology- and design-wise, with European level crossing safety standards.

8.2. Problems related to operating level crossings

As already outlined in the background to this chapter, traffic safety on level crossings depends on whether road users comply with the traffic rules, whether level crossings are properly marked for railway lines and roads, and also whether the level crossing infrastructure and devices are properly maintained and functional. Also of importance is the expertise and responsibility of the personnel who operate and maintain level crossings, and to ensure sufficient visibility within the level crossing.

The currently operated level crossing traffic safety devices use different technologies, from the oldest key-based solutions to hybrid and microprocessor technologies. Relatively few level crossings are protected by devices that were designed in the 21st century and comply, technology- and design-wise, with European level crossing safety standards.

The table below compiles information on public and separate network level crossings in line with the classification of the types of level crossing safety devices and in accordance with the Commission Directive 2009/149/EC of 27 November 2009 amending Directive 2004/49/EC of the European Parliament and of the Council as regards Common Safety Indicators and common methods to calculate accident costs. It follows from the table that over **63%** of all level crossings within the rail network have passive protection systems.

Tab. 19: The number of public network level crossings, including pedestrian crossings, by the protection systems (devices) they use

No.	Number of crossings	Total
1.	Level crossings with active protection systems including	5040
2.	automatic user-side warning system	1297
3.	automatic user-side protection system	10
4.	automatic user-side protection and warning system	414
5.	automatic user-side protection and warning, and rail-side protection system	468
6.	manual user-side warning system	54
7.	manual user-side protection system	1248
8.	manual user-side protection and warning system	1549
9.	Level crossings with passive protection systems	8609
10.	TOTAL LEVEL CROSSINGS	13 649

Source: prepared by UTK using data from 2013 safety reports

As far as the causes of level crossing events are concerned, the most important specific factors that have been identified to impact on the use of level crossings, and thereby to affect safety on single level crossings, include:

- Non-compliance with road traffic rules by road users;
- Complex traffic systems within level crossing areas with multiple road intersections or level crossings situated in their immediate vicinity;
- The inclination of some drivers to downplay the efficiency of safety devices (e.g. due to long barrier closure times) and attempts to bypass protection systems;



In 2013 there were 255 level crossing and pedestrian level crossings accidents, which resulted in 52 deaths and 37 serious injuries.

- Poorly maintained road and railway infrastructure within level crossings;
- Professional discipline by the personnel involved directly in rail traffic control;
- Premature activation or deactivation of level crossing safety devices;
- Deficient lighting around level crossings;
- Insufficient visibility of approaching trains;
- Insufficient visibility of full and half barriers within the level crossing approach zone;
- Incomplete or illegible marking of level crossings.

8.3. Level crossing accidents

As already mentioned in the chapter analysing railway events, level crossing accidents make up a substantial portion of total events. In 2011, 2012 and 2013, these accounted for ca. 30%, ca. 38% and ca. 36% of all events, respectively. Any level crossing collision can put human life and health at risk. The same applies to cargo transported on both rail and road vehicles. Such collisions can generate substantial social costs resulting from traffic disruptions and limitations.

The available data show that in 2013 there were 255 level crossing and pedestrian level crossings accidents, which resulted in 52 deaths and 37 serious injuries. Detailed data in this respect, broken down by the categories of level crossings, are presented in the table below.

Tab. 20: The number of accidents on public and separate network level crossings in the years 2011–2013

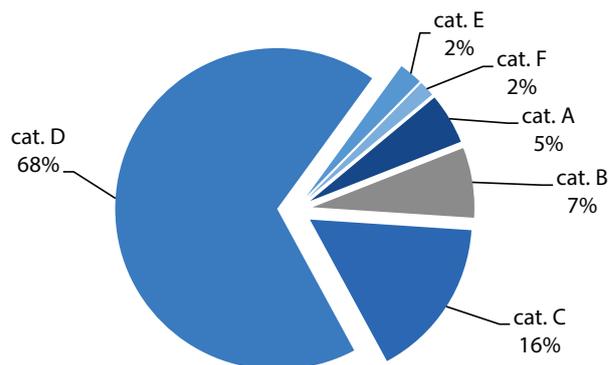
No.	Crossing type	Number of accidents		
		2011	2012	2013
1.	Category A	13	18	13
2.	Category B	28	25	18
3.	Category C	46	53	41
4.	Category D	152	165	173
5.	Category E*	10	9	6
6.	Category F**	4	2	4
7.	TOTAL	253	272	255

* pedestrian level crossings

** private level crossings and pedestrian level crossings

Source: prepared by UTK using the Railway Event Register data

Fig. 84: Level crossing and pedestrian level crossing accidents by level crossing category in 2013



Source: prepared by UTK using the Railway Event Register data

About two thirds of all level crossing accidents included level crossings that had no warning (signal lights) and safety devices (full and half barriers). Every eighth accident happened at a level crossing with full or half barriers (A- or B-category). Compared to 2012, 2013 saw over 6% less accidents at level crossings. For A, B, C and E-category crossings, the number of accidents decreased by one third on average. For category D, this figure increased by nearly 5%. The figure below presents the proportion of accidents, broken down by individual level crossing and pedestrian level crossing categories.

As the presented data suggest, there are half the accidents at level crossings with automatic signal lights and half barriers (B- and C-category crossings) than at level crossings with only the so-called passive systems (D-category crossings). As emphasised earlier, one should keep in mind that while D-category level crossings are the most numerous within the rail network, they should have the lowest traffic factor.

The President of UTK claims, however, that a better picture of level crossing safety for individual categories is provided by the accident frequency ratio, which is the number of events at specific-category level crossings relative to the total number of such level crossings. The accident frequency ratio for specific-category level crossings is presented in the table and figure below. In addition, for comparison purposes, the figure presents the accident frequency ratios for 2012.

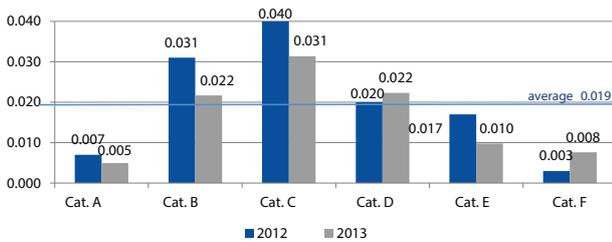
Tab. 21: The accident frequency ratio by level crossing category for 2013

No.	Crossing type	Number of level crossings	Number of accidents	Ratio
1.	Category A	2615	13	0.005
2.	Category B	830	18	0.022
3.	Category C	1308	41	0.031
4.	Category D	7756	173	0.022
5.	Category E	614	6	0.010
6.	Category F	526	4	0.008
7.	Total	13 649	255	0.019

Source: prepared by UTK using the Railway Event Register data

With the number of level crossings factored in, it becomes apparent that the highest accident frequency ratio is for level crossings with signal lights (C-category) and level crossings with signal lights and half barriers (B-category). It is important to note that in **75% of all accidents the safety devices were fully functional**, and the underlying cause was road users' non-compliance with the Road Traffic Code. One should also remember that there is comparatively less traffic at these level crossings.

Fig. 85: The accident frequency ratio by level crossing category for 2012 and 2013 – a comparison



Source: prepared by UTK using the Railway Event Register data

A comparison of 2012 and 2013 data show a low decrease in accident frequency ratios, which is attributable to less events at level crossings in total. D-category level crossings experienced a slight growth in this ratio, as did private level crossings and pedestrian level crossings managed by the respective owners of properties and plants.

The table below presents the number of deaths and serious injuries by level crossing category. In addition, the following figures provide a graphic representation of the number of deaths and serious injuries by level crossing category.

Tab. 22: The number of injured in level crossing accidents by individual categories in 2013

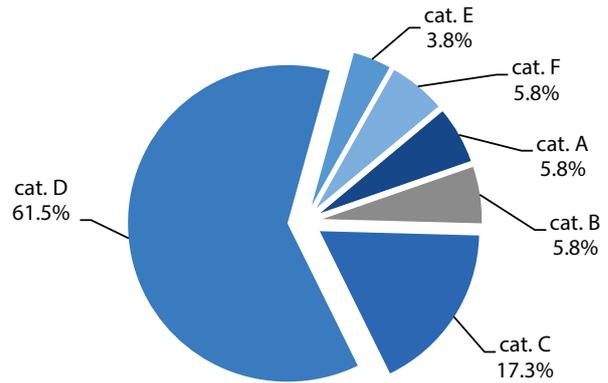
No.	Crossing category	Number of deaths			Number of serious injuries		
		2011	2012	2013	2011	2012	2013
1.	Category A	8	5	3	0	6	5
2.	Category B	15	9	3	6	1	5
3.	Category C	12	7	9	13	6	7
4.	Category D	21	34	32	29	21	17
5.	Category E*	6	7	2	4	2	3
6.	Category F**	0	0	3	1	0	0
7.	Total	62	62	52	53	36	37

* pedestrian level crossings

** private level crossings and pedestrian level crossings

Source: prepared by UTK using the Railway Event Register data

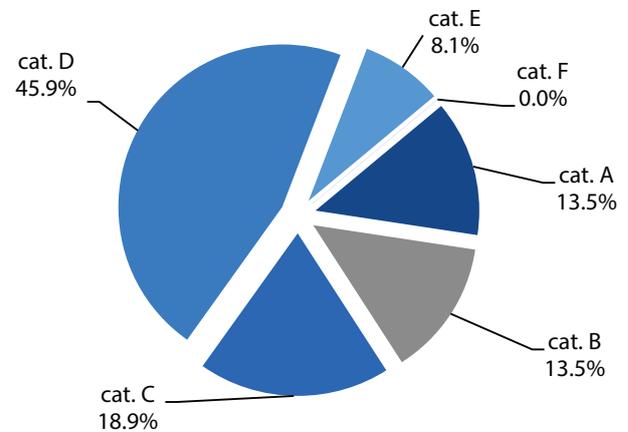
Fig. 86: Deaths by level crossing category in 2013



Source: prepared by UTK using the Railway Event Register data

The bulk of level crossing accidents were caused by road users' non-compliance with traffic laws and insufficient care when entering and passing through level crossings. A notable cause was also the professional negligence of railway employees who operated A-category level crossings, in that such employees failed to close barriers on time or opened the barriers after a train had passed without ascertaining whether there was another train approaching the crossing.

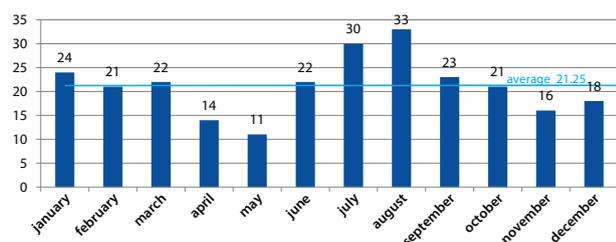
Fig. 87: Serious injuries by level crossing category in 2013



Source: prepared by UTK using the Railway Event Register data

The available data show that the rates of level crossing accidents vary throughout the year. The summer months between June and September, in addition to January and March, recorded the most accidents in 2013. In that period over 21 accidents were recorded, which is above the average. April and May saw the least accidents in 2013. The figure below presents a breakdown of accidents in 2013 by individual months.



Fig. 88: The number of level and pedestrian level crossing events in 2013 by month

Source: prepared by UTK using the Railway Event Register data

The analysis of data for all events allowed the identification of those level crossings which experienced more than one event. These crossings had varying (without a specific pattern) accident frequency rates. They ranged from 12 to 304 days and averaged 129 days. These crossings are presented in the table below.

Tab. 23: Level crossings on which more than one event occurred in 2013

No.	Crossing category	Station/path	Number of events	Line No.	Km
1.	C	Gdynia Postojowa - Gdynia Port	3	961	0.472
2.	C	Podkowa Leśna Główna - Grodzisk Mazowiecki	3	WKD	31.950
3.	B	Toszek Północ - Rudziniec Gliwicki	2	153	9.283
4.	D	Piława - Stoczek Łukowski	2	12	118.294
5.	D	Bratków	2	25	67.890
6.	D	Drozdów LHS - Wola Baranowska LHS	2	65	180.283
7.	D	Dębica-Ropczyce	2	91	120.18
8.	D	Andrychów-Kęty	2	117	32.922
9.	D	Andrychów-Kęty	2	117	37.974
10.	D	Szczytno-Pisz	2	219	76.274
11.	D	Opole Groszowice - Opole Główne	2	280	1.9750
12.	D	Koźmin Wielkopolski - Jarocin	2	281	87.530

Source: prepared by UTK using the Railway Event Register data.

8.4. Improving level crossing safety

As already mentioned, the bulk of accidents at single-level intersections of railway lines and roads is caused by third parties, i.e. pedestrians and car drivers who violate the traffic laws (although, admittedly, there are accidents where failures of safety devices and gatekeeper errors are at fault). To improve level crossing safety, infrastructure managers undertake numerous investment and publicity efforts. The objectives being currently pursued include:

- To phase out level crossings and pedestrian level crossings (including illegal crossings) and replace them with tunnels or viaducts, or footbridges;
- To upgrade level crossings (to a better category) by fitting them with additional warning and safety devices;
- To increase the maintenance of the existing level crossings and pedestrian level crossings;
- To run social campaigns and increase the presence of Railroad Guard and Police at level crossings.

Presented below are the safety improvement efforts of PKP PLK S.A., the largest Polish infrastructure manager, which manages over 96% of the public rail network and over 96% of active level crossings. This is to illustrate how Poland is striving for better level crossing safety. This infrastructure manager is in an admittedly good position, as being the manager of the national rail network, it has been taking advantage of EU funds and many investment programmes. The table below presents the number of level crossings used over the period 2007–2013 on railway lines managed by PKP PLK S.A.

Tab. 24: The number of active level crossings used on the railway lines managed by PKP PLK S.A. in the years 2007-2013

No.	Year	Cat. A	Cat. B	Cat. C	Cat. D	Cat. F	Total
1.	2007	2834	561	1303	8333	682	13 713
2.	2008	2772	645	1285	8362	676	13 740
3.	2009	2724	665	1313	8314	682	13 698
4.	2010	2712	684	1311	8270	680	13 657
5.	2011	2676	728	1304	8155	684	13 547
6.	2012	2633	789	1302	7967	661	13 352
7.	2013	2539	812	1289	7386	500	12 526

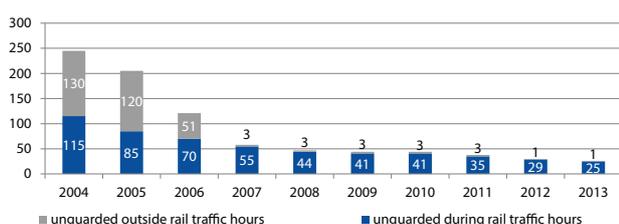
Source: prepared by UTK using data provided by the infrastructure manager (PKP PLK S.A.)

To improve safety, the infrastructure manager (PKP PLK S.A.) additionally puts level crossing warning signs (LCWS) along railway lines before technologically adapted crossings equipped with automatic signalling systems. The LCWS indicate to engine drivers whether level crossing devices are working properly (in which case trains may run at the maximum allowed train speed) or whether they have malfunctioned (in which case the train must slow down to 20 km/h). Malfunction also includes a blown bulb in a road signal device or an open or vandalised and broken-off half barrier. There are no devices, however, that warn rail vehicle drivers about obstacles (such as road vehicles) on level crossings.



A long-standing level crossing-related problem has been one of the things to do with A-category crossings with suspended staffing due to personnel downsizing. Primarily, these are very rarely frequented level crossings in terms of both rail and road traffic and their suspension is sometimes only temporary, such as during hours with no rail traffic (e.g. night times). Starting from 2005, PKP PLK S.A. has been engaged in efforts to reduce A-category level crossings with suspended operating personnel. Within a period of eight years, this has helped to reduce the number of these crossings from 245 (including 115 crossings unguarded during rail traffic hours and 130 crossings unguarded outside rail traffic hours) to 26 (including 25 crossings unguarded during rail traffic hours and 1 crossing unguarded outside rail traffic hours). For the number of A-category level crossings with suspended operating personnel, based on data accumulated in the years 2004-2013 (as at 31 December 2013), see the figure below.

Fig. 89: The number of A-category level crossings with suspended operating personnel within the rail network managed by PKP PLK S.A. in the years 2004-2013



Source: PKP PLK S.A. 2013 safety report

The efforts undertaken by PKP PLK S.A. in the years 2004-2013 that facilitated a substantial reduction in the number of A-category level crossings, while varying from case to case, included reassigning operating personnel (gatekeepers), re-categorising level crossings, and also phasing out level crossings or closing road traffic for as long as such crossings remained unstaffed.

PKP PLK S.A. is continuing to phase out A-category level crossings with no operating personnel as far as is financially possible. In the years to come, the efforts addressing this problem will primarily include redevelopment and upgrade works as part of the „Safety improvement and elimination of operational hazards“ – stage I (Infrastructure and Environment Operational Programme

7.1-59) and stage II (Operational Programme Infrastructure and Environment 7.1-80) and also railway line redevelopment works. The company’s further efforts related to A-category level crossings with suspended operating personnel and negligible rail traffic (e.g. on average 0.40 or 0.63 train per 24 hours) are driven by the railway line phase-out strategy.

In addition, the railway line upgrading works carried out by PKP PLK S.A. will include the reconstruction of level crossings and pedestrian level crossings, including their retrofitting with safety and/or warning devices. In many cases, the level crossings and pedestrian level crossings will be dismantled and replaced by viaducts (footbridges) or tunnels. While being the most expensive, building two-level crossings is by far the only fully effective method to eliminate the risk of accidents at intersections of railway lines and roads.

The 2012-2014 plan for investment projects, as included in the Multiannual Rail Investment Project of 28 August 2012, is to:

- renovate and upgrade level crossing road surfaces, including 415 crossings (adjusted to 373, completed 239) in 2012, 438 in 2013 (completed 248) and 376 in 2014;
- install automatic signal lights (ASL) at level crossings: 113 in 2012 (adjusted to 114, completed 94), 114 in 2013 (completed 75) and 120 in 2014.

In addition in 2013, 116 new viaducts were built.

The already mentioned investment projects “Safety improvement and elimination of operational hazards on level crossings,” as divided into two stages, are aimed at redeveloping and upgrading level crossings. The projects are being carried out within the Infrastructure and Environment Operational Programme. Below is some basic information on material scope, progress, schedule and expected outcomes (as at 31 December 2013).

The first stage of the project, being carried out under Actions 7.1-59, includes the upgrade of 221 level crossings. The second stage, to be carried out under 7.1-80, will include the upgrade of 187 level crossings. For the material scope of both projects, see the table below.

Tab. 25: The material scope of the Infrastructure and Environment Operational Programme, Actions 7.1-59, stage I, and the Infrastructure and Environment Operational Programme, 7.1-80, stage II

No.	Current category	Target category				Total crossings
		A	B	C	E*	
1.	A	6	28	1	---	35
2.	B	---	1	---	---	1
3.	C	1	59	8	---	68
4.	D	25	104	171	---	300
5.	E	---	---	---	4	4
6.	Total crossings	32	192	180	4	408

* – E-category with B-category devices

Source: PKP PLK S.A. 2013 safety report

The level crossings to be upgraded under the investment projects of PKP PLK S.A. were selected by a separate team using technical and operating data. The crossing selection criteria were as follows:

- A-category crossings with suspended operating personnel;
- D-category crossings which, due to excessive traffic factors and/or the lack of visibility display, are eligible for reclassification into C- or B-category;
- C-category level crossings which, due to excessive traffic factors, are eligible for reclassification into B-category;
- D- or C-category crossings within lines that are undergoing (or will undergo according to the plan) speed improvement works, in order for such level crossings not to necessitate new speed limits as a result of their being not adapted to new line parameters;
- D- or C-category level crossings whose traffic factors are close to threshold values (the risk of imposing speed limits);
- C- and B-category crossings at which the signal devices show defectiveness and result in frequent speed limits.

The projects are expected to have the following outcomes:

- Reduced accident frequency rates;
- Improved rail and road traffic safety;
- Less level crossings without barriers, half barriers and signal lights, which have the highest accident frequency ratios;
- Eliminated rail and road traffic risks resulting from poorly maintained level crossing road surfaces and a high defectiveness of outdated devices;

- Improved technical condition of poorly maintained level crossing road surfaces;
- No more speed limits at level crossings where traffic factors reach threshold values;
- Current speed limits removed;
- Improved quality of public transport systems.

To improve safety at level crossings, PKP PLK S.A. also engages in publicity measures. This is especially important for D-category level crossings, as almost all accidents they see are caused by road vehicle drivers who are insufficiently careful when crossing railway lines. Indeed, some drivers tend to ignore the "STOP" sign or signal lights, bypass half barriers or pass through barriers when they are coming down. Consequently, the "Safe crossing – stop for your life" publicity campaign has been in place since 2005. This campaign is addressed to all road users (drivers, cyclists, pedestrians), both adults and children and young people, as well as to media, companies and institutions.

The campaign efforts include educational visits to kindergartens, schools and driving schools, simulations of level crossing accidents, briefings and press conferences, family picnics, banners on cars, and also informational leaflets and posters. To bolster the campaign message, PKP PLK S.A. representatives take part in debates on safety, and join in radio and television programmes. The campaign is supported by, among others, the Railroad Guard, with active contribution from the Office of Rail Transport, through publicity and prevention activities at individual level crossings and promoting awareness among road vehicle drivers about the dangers of being insufficiently careful when crossing railway lines.

With a view to improving safety on level crossings, WKD Sp. z o.o., the manager of the separate network, engaged in 2013 in measures to upgrade the crossings to better categories. The Company's committee, together with road managers, took measurements of traffic volumes, and defined, in accordance with the Regulation of the Minister of Transport and the Maritime Economy of 26 February 1996 on the technical conditions to be met by intersections of railway lines and public roads, and the location of such intersections, new categories of level crossings. As a result of these measures, some level crossings were re-categorised from D-category to a better category, with 10 crossings upgraded to B and one to A. Assembling and delivering new safety devices will, however, require more time, due to tendering procedures.

8.5. Level crossings in the European Union

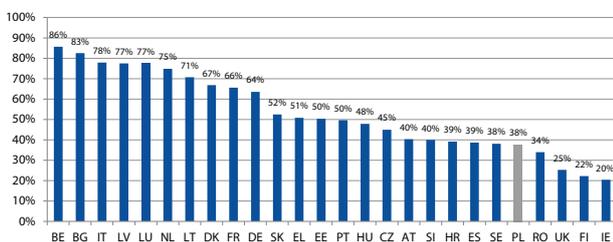
When analysing the problem of accidents occurring on level crossings and pedestrian level crossings, along with the possible solutions, it seems advisable to consider the situation in other countries, and in the entire European Union, based on the statistics gathered by the European Railway Agency (ERA).

When analysing the problem of accidents occurring on level crossings and pedestrian level crossings, along with the possible solutions, it seems advisable to consider the situation in other countries, and in the entire European Union, based on the statistics gathered by the European Railway Agency (ERA).

The number of deaths among level crossing users in the European Union account for ca. 30% of all deaths resulting from accidents on railway lines in the EU. It should also be noted that level crossing deaths, in combination with deaths sustained by “un-authorized persons on railway premises”, constitute ca. 90% of all deaths resulting from railway accidents in the EU. In Poland the number of deaths in these two categories, in relation to the overall number of deaths sustained in railway accidents, is similar.

However, when analysing the number of railway deaths, it should be emphasised that the railway system itself has a limited effect as regards any considerable reductions in the number of deaths in these two categories. The occurrence of level crossing accidents also depends on individual persons’ behaviour which remains beyond the railway system’s influence, given that such accidents are mainly caused by road users. As revealed in the statistics, the casualties of level crossing accidents constitute a low percentage of road accident deaths, accounting for ca. 1.1% in total. In the case of the railways, such events are of major importance in terms of both the number of casualties and the influence they exert on rail transport, contributing to its unfavourable image.

Fig. 90: The percentage shares of active level crossings by EU country in 2012



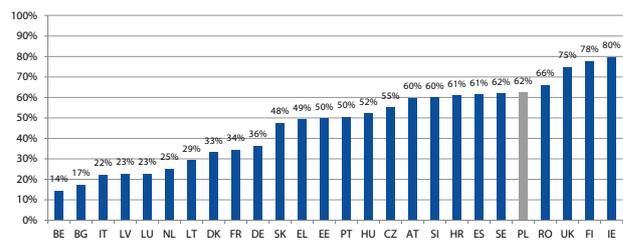
Source: prepared by UTK using the European Railway Agency data

Apart from the unfortunately low safety culture in society, combined with the reckless behaviour of drivers and pedestrians entering the level crossing area, a considerable impact on such a high number of accidents is exerted by the kind of protection systems deployed on the crossing. The European nomenclature distinguishes between active level crossings (i.e. users protected against, or warned about, an approaching train whenever going

through the crossing might pose any danger) and passive level crossings (i.e. there are no alert or safety devices).

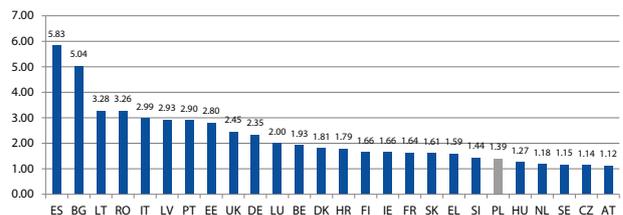
In Poland level crossings with passive protection systems are in the majority, accounting for over 60% of the total number of currently operational crossings. This puts our country in one of the last positions among the EU Member States as regards the number of active level crossings. The following figures present the percentage shares of active and passive level crossings in various EU countries in 2012 (data for 2013 are not available).

Fig. 91: The percentage shares of level crossings with passive protection systems by EU country in 2012



Source: prepared by UTK using the European Railway Agency data

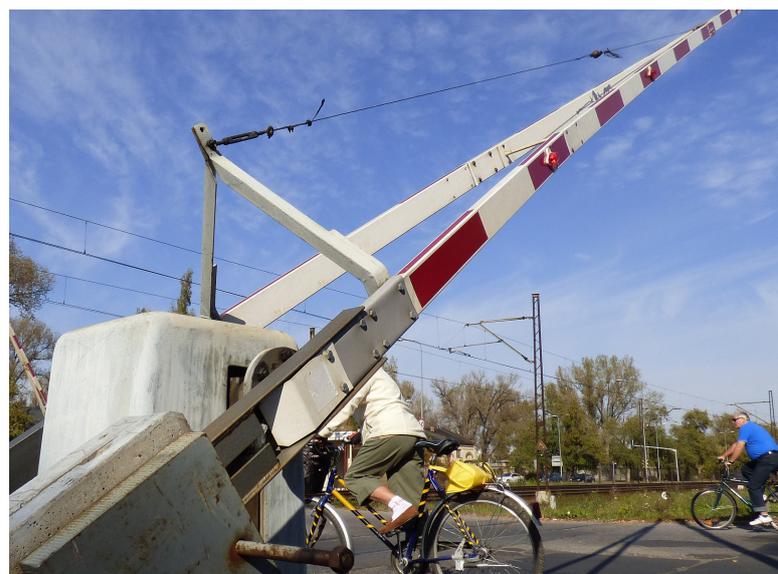
Fig. 92: The average distance between level crossings by EU country in 2012



Source: prepared by UTK using the European Railway Agency data

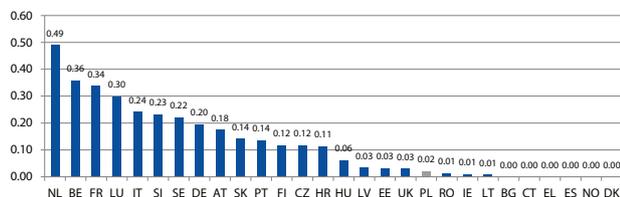
The length of railway lines, the number of crossings in a given Member State and the average distance between level crossings constitute other factors to be considered when analysing the underlying causes of accidents occurring on level crossings and resulting in deaths or serious injuries.

The average distance between level crossings in the European Union is ca. 2 km. In Poland it is ca. 1.4 km, being one of the shortest distances between level crossings that currently exist



in the railway systems of the Member States. Such a high density of level crossings, coupled with the previously mentioned high percentage of crossings with passive protection systems, is conducive to the occurrence of level crossing accidents.

Fig. 93: The number of level crossings with automatic user safety and warning systems in relation to the length of railway lines by EU country in 2012



Source: prepared by UTK using the European Railway Agency data

With a view to improving safety on level crossings, it might seem useful to increase the number of crossings equipped with automatic user safety and warning systems. A higher level of safety is likely to contribute to better security and, thus, to a lower number of deaths resulting from level crossing accidents, given especially that the current correlation between the number of level crossings equipped with automatic user safety and warning systems and the length of railway lines in Poland is relatively low as compared to other Member States. Nevertheless, it should be borne in mind that additional safety measures on a given level crossing do not always appear indispensable and justified



In Poland level crossings with passive protection systems are in the majority, accounting for over 60% of the total number of currently operational crossings. This puts our country in one of the last positions among the EU Member States as regards the number of active level crossings.

when such factors as the crossing location, the frequency of its use by people and road vehicles as well as rail-traffic intensity are taken into consideration.

8.6. Summary

At the end of 2013, Poland had 13 649 working level crossings. The number of accidents involving vehicle users and pedestrians amounted to 255, resulting in 52 deaths and 37 serious injuries. **As many as 99% of these accidents were caused by reckless drivers.**

The major causes of events occurring on level crossings include failing to comply with traffic regulations, entering a railroad crossing in front of an approaching train by ignoring STOP signs and signal lights, driving around closed half barriers, and driving directly under closing barriers. Each of these events, apart from the tragedy experienced by the injured and their families, brings a number of negative consequences to society and national economy. The cost of moral damage, suffering, and the loss of relatives and beloved ones, can hardly be estimated. The more tangible costs have been assessed by the World Bank as gigantic. These include the cost of damages, rescue service operations, the treatment and rehabilitation of the injured, and the loss of GDP that could be generated by the injured, estimated at more than PLN 2 bn in total. An average level crossing accident which involves a vehicle or a pedestrian causes traffic disruptions that last over five hours. These are connected with the necessary procedures conducted by public prosecutors and the removal of vehicles. The disturbances caused by a single event can affect as many as several dozen freight and passenger trains.

Safety on level crossings depends, to a large extent, on compliance with road traffic regulations on the part of road users. PLK S.A, as the major railway infrastructure manager in Poland, is continually raising the level of rail traffic safety, increasing the number of modern devices, conducting personnel training and improving management procedures, thereby leading to a decreased number of accidents in yearly terms. However, the number of events on level crossings which result from the failure to abide by road traffic regulations, rushing, or carelessness, remains alarming.

In the opinion of the President of UTK, the improvement of traffic safety on level crossings requires that the following activities be continued or undertaken:

- Increasing the number of modernisations aimed at improving the technical condition of level crossings and their safety equipment;

The average distance between level crossings in the European Union is ca. 2 km. In Poland it is ca. 1.4 km, being one of the shortest distances between level crossings that currently exist in the railway systems of the Member States.

- Monitoring and conducting intensified inspections of those crossings where traffic regulations are frequently violated, and imposing penalties for posing a threat to ground-based traffic by attempting to drive around closed barriers;
- Marking particularly dangerous crossings with signage that informs drivers about the number of accidents recorded on this particular crossing, along with the number of deaths and serious injuries;
- Introducing automatic, microprocessor-based level crossing signalling systems into common use, comprising comprehensive automatic control, event registration and technical diagnostics functions, which allow the remote transmission of information on events and malfunctions;
- Tightening sanctions for misdemeanours by level crossing users, so that they are more severe and act as a deterrent.

At present, efforts are being made to construct viaducts on high-traffic railways and roads. This also concerns high-speed railways, which also require non-collision two-level crossings. New technological solutions for automatic signalling systems and their efficiency are of particular importance to traffic safety on level crossings. The increased safety of computer-based automatic crossing signal systems stems mainly from the use of programmable logic controllers, basing on the ability to immediately detect equipment faults, and the possibility to monitor the operation of the automatic signalling system and record every occurring event and failure.

Nonetheless, it should be stressed that all technological solutions can prove ineffective if the user of a level crossing does not give way to the approaching train, acting without caution, recklessly or in haste. The right reaction by drivers and pedestrians, and compliance with traffic regulations might spare them from a potentially tragic accident.



9. Vandalism within the railway network

In recent years a worrying trend has been observed in rail transport, involving various acts of hooliganism, which endanger the safety of rail traffic and result in the temporary limitation or suspension of rail traffic.

The most common acts of hooliganism include:

- Theft of and damage to the railway infrastructure, including railway safety devices;
- Train robberies and theft of cargo;
- Pelting of trains;
- Placing of obstacles on tracks;
- Unauthorised emission of warning signals, resulting in the activation of the "Radiostop" system.

It should be noted that, in most cases, the perpetrators of these actions remain unknown. The possibilities of preventing such events are also limited, given the lack of the appropriate resources within the railway system, and especially the railway protection services.

In 2013, considering the harmful effect of those actions, and the fact that only a few of them are reflected in the official statistics provided by the railway sector entities, the President of UTK undertook actions aimed at monitoring acts of hooliganism within the railway network, in order to analyse this phenomenon and to indicate the most affected locations that pose a threat to overall rail traffic safety and contribute to an unfavourable image of the railway as a whole. This chapter features an analysis of particular types of vandalism within the railway network, based on the data gathered from infrastructure managers.

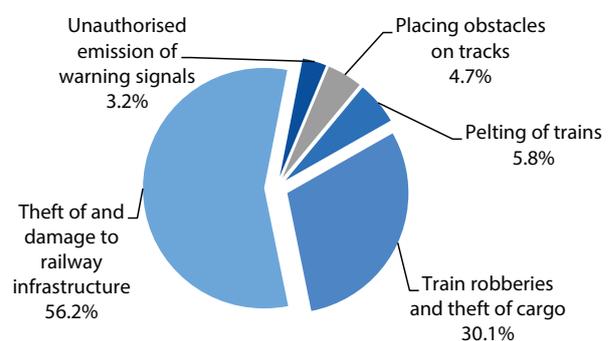
9.1. Theft of and damage to the railway infrastructure

Theft of and damage to railway safety devices (i.e. interlocking devices, electrical energy equipment and tele-information equipment) and railroad surface elements, constitute the major

Theft of and damage to railway safety devices (i.e. interlocking devices, electrical energy equipment and tele-information equipment) and railroad surface elements, constitute the major acts of hooliganism within the railway system.

acts of hooliganism within the railway system, endangering the safety of rail traffic and resulting in the temporary limitation or suspension of rail traffic. 3790 events of this kind were reported in 2013, with a strong prevalence of thefts (3399 cases). Damage to the railway infrastructure (391 cases) accounted for over 10% of all events in question. The instances of theft and damage account for over 56% of all acts of vandalism reported on the active railway lines in 2013. The percentage share of various types of vandalism is presented below.

Fig. 94: The percentage share of various categories of vandalism within the railway network reported in 2013

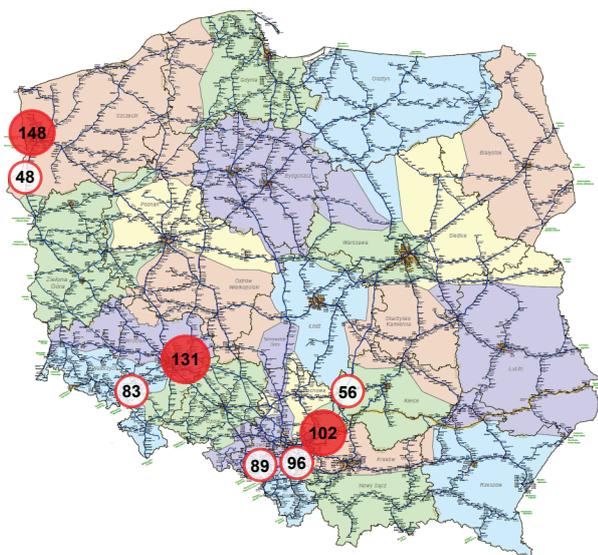


Source: prepared by UTK using data from infrastructure managers



In 2013 cases of theft of and damage to the railway infrastructure were reported countrywide, with their highest frequency recorded in the south-western and western regions. The analysis of data available to the President of UTK revealed eight areas with the highest concentration of theft and damage in 2013, as presented in the following figure. Such events were the most common in Silesia, including such cities as Dąbrowa Górnicza, Katowice and Zabrze, where respectively 102, 93 and 89 cases of theft of and damage to railway infrastructure were reported. Most events of this kind, however, occurred in the Szczecin and Wrocław areas (148 and 131, respectively).

Fig. 95: The areas of the frequent occurrence of theft of and damage to the railway infrastructure in 2013



Source: prepared by UTK using data provided by infrastructure managers and the map drawn by PKP Polskie Linie Kolejowe S.A., www.plk-sa.pl

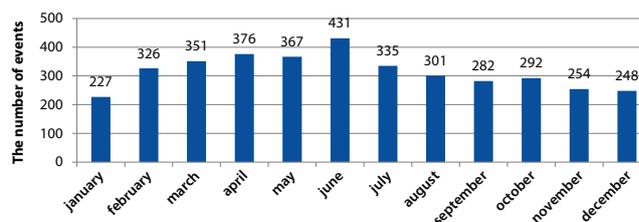
Tab. 26: The areas of frequent events involving the theft of and damage to the railway infrastructure in Poland in 2013

No.	Area	Number of events
1.	Szczecin area	148
2.	Wrocław area	131
3.	Dąbrowa Górnicza area	102
4.	Katowice area	93
5.	Zabrze area	89
6.	Wałbrzych area	83
7.	Psary - Góra Włodowska path	56
8.	Kostrzyn - Dolna Odra path	48

Source: prepared by UTK using data provided by infrastructure managers

The number of theft and damage events throughout 2013 displayed considerable fluctuations. The lowest number of such events (227) was reported in January 2013. It had been steadily growing since February to reach the highest level in June (431 acts of hooliganism). A downward tendency was observed from July, except for October, which saw a slight increase in the number of events of this kind. In December the number of theft and damage events dropped to 248.

Fig. 96: The theft of and damage to the railway infrastructure in Poland in 2013 by month



Source: prepared by UTK using data provided by infrastructure managers

A large number (over 44%) of theft and damage cases within the railway network in 2013 involved interlocking devices, i.e. such railway infrastructure elements as power supply cables, cords, power supply adaptors, track choke coils, shafting posts and transformers. These elements are crucial for the safety of rail traffic.

A large number (over 44%) of theft and damage cases within the railway network in 2013 involved interlocking devices.

The theft of and damage to such devices result primarily in defects and faults in the operation of railway interlocking devices, which leads to lower traffic safety. Due to the fact that interlocking devices constitute a complicated and intertwined system, the theft of even a small element can result in the inability to manage rail traffic in an organised manner, on approved and secured paths. As a result, rail traffic on the locations hit by thieves is managed on the basis of so-called auxiliary signals, which necessitates the use of more procedures, creating an additional burden on traffic controllers.

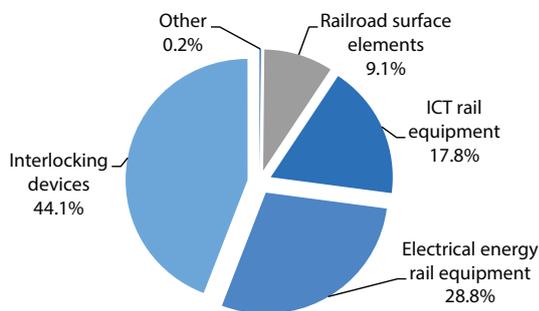
The theft of and damage to such devices result primarily in defects and faults in the operation of railway interlocking devices, which leads to lower traffic safety.

Tab. 27: Railway theft and damage targets in 2013

No.	Theft and damage targets	Number of events	Percentage share
1.	Interlocking devices	1673	44.1%
2.	Electrical energy rail equipment	1090	28.8%
3.	Tele-information rail equipment	675	17.8%
4.	Railroad surface elements	346	9.1%
5.	Other	6	0.2%
6.	Total	3790	100%

Source: prepared by UTK using data provided by infrastructure managers

Fig. 97: The percentage share of various groups of railway theft and damage targets in 2013



Source: prepared by UTK using data provided by the Railroad Guard Headquarters

In adverse circumstances, theft of railroad surface elements can cause a dangerous derailment. In 2013 such an event occurred on 10 October in Jaworzno Station. A freight train entered a track section robbed of screws, as a result of which six culm-carrying wagons derailed, and the financial losses sustained exceeded PLN 140 thousand.

One of the consequences of the theft of or damage to the railway infrastructure entails the aforementioned application of auxiliary signals. In most cases, the period when traffic is managed using auxiliary signals is relatively short and usually lasts no more than few hours. However, there were cases when this time was considerably longer. According to data released by the main infrastructure manager, out of 70 cases of long-term management of traffic (longer than 3 days)⁴ based on auxiliary signals, 4 were related to the theft of or damage to

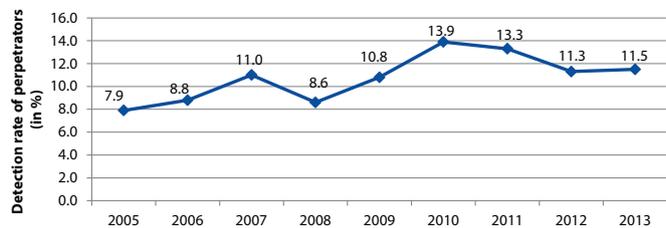
infrastructure components, which therefore constitutes the fourth most common reason for applying such management (as at 31 December 2013).

Furthermore, the instances of the theft of and damage to railway equipment have significant consequences for railway undertakings, passengers and freight transport customers. Most of all, they result in delays and cancellations of trains. In extreme cases, the theft of particular devices can result in long-term traffic suspension and the necessity to establish auxiliary lines of communication. The incidences of the theft of electrical equipment, such as traction network devices, have particularly severe consequences for the railway system. They result in considerable train delays, lasting up to over a dozen hours, resulting from the necessity to rebuild the damaged line devices, to provide diesel locomotives or to temporarily divert rail traffic.

For instance, in 2013 passenger train delays caused by the theft of or damage to the railway infrastructure reached a total of 71 643 minutes, i.e. over 1194 hours or nearly 50 days. It is worth pointing out that frequent phenomena of this type, resulting in delays and disturbances to rail traffic, have an adverse impact on the image of railway transport and the services offered by specific railway undertakings.

Moreover, the detection rate of theft perpetrators is low. As revealed by data provided by the Railroad Guard, it remains similar to the previous year's level, at 11.5%.

Fig. 98: The detection rate of the perpetrators of the theft of and damage to traffic safety devices (in %)



Source: prepared by UTK using data provided by the Railroad Guard Headquarters

The cases of the theft of and damage to the railway infrastructure also generate considerable economic costs which are incurred by infrastructure managers. The expenditures incurred by the main infrastructure manager on the repair or replacement of



the interlocking devices affected by theft and damage grew to over PLN 6.9 m in 2013. This amount is nearly 11.3% higher than in 2012, when it reached PLN 6.2 m. The costs related to all cases of theft and damage incurred in 2013 were estimated by the main infrastructure manager at PLN 17.4 m.

The above shows that the occurrence of the theft of and damage to railway infrastructure brings serious consequences to both railway sector entities and railway customers. Therefore, it seems advisable to determine the causes of such events. While damage to railway devices appears to be driven mainly by hooliganism, in theft cases the economic factor seems to prevail. The majority, if not all, of the elements stolen from railway premises eventually reach scrap yards, where they are sold for cash.

With the aim of combatting this negative phenomenon, as a follow-up to the activities undertaken in 2012, the President of UTK is participating in the work being part of „The memorandum on cooperation towards counteracting the incidences of infrastructure theft and damage.“ The Memorandum, launched by the presidents of three regulatory offices, i.e. the Office of Electronic Communications (UKE), the Energy Regulatory Office (URE) and the Office of Rail Transport (UTK), has also been signed by entities operating in the telecommunications, energy and railway sectors (acting as signatories), that are willing to participate in the activities falling within their scope. This initiative was endorsed by the Chief of the National Police Headquarters, who obliged chiefs of the provincial police headquarters to give special attention to all cases related to infrastructure theft and damage.

Furthermore, representatives of the Memorandum take part in the work on draft amendments to legislative Acts which concern, among other things, the incidences of infrastructure theft. For instance, owing to the efforts made by representatives of the Memorandum in respect of the recently amended Waste Act of 14 December 2012, the legislators have retained, among others, Article 43a, which imposes the obligation on scrap yard owners to verify the identity of scrap providers and to fill in the metal waste receipt forms, as well as Article 75a, which lays down the responsibilities of people running scrap yards. These Articles (marked, respectively, as 102 and 188 in the amendment) were initially planned to be removed in the course of legislative work. Pursuant to Article 102 (8) of the said Act, the Minister of the Environment issued a regulation dated 9 December 2013 regarding the waste receipt form comprising a statement made by the waste provider that the waste constitutes his/her property, is not subject to third parties' rights, and has not been stolen.

Considering the importance of the issues dealt with in the Memorandum, on 29 October 2013 the activities falling within its scope were covered by the governmental programme of reducing crime and antisocial behaviour, entitled „Safer together.“

Finally, it is worth noting that on 10 December 2013 the signatories to the Memorandum set up the “Steadfast - Infrastructure Protection” Foundation, the aim of which is to raise social awareness and involvement against the theft of and damage to telecommunications, power supply and railway infrastructure. The Foundation seeks to establish an information platform concerning infrastructure theft and damage, gathering detailed data from

With the aim of combatting this negative phenomenon, as a follow-up to the activities undertaken in 2012, the President of UTK is participating in the work being part of “The memorandum on cooperation towards counteracting the incidences of infrastructure theft and damage.”

entities operating in the sectors involved. The quarterly data on infrastructure theft and damage, the compilation of which was initiated in 2014 by the President of UTK, will constitute the railway sector's contribution to the said information platform.

With a view to combatting infrastructure theft in the border areas, the signatories to the Memorandum plan to establish cooperation with a similar organisation operating in Germany as the *Security Partnership Against Metal Theft in Germany (SIPAM)*. This cross-border partnership will focus on safety issues, aimed at combatting and preventing metal theft, and also at intensifying cooperation in this field. This activity will also be supported by the President of UTK.

9.2. Train robberies and the theft of cargo

The second category of problematic events includes train robberies often connected with the theft of cargo from rail wagons. In 2013 a total of 2029 events of this kind were reported countrywide, which accounted for 30.1% of all offences committed by hooligans that were monitored in 2013 at the request of the President of UTK.

This category of acts of hooliganism committed within the railway network includes so-called dumping, which means intentionally opening the doors of freight wagons carrying bulk material (usually coal or coke) with the intention of tipping the wagon's load onto the tracks. In most cases, it is not possible to remove all the cargo from the tracks, and the remains become an easy target for thieves.

The problem of dumping seems crucial to the safety of railway transport, due to the sheer boldness of the thieves who resort to increasingly more dangerous methods to achieve their goal. In general, the thieves attempt to open rail wagon doors during stops at semaphores, but as infrastructure managers have been making efforts to minimise such stops, criminals now attempt to stop the train in motion by placing obstacles on the railway track or simply open the doors of a train in motion.

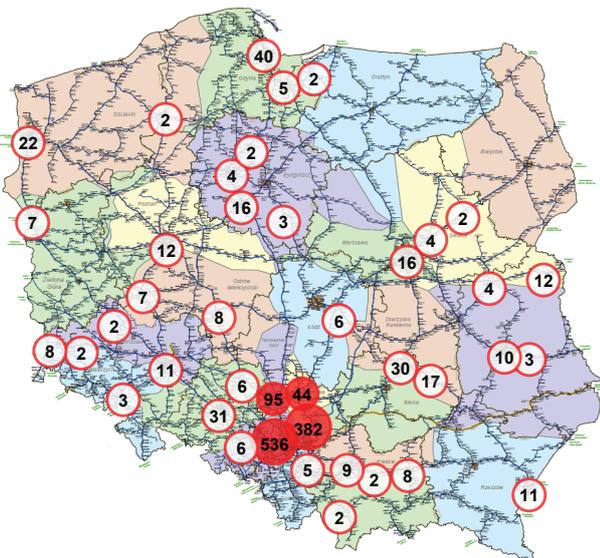
These actions are extremely dangerous to rail traffic as it is not always possible to remove all the cargo left on the tracks, which may then be hit by another train. Attempts to rob a train in mo-



tion also pose a considerable threat as the open rail wagon doors can damage elements of railway infrastructure, such as track poles or semaphores.

For instance, on 22 August 2013 a train was derailed on the Siemianowice Śląskie – Chorzów Stary line after hitting culm dumping deposited on the tracks. The total cost of this event was estimated at nearly PLN 140 thousand, including PLN 125 thousand spent on rebuilding 424 damaged concrete sleepers.

Fig. 99: The areas of frequent train robberies and theft of cargo in 2013



Source: prepared by UTK using data provided by infrastructure managers

Tab. 28: Train robberies and theft of cargo by province in 2013

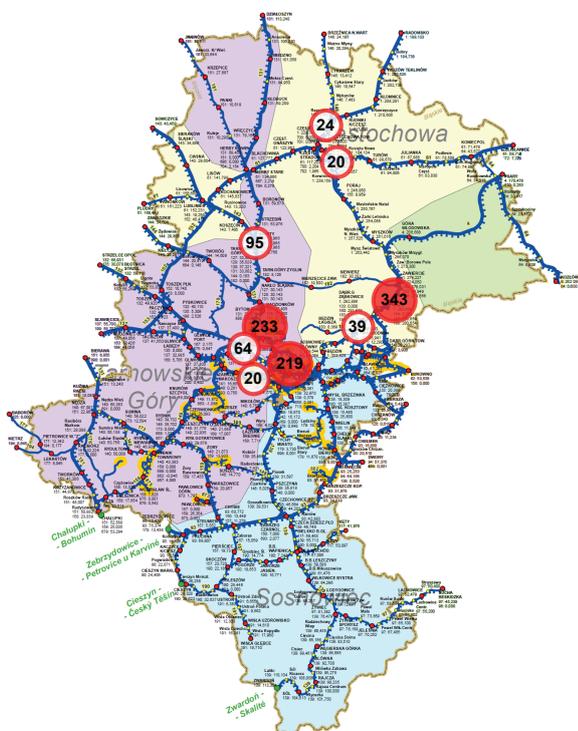
No.	Province	Number of train robberies
1.	Śląskie	1668
2.	Świętokrzyskie	48
3.	Pomorskie	45
4.	Opolskie	43
5.	Wielkopolskie	30
6.	Dolnośląskie	29
7.	Lubelskie	29
8.	Małopolskie	27
9.	Kujawsko-Pomorskie	26
10.	Zachodniopomorskie	26
11.	Mazowieckie	23
12.	Podkarpackie	14
13.	Łódzkie	10
14.	Lubuskie	7
15.	Warmińsko-Mazurskie	3
16.	Podlaskie	1
17.	Total	2029

Source: prepared by UTK using data provided by infrastructure managers

Similar to the theft of and damage to the railway infrastructure, also in this scenario the President of UTK analysed the incidences of train robberies and the theft of cargo in geographical terms. It was revealed that the Śląskie Province is the area where the cases of theft of cargo were by far the most common. In 2013 as many as 1668 incidences of this kind were reported in this province, constituting over 82% of all cases of the theft of cargo reported in 2013 countrywide. This might have resulted from the proximity of coal mines, as coal constitutes the most frequent target of the theft of rail wagon cargo. Other goods stolen from trains include coke, scrap, elements of transported cars and even fuel from tankers.

In 2013 the largest number of events described occurred in the Łazy Station located on railway line No. 1, which constitutes the so-called coal main line. The number of train robberies and thefts of cargo reported at this station amounted to 343, accounting for 16.9% of all events of this kind reported in 2013 countrywide. The Chorzów Stary – Siemianowice Śląskie path was the rail section displaying the second most frequent occurrence of this alarming phenomenon, with 114 events reported in 2013. It should also be noticed that the triangle comprising the areas of Bytom, Zabrze and Chorzów was characterised by the highest concentration of events described, with the number of train robberies and theft of cargo totalling 478. The stations and paths situated within the Śląskie Province, indicating the largest number of reported events of train robberies and thefts of cargo, are presented in the following figure and table.

Fig. 100: The locations indicating the largest number of train robberies and theft of cargo in the Śląskie Province in 2013



Source: prepared by UTK using data provided by infrastructure managers and the map drawn by PKP Polskie Linie Kolejowe S.A., www.plk-sa.pl

Tab. 29: The stations and paths characterised by the most frequent occurrence of train robberies and thefts of cargo in the Śląskie Province in 2013

No.	Station or path	Number of events
1.	Łazy	343
2.	Chorzów Stary - Siemianowice Śląskie	114
3.	Tarnowskie Góry	95
4.	Bytom Bobrek - Zabrze Biskupice	64
5.	Bytom Bobrek - Bytom Karb	57
6.	Bytom Bobrek	48
7.	Bytom - Chorzów Stary	41
8.	Dąbrowa Górnicza Ząbkowice	39
9.	Siemianowice Śląskie	38
10.	Bytom Karb - Bytom Północny	37
11.	Bytom - Bytom Karb	33
12.	Bytom Północny - Radzionków	33
13.	Chorzów Stary	26
14.	Bytom Karb	25
15.	Częstochowa Towarowa	24
16.	Częstochowa Mirów	20
17.	Ruda Bielszowice	20

Source: prepared by UTK using data provided by infrastructure managers

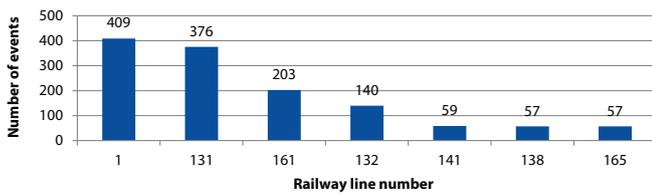
The next figure presents the number of train robberies and cargo theft cases on the lines that start, end or run through the Śląskie Province, where the number of such events exceeded 50. These include the very short railway line No. 165, less than one kilometre long. It connects Bytom Bobrek Station with Bytom Karb Station, and is located near an ironworks. The number of events reported there in 2013 reached 57, which, statistically speaking, means at least one train robbery a week.

With the aim of supporting the railway protection services supervised by infrastructure managers, railway undertakings often hire property protection agencies, specialising in providing services to railway sector services, to protect specific trains. The employees of these agencies guard the train both while it is moving and when it stops. Such protection covers not only coal and coke trains, but also trains carrying liquid fuels and cars.

Moreover, railway undertakings are attempting to minimise the risk of theft from railway wagons by using better security methods. Unfortunately, this is not always possible, especially in the old-generation wagons. RUs operating newer rolling stock have an easier task, as their wagons cannot be unloaded from the side (only from the top), which eliminates the danger of having the side wagon doors opened.



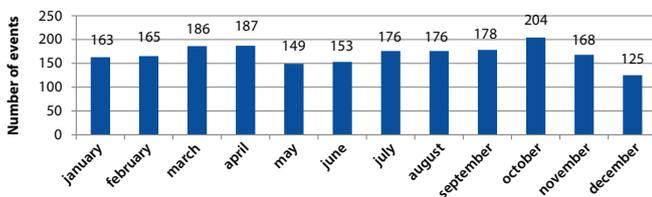
Fig. 101: Train robberies and thefts of cargo by railway line in the Śląskie Province in 2013



Source: prepared by UTK using data provided by infrastructure managers

The data gathered from infrastructure managers concerning train robberies in 2013 indicate that in national terms such events were most frequently committed in October, with the total number reaching 204. 154 cases, i.e. over 75%, occurred in the Śląskie Province.

Fig. 102: Train robberies and thefts of cargo in 2013 by month



Source: prepared by UTK using data provided by infrastructure managers

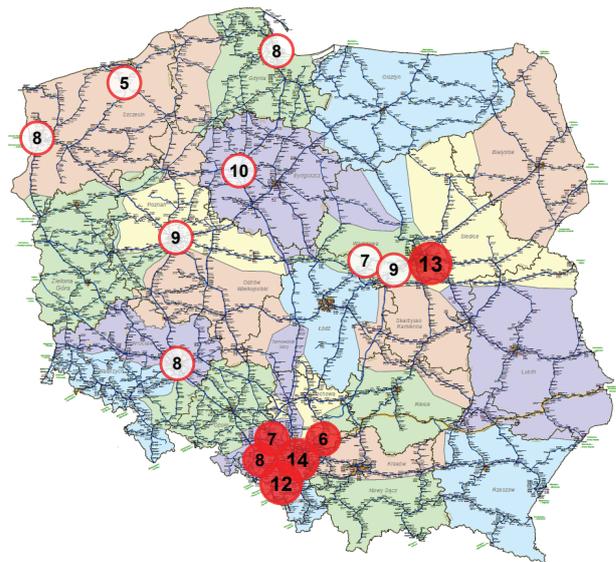
Finally, it is worth stressing that underhand dealings involving the theft of rail wagon cargo are extremely dangerous not only to rail traffic, but also to the perpetrators. For instance, on 14 June 2013, a person attempting to rob a coal train on the Zabrze Biskupice – Maciejów Północ path was hit by the train and sustained bodily injuries.

9.3. Pelting of trains

Another problem related to vandalism on railway lines being monitored by the President of UTK involves the cases of trains being pelted with stones or other objects that are mainly thrown off viaducts and footbridges located over the tracks. They constitute a disturbing phenomenon which diminishes the safety of rail transport, though they are not as frequent as the previously described problems. In 2013 the number of such cases amounted to 388, which accounted for nearly 6% of total vandalism acts within the railway network presented in this chapter.

Although the cases of pelting of trains in 2013 were reported countrywide, there were 14 areas in which their concentration was the highest. These undoubtedly included Silesia, with a total of 47 cases of the pelting of trains reported in the vicinity of such cities as Chorzów, Katowice, Zabrze, Bytom and Dąbrowa Górnicza, which accounted for over 12% of all events of this kind countrywide.

Fig. 103: The areas of the frequent pelting of trains in 2013



Source: prepared by UTK using data provided by infrastructure managers and the map drawn by PKP Polskie Linie Kolejowe S.A., www.plk-sa.pl

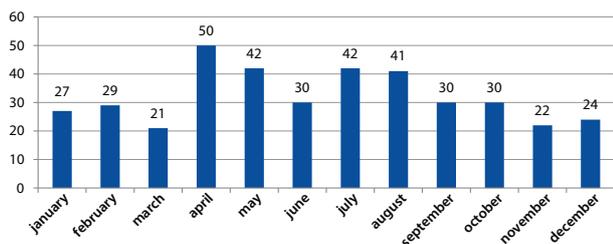
Tab. 30: The areas of the frequent pelting of trains in Poland in 2013

No.	Area	Number of events
1.	Chorzów area	14
2.	Warsaw area	13
3.	Katowice area	12
4.	Bydgoszcz area	10
5.	Błonie area	9
6.	Poznań area	9
7.	Gdańsk area	8
8.	Szczecin area	8
9.	Zabrze area	8
10.	Wrocław area	8
11.	Bytom area	7
12.	Sochaczew area	7
13.	Dąbrowa Górnicza area	6
14.	Białogard area	5

Source: prepared by UTK using data provided by infrastructure managers

Most cases of the pelting of trains occurred in the spring and summer months, including especially April, May, July and August, with their number totalling 175, i.e. over 45% of all cases of this kind reported in 2013. These figures were lowest in March, November and December (21, 22 and 24, respectively).

Fig. 104: The pelting of trains in Poland in 2013 by month

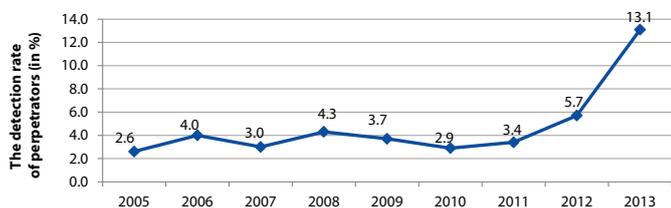


Source: prepared by UTK using data provided by infrastructure managers

The pelting of trains poses a real threat to the safety of rail traffic. Obviously, train drivers, who are crucial to assuring the safety of moving trains, are the most vulnerable to these types of attack. One can easily predict the consequences of a train driver being hit with a stone, losing consciousness and control over the train. Under very unfavourable circumstances, combined with the failure of the devices verifying the train driver's alertness, this can lead to a very dangerous accident. For instance, on 13 December 2013 an incident occurred on the Teresin Niepokalanów – Błonie line, in which an object thrown out of a passing train broke the window, causing injuries to the train driver. In two other incidents involving the pelting of trains, two passengers were injured, and the overall cost of these events exceeded PLN 13 thousand, over PLN 9 thousand of which were spent on replacing broken windows.

A relatively high increase in the detection rate of perpetrators committing the offences in question is, by all means, a positive trend. In comparison with the previous years, when the detection rate fluctuated around a few percent, 2013 saw a considerable increase in the detection rate of such events, to the level of 13.1%, along with an over 30% drop⁵ in their number. Nevertheless, the upcoming years will show if this change is actually significant or merely reflects a temporary blip.

Fig. 105: The detection rate of the perpetrators of the pelting of trains in 2005-2013



Source: prepared by UTK using data provided by the Railroad Guard Headquarters

Despite the fact that the pelting of trains accounts for less than 5% of all acts of hooliganism, and has become significantly less frequent in recent years, the President of UTK decided to monitor this phenomenon because of its potentially serious consequences to the health and life of passengers and railway workers inside trains.

⁵ Based on the data provided by the Railroad Guard.

9.4. Obstacles on tracks

The placing of obstacles on railway tracks constitutes another category of actions that pose a danger to the safety of rail traffic and were monitored by the President of UTK in 2013. The total number of cases of intentionally placing obstacles on railway tracks in 2013 reached 318, accounting for 4.7% of all acts of hooliganism reported in 2013. The most frequent objects placed on railway tracks are stones, branches and logs, but they also include concrete slabs and other heavy objects.

The events in question happen all over the country, but there are 10 areas where their concentration proves the highest. These are presented in the following table and figure. As can be noticed, the Upper Silesia region, including such cities as Chorzów, Siemianowice Śląskie, Katowice and Sosnowiec, seems to prevail in terms of the number of obstacles placed on tracks, with the total number of such cases reaching 49. Among other areas listed, 13 cases were reported on the Strzebielino Morskie – Wejherowo line, 11 in the Warsaw area, in the Wrocław and Kraków areas – 10 in each case, and in the Szczecin, Gdańsk and Lublin areas – 6 in each case.

Tab. 31: The areas of the frequent occurrence of obstacles on railway tracks in Poland in 2013

No.	Area	Number of events
1.	Chorzów - Siemianowice Śląskie	24
2.	Katowice	19
3.	Strzebielino Morskie - Wejherowo	13
4.	Warszawa	11
5.	Wrocław	10
6.	Kraków	10
7.	Szczecin	6
8.	Gdańsk	6
9.	Lublin	6
10.	Sosnowiec	6

Source: prepared by UTK using data provided by infrastructure managers

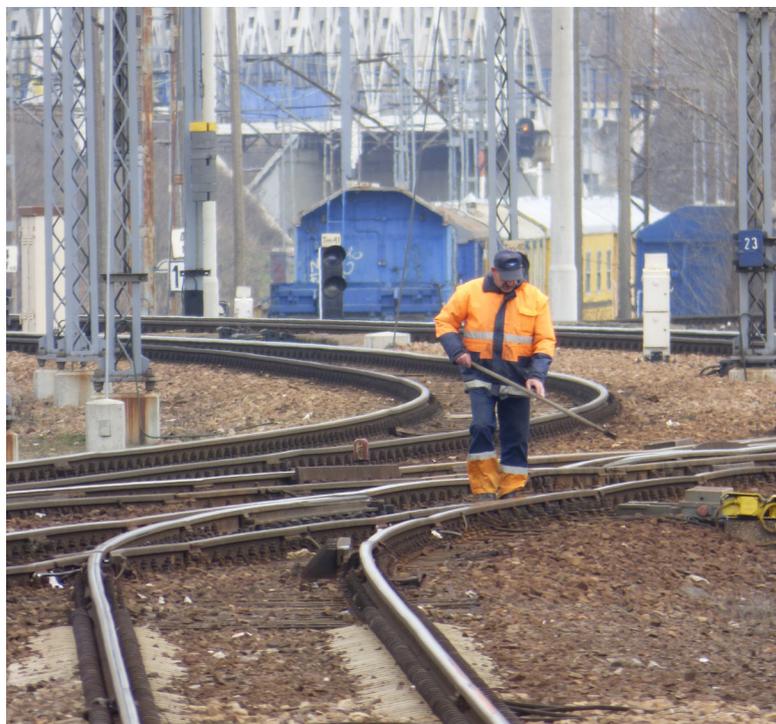
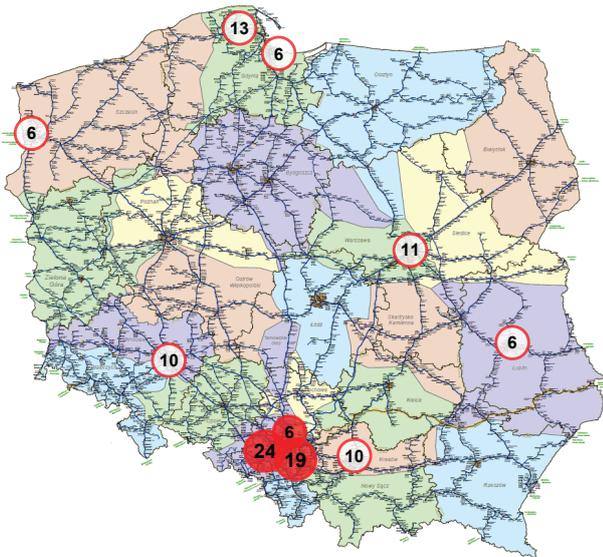


Fig. 106: The areas of the frequent placement of obstacles on railway tracks in 2013

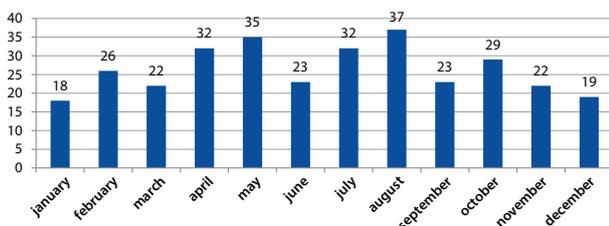


Source: prepared by UTK using data provided by infrastructure managers and the map drawn by PKP Polskie Linie Kolejowe S.A., www.plk-sa.pl

The concentration of the described phenomena around Upper Silesia can be connected with another problem discussed before, i.e. with train robberies and thefts of cargo. In some cases, the placement of obstacles on railway lines is used by perpetrators as a means of stopping a train in motion and to open the wagons, with the aim of stealing the transported cargo.

Based on data gathered from infrastructure managers, the cases of intentionally placing obstacles on tracks in 2013 were, in general, evenly distributed throughout the year. Nevertheless, it can be noted that most cases of this kind occurred in the spring and summer months, including April, May, July, and especially August, when this phenomenon reached the highest level. The lowest numbers of cases were reported in the winter months, i.e. December and January, in March, and also in June and September.

Fig. 107: The placing of obstacles on railway tracks in Poland in 2013 by month



Source: prepared by UTK using data provided by infrastructure managers

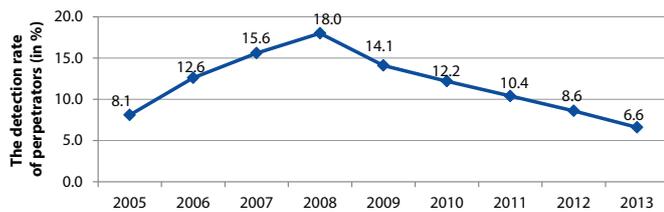
The most serious consequences of collisions with track obstacles include damage to the train braking system, mainly valves, which results in their opening and decreased pressure within the main tube, leading to sudden train stopping. Some cases also result in damage to other components of the train (such as wipers and lights damage, or chassis scratches and breakages). Therefore, each collision with track obstacles creates the need to inspect the train in terms of the possibility of the continuation of its journey and the identification of any potential damage. In certain cases, the involvement of other workers, such as wagon controllers, might be required in order to verify the technical possibility of continuing the journey after sudden train stopping. The financial consequences of such events can also be significant. For instance, the event that occurred on 18 August 2013 on the Granowo Nowotomyskie – Stęszew line, resulting in damage to the railbus which had hit a pile of stones, broken stones and large granite slabs placed on tracks, generated losses exceeding PLN 400 thousand.

Nevertheless, one should note that most situations related to the placement of obstacles on tracks have relatively small consequences. Some obstacles are removed by the train staff who manage to stop the train in time before it hits the obstacle. In less frequent cases, obstacles are removed even before they are approached by the train. Therefore, it can seem that the issue of obstacles on tracks is currently not crucial to railway safety but the President of UTK has decided that it should be monitored in order to assess the actual scale of this phenomenon. It should be borne in mind that even those events that appear insignificant can actually lead to much more dangerous situations, and the lack of reaction of the relevant services can act as an unwanted incentive for potential perpetrators.

In this context, it should be mentioned that the detection rate of the perpetrators of the offences in question remains low, at only 6.6% in 2013. In addition, this level has been gradually dropping in recent years, as shown in the figure below. In comparison with 2012, the detection rate dropped by 34.4% while the number of misdemeanours discussed fell by 15.6%. Undoubtedly, combatting this phenomenon is not an easy task, as the perpetrators clear away from the scene without leaving any traces. Catching the perpetrator red-handed thus seems the most effective method but it would require continuous monitoring of the railway network, which is not always possible and calls for considerable resources.

It also seems that, similar to the previously discussed problem of the pelting of trains, the events consisting of placing obstacles on railway tracks might partly stem from the lack of other attractive free-time activities available to teenagers, and from the low awareness of the possible threats. One effective form of preventing such events would, therefore, be to launch social campaigns raising the awareness of the possible dangers stemming from such actions, encouraging the public to intervene when seeing any attempts to commit such offences, and organising free-time activities for teenagers in order to discourage them from spending their leisure time in this manner.

Fig. 108: The detection rate of the perpetrators placing obstacles on railway tracks in 2005-2013



Source: prepared by UTK using data provided by the Railroad Guard Headquarters

The unauthorised transmission of Radiostop signals through the railway radio communications system, which results in the activation of the Radiostop system, is yet another serious problem encountered within the railway network, the monitoring of which was introduced in 2013 by the President of UTK.

9.5. The unauthorised transmission of Radiostop signals

The unauthorised transmission of Radiostop signals through the railway radio communications system, which results in the activation of the Radiostop system, is yet another serious problem encountered within the railway network, the monitoring of which was introduced in 2013 by the President of UTK. Receiving such a signal by devices in a traction vehicle leads to the automatic activation of the train braking system. Generally speaking, this system causes the stopping of a railway vehicle in motion in the event of a threat to traffic safety. It is activated by pressing the "Alarm" button on a radiophone that starts to transmit a special sound signal, following which the self-braking devices are switched on to stop all railway vehicles within reach. This solution is used as a method to stop every train in the vicinity of the signal emitter in cases of emergency.

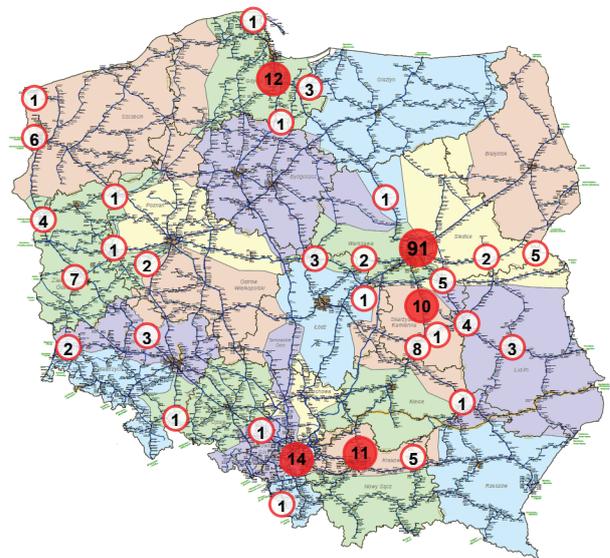
In 2013, considering the potential consequences of the unauthorised transmission of alarm signals and the difficulties they cause

to rail traffic the President of UTK undertook actions intended to continually monitor such events and assess their actual scale. The following points present the statistics concerning unauthorised transmission of Radiostop signals in the whole country, and in Warsaw, where this problem has especially grown in importance.

9.5.1. The unauthorised transmission of "Radiostop" signals in Poland

The places with the most frequent cases of unauthorised transmission of "Radiostop" signals in Poland were determined on the basis of data collected from infrastructure managers. In 2013 a total of 215 cases of this kind were reported countrywide. As shown in the following figure, this problem occurs with different intensities in various regions, with the north-eastern regions of Poland being the only areas where this phenomenon was not identified. In northern Poland most cases were reported in the Tczew area, in the western regions in the Szczecin and Zielona Góra areas, and in the southern regions near Katowice and Kraków. Most cases of unauthorised transmission of Radiostop signals were reported in central Poland, including especially the Warsaw agglomeration.

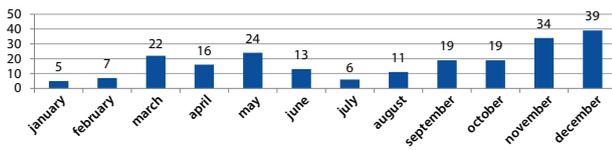
Fig. 109: The places of occurrence of the unauthorised transmission of alarm signals in 2013



Source: prepared by UTK using data provided by infrastructure managers and the map drawn by PKP Polskie Linie Kolejowe S.A., www.plk-sa.pl



Fig. 110: The unauthorised transmission of “Radiostop” signals in Poland in 2013 by month



Source: prepared by UTK using data provided by infrastructure managers

The number of cases of unauthorised transmission of “Radiostop” signals in Poland was diversified throughout 2013. The monitoring of the results of this phenomenon for the upcoming years will show whether this was a permanent trend or not. Considering the 2013 data, it can be seen that least acts of hooliganism of this kind in Poland were reported in January, February and July, and most in December (39 cases reported) and November (34).

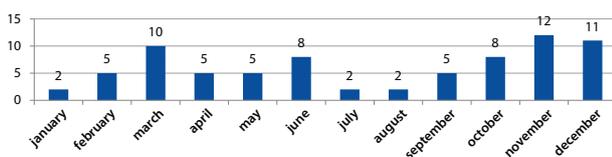
9.5.2. The unauthorised transmission of “Radiostop” signals in Warsaw

The unauthorised transmission of alarm signals creates most inconveniences in urban areas, including Warsaw, causing sudden traffic disturbances involving a large number of trains. This is true, for instance, of the Warsaw cross-town railway line.

91 acts of hooliganism connected with the unauthorised transmission of “Radiostop” signals were reported in 2013 in the Warsaw agglomeration, including 75 in Warsaw. This accounted for over 35% of all cases of this kind occurring in Poland in 2013. Most cases were reported in the vicinity of Warszawa Zachodnia Station (24), Warszawa Praga Station (17) and Warszawa Włochy Station (12).

In 2013 the number of cases of unauthorised transmission of “Radiostop” signals reported in Warsaw, presented in monthly terms, was very similar to the national trends, as shown in the following figure. Definitely the lowest number of events was reported in January, July and August. This phenomenon intensifies in the spring and autumn months, especially November and December, with most events reported, and also in March and June.

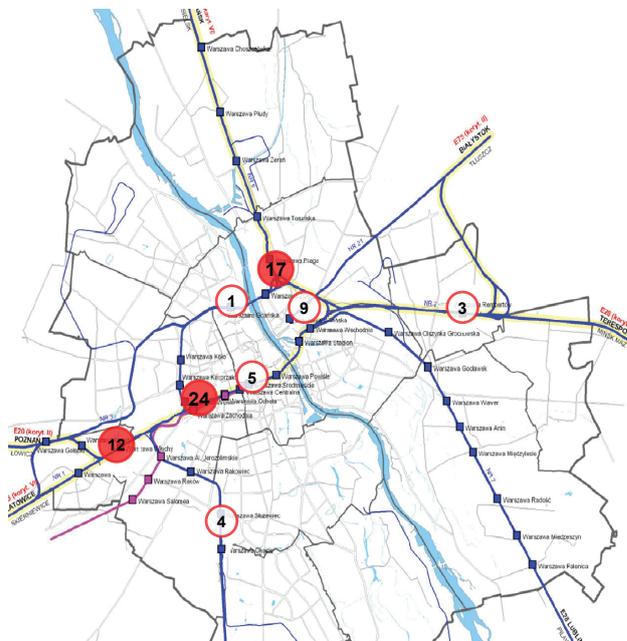
Fig. 111: The unauthorised transmission of “Radiostop” signals in Warsaw in 2013 by month



Source: prepared by UTK using data provided by infrastructure managers

When analysing the available data on the unauthorised transmission of the “Radiostop” signal in Warsaw, one can distinguish two regions in which this problem is definitely the most frequent. One of them is the rail section between Warszawa Zachodnia and Warszawa Włochy stations, within which 36 cases of the unauthorised uses of signal emitters operating on the same radio frequency as the train radio communication networks were recorded. This accounted for 49% of all cases recorded in the whole city. The intensification of this phenomenon was observed in March (6 cases reported), June (5) and September (4), but the peak was reached in November (7 cases). In the summer holiday period, i.e. from July to the end of August, and also in January, no instances of the unauthorised transmission of alarm signals were reported in Warszawa Zachodnia regions. Similar to the trends prevailing in the country, most acts of hooliganism of this kind were recorded on Fridays (11 cases in total).

Fig. 112: The places of the occurrence of the unauthorised transmission of alarm signals in Warsaw in 2013



Source: prepared by UTK using data provided by infrastructure managers



10. Assessment of the condition of railway infrastructure

Poland has one of the most dense network of railway lines in Europe. The problem is its poor technical condition, which is the reason why the maximum speed has been reduced on substantial part of the network and on a number of important railway connections travel time is seriously extended, which worsened the competitiveness of railway transport on the transport market and increased energy consumption of transport.

Bad technical condition is the result of aging of all the infrastructure elements as a result of a drastic reduction in infrastructure repairs after 1990.

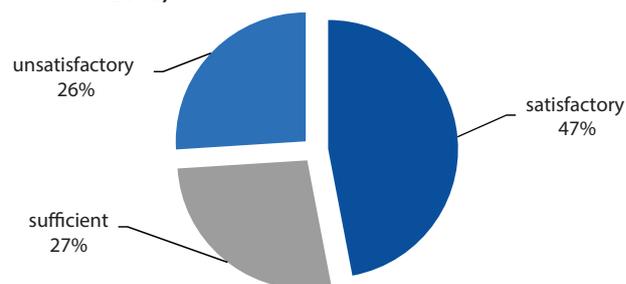
The largest rail infrastructure manager in Poland, PKP PLK S.A. with its share in the total accessible railway network amounting to over 96% submitted the "Report on the safety of the year 2013" to the President of the UTK where it is stated that 26% of the infrastructure is in unsatisfactory condition, and 27% in sufficient condition. This gives a total of almost 53% of the infrastructure, about which there are more or less serious reservations, and we should bear in mind that it only refers to the state of the track. This assessment should be supplemented by an assessment of the state of traffic control devices. As a result of the maintenance-repair works and investments conducted in 2013, as at December 31, 2013 there has been an improvement by approx. 4% compared to the state as at December 31, 2012. - 43% of the tracks were assessed positively.

The abovementioned assessment was conducted according to the following criteria:

- Good – railway lines used according to the assumed parameters, only maintenance works required;
- Sufficient – railway lines with reduced operational parameters (reduced maximum time-table speed, local speed limits), for the maintenance of transport parameters, apart from maintenance works it is required to conduct current repair works consisting in the exchange of damaged track elements;
- Insufficient – railway lines with substantially reduced transport parameters (low schedule speeds, numerous local speed limits, reduced permissible load) which qualify the track of the railway line to a complex exchange of superstructure.

Modernization and other activities connected with the improvement of the state of railway lines are one of the most important tasks completed by PKP PLK S.A., which are financed by means acquired by the company as a national manager from numerous sources: Cohesion Fund, European Regional Development Fund, budgetary means and own resources as well as from the Railway Fund. The Company conducts a wide-scale programme of modernization and revitalization of railway lines. The scope of individual investment projects usually includes complex exchange of railway superstructure, railway traffic control devices and (traction and non-traction) electrical power engineering, as well as modernization of level crossings and their removal and replacement by two-level crossings. The exchange of old, used and damaged elements of railway infrastructure and technical elements for new ones, conducted with the use of modern technology, allows for substantial improvement of exploitation parameters of the railway lines (mainly the maximum permissible speed) and at least the retention of, or more often the improvement of, the level of railway traffic safety.

Fig. 113: The assessment of technical state of railway infrastructure of PKP PLK (as of December 31, 2013)



Source: own study by UTK based on the Report on safety for 2013 by PKP PLK S.A.

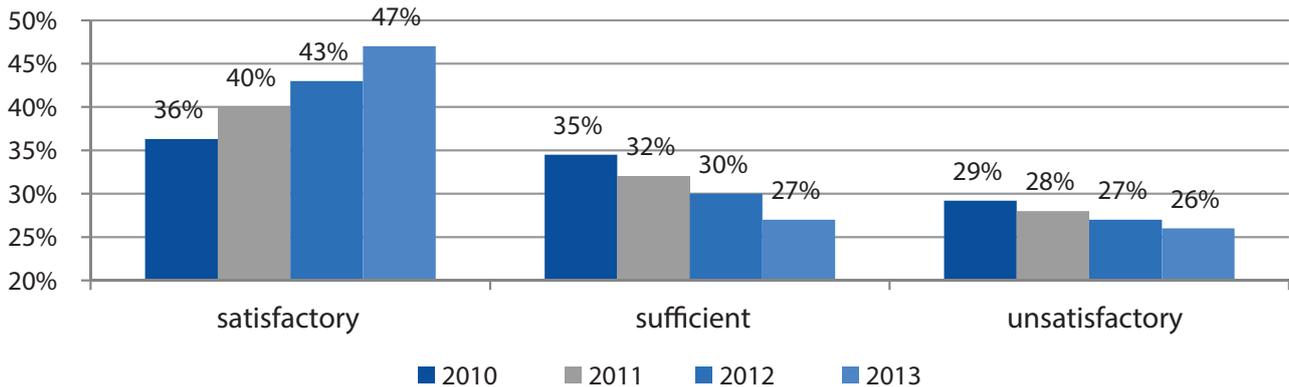
It is expected that on the sections of railway lines that underwent modernization or revitalization the risk of incidents or operational difficulties due to poor technical state of infrastructure and/or infrastructure failures will be significantly lower. Similarly, it is expected that the frequency of accidents at level crossings will decrease thanks to additional security devices and user alert devices (i.e. reclassification to a higher category).

In 2013, PLN 5.26 billion were spent on investment works conducted on the railway network managed by PKP PLK. 1295.5

km of tracks have been upgraded (and rebuilding works were conducted, i.a. on 142 platforms).

also sensitive elements, which cause a threat of derailment, that is i.e. crossovers, were exchanged as part of modernization and revitalization works, which include railway superstructure. In 2013, 778 new crossovers were built within the PKP PLK railway network.

Fig. 114: The assessment of technical state of railway infrastructure of PKP PLK in 2010-2013



Source: own study by UTK based on the Report on safety for 2013 by PKP PLK S.A.

As a result of modernization works, the condition of infrastructure is gradually improving, but its quality should still be assessed as deviating from both needs and standards. The amount of financial resources remaining at the disposal of the

main infrastructure manager, obtained from both railway carriers and as budget subsidy, still does not allow for financing all the necessary rail infrastructure repair works in full scope.



11. Supervision over rail market entities

11.1. Legal regulations in the field of implementing supervision

The principles for implementing supervision by the President of UTK are laid out in two primary legislative acts, i.e. the Act of 2 July 2004 on the Freedom of Economic Activity and the Regulation of the Minister of Transport of 12 March 2007 on the method of supervision used by the President of UTK. Pursuant to the current legal regulations, the only form of supervision conducted by the President of UTK is inspection. He may also issue written requests to provide clarifications, under Article 13(7)(a) of the Railway Transport Act.

It should be stressed that the inspection mode regulated under the aforementioned regulations is appropriate only to certain supervisory procedures conducted by this authority. A gradual deviation from the previous legal framework regarding safety towards a model based on independent risk management by rail market entities creates the need to update the current supervision mechanisms. In consequence, along with the notion of inspection, the term “audit” should also be introduced, following the recommendations of the European Railway Agency. At present, such activities are being conducted as part of the certification process of entities in charge of maintenance of freight wagons (ECM).

Referring to other possible amendments to the legal regulations concerning the supervision in question, one can point out the possibility of amending the content of the aforementioned Article 13(7)(a). Currently, this article directly refers to the duties assigned to the President of UTK in the field of rail transport regulation and railway system cohesion, while leaving aside other tasks related to supervising the entities whose activity exerts a direct impact on the safety of rail traffic.

The duties assigned to the President of UTK include imposing financial penalties, the amount of which depends on the revenues earned by the entity that has violated the provisions. In this respect, it is worth noting that the President of UTK is, on the one hand, responsible for determining the financial capacities of such entities but, on the other, is not authorised to

The principles for implementing supervision by the President of UTK are laid out in two primary legislative acts, i.e. the Act of 2 July 2004 on the Freedom of Economic Activity and the Regulation of the Minister of Transport of 12 March 2007 on the method of supervision used by the President of UTK.



receive any information that is subject to fiscal confidentiality. Practically speaking, the financial condition of the violating entity is determined on the basis of documents provided by it.

Furthermore, the list of violations of Article 66 of the Railway Transport Act, which require the President of UTK to impose an administrative financial penalty, raises controversy. It should be noted that some of those violations are not connected with a direct influence on safety, e.g. untimely submission of safety report by a railway undertaking or manager, or submission of a train driver's statement on providing services to more than one entity. In turn, recurrent violations involving the use of vehicles without prior conduction of the relevant maintenance activities, or gross negligence in the maintenance of a railway line or side-tracks the condition of which poses danger to rail traffic may only be the subject of a decision under which the supervising authority requests that the said violations cease to exist.

The issues that call for an urgent amendment to the legal regulations include inspections of the railway's occupational medicine establishments (i.e. entities authorised to conduct medical and psychological examinations, and to verify the compliance with health-related, physical and psychological requirements necessary to obtain a licence or certificate by a train driver). The inspection of the railway's occupational medicine establishments, pursuant to Article 13(7)(e) of the Railway Transport Act, are conducted by an entity authorised by the President of UTK. However, the requirements to be satisfied by the inspecting entity seem controversial. On the one hand, this entity must be authorised to conduct inspections of the occupational medicine services, dealing with railway occupational medicine issues. On the other hand, it may not be entered onto the list of entities authorised to conduct medical and psychological examinations, or to verify the compliance with health-related, physical and psychological requirements necessary to secure the licence or certificate of a train driver, and the validity of such documents. Therefore, the regulations provide contradictory guidelines, stipulating that the inspecting entity should deal with railway medicine matters, at the same time not being included in the list of entities authorised to conduct medical examinations of train drivers. In this context, choosing an entity satisfying the requirements to conduct inspection activities appears challenging.

With reference to Commission Regulation (EU) No. 1077/2012 of 16 November 2012 on a common safety method for supervision by national safety authorities after issuing a safety certificate or safety authorisation, which requires the President of UTK to develop a strategy and a supervision plan, it should be stressed that the said documents have been prepared for 2014.

11.2. The characteristics of the supervision exercised by the President of UTK in 2013

Pursuant to Article 13(1)(a) of the Railway Transport Act, the duties assigned to the President of UTK related to supervising the entities whose activity exerts an impact on the safety of rail traffic, and the use of railway vehicles, include the following:

1. Issuing, renewing, amending and withdrawing safety authorisations, safety certificates and safety attestations, along with keeping and updating registers of such documents;
2. Issuing, renewing, suspending, re-establishing and withdrawing train driver's licences, updating data included in train driver's licences, issuing duplicates of train driver's licences, along with keeping and updating registers of such documents;
3. Issuing and withdrawing certificates to and from entities in charge of maintenance (ECM) in respect of freight wagons, along with verifying the compliance with the conditions or requirements stipulated in such certificates;
4. Verifying compliance with the conditions or requirements stipulated in safety authorisations, safety certificates and safety attestations, inspecting the compliance of business activity of managers or railway undertakings with the EU and national regulations with regard to the safety of rail traffic;
5. Supervising train drivers and train driver candidates training and examination centres and entities authorised to conduct medical and psychological examinations, and to verify the compliance with the health-related, physical and psychological requirements necessary to obtain the licence or certificate of a train driver, and the validity of such documents, along with keeping and updating the register of training and examination centres, and the list of entities authorised to conduct medical and psychological examinations required to obtain a licence or certificate of a train driver;
6. Verifying the compliance of the requirements regarding rail traffic safety by managers, railway undertakings and side-track users;
7. Supervising the safety in rail traffic and the adequate maintenance and use of railway lines and side-tracks;
8. Analysing safety reports;
9. Monitoring, promoting, implementing and developing safety regulations, along with the national safety principles system.

The supervision exercised by the President of UTK may take a form of inspection, administrative or clarification proceedings, together with a wide array of actions aimed at promoting the culture of safety.

The inspections conducted by the President of UTK often involve issues directly related to the safety of rail traffic, including the safety of passenger and freight transport. In the event of obtaining information on any existing direct threat to human life, health or natural environment, the inspection by the President of UTK commences with limited formal obligations arising from the inspection purpose. The inspection conducted upon

The characteristics of the supervision exercised by the President of UTK in 2013

obtaining information on any threat to human life, health or natural environment is conducted with the following exceptions:

- No inspection commencement notification is provided;
- Inspection activities may be only undertaken on the presentation of an identification card, but without any authorisation;
- Inspection activities may be conducted in the absence of the entity being inspected or a person authorised by it;
- Such an inspection may be conducted simultaneously with a regular inspection preceded by a notification;
- No restrictions as to the inspection duration are applied.

The regulations in force also define specific exceptions applied in the event of inspecting moving vehicles, transport users or freight carried under the Railway Transport Act. Such inspections are conducted with the following exceptions:

- No inspection commencement notification is provided and no entry is made to the inspection register;
- Inspection activities may be undertaken upon the presentation of an identification card, but without any authorisation;
- Inspection activities may be conducted in the absence of the entity being inspected or a person authorised by it;
- A simultaneous inspection of several vehicles is allowed;
- No restrictions as to the inspection duration are applied.

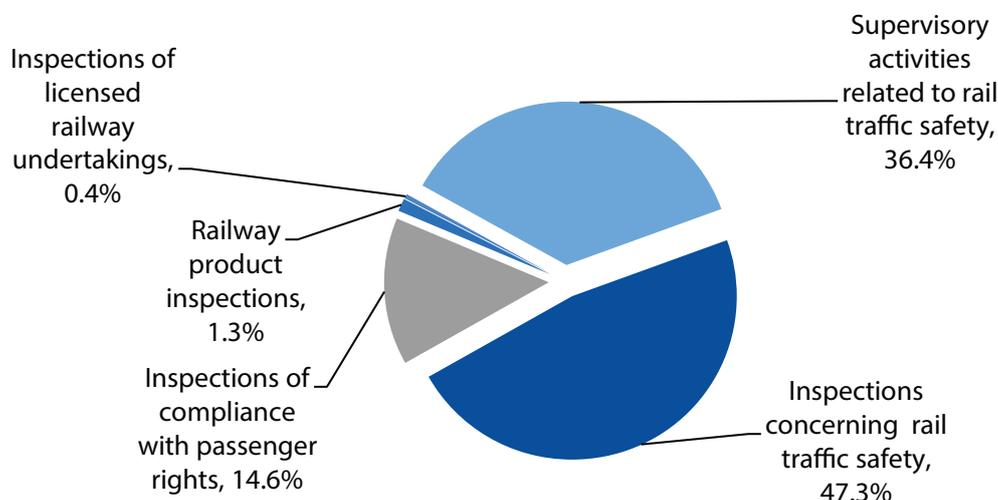
In 2013 the President of UTK performed a total of 1339 inspection activities. Inspections concerning rail traffic safety accounted for over 47% of all inspections and mainly covered managers of railway infrastructure, passenger and freight railway undertakings, and side-track users. The percentage distribution of other inspection activities was as follows: supervisory activities related to rail traffic safety – 36.4%, inspections of compliance with passengers’ rights – 14.6%, railway product inspections – 1.3%, and inspections of licensed railway undertakings – 0.4%.

Tab. 32: The number of inspections conducted by the President of UTK in 2013 by type

No.	Type of inspection	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1.	Inspections involving rail traffic safety	25	33	48	55	51	66	58	52	60	67	55	64	634
2.	Supervisory activities related to rail traffic safety	24	15	19	18	40	30	41	52	33	135	25	55	487
3.	Inspections of compliance with passengers’ rights	33	35	21	17	16	2	10	19	11	13	3	15	195
4.	Railway product inspections	1	0	3	0	1	0	2	0	3	2	1	4	17
5.	Inspections of licensed railway undertakings	0	0	2	0	0	3	1	0	0	0	0	0	6
6.	Total	83	83	93	90	108	101	112	123	107	217	84	138	1339

Source: prepared by UTK

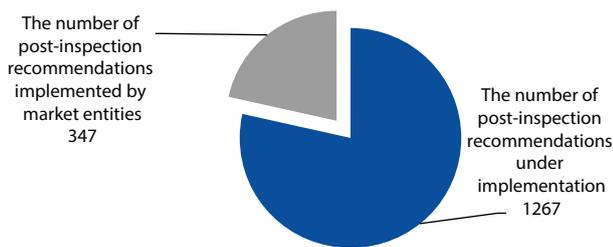
Fig. 115: The percentage distribution of various types of inspections conducted by the President of UTK



Source: prepared by UTK

In 2013 the President of UTK intensified supervisory activities related to rail traffic safety in Poland. The inspections and audits covered, among other entities, licensed railway undertakings, infrastructure managers, side-track users, participants in the transportation of dangerous goods, entities in charge of the maintenance of railway vehicles, centres authorised to conduct medical examinations and to issue decisions, entities authorised to conduct training and examinations of persons applying for a train driver's licence and certificate, producers and goods suppliers.

Fig. 116: Post-inspection recommendations issued by the President of UTK in 2013



Source: prepared by UTK

From 1 January 2013 to 31 December 2013, the President of UTK conducted a total of 1339 supervisory activities, based on which 1614 post-inspection recommendations were issued in

2013. This translated into an average of 1.2 recommendation per inspection. By the end of 2013 rail market entities had implemented 1267 post-inspection recommendations, whereas the remaining ones (i.e. 21.5%) are to be implemented in 2014, having been issued in the last months of 2013 without any possibility of immediate implementation.

11.3. Inspections verifying the compliance of product parameters with product type

For internal purposes of the Office of Rail Transport, "The procedure for issuing confirmations of product compliance with the product type approved by the President of UTK for common use" was binding in 2013. It was introduced by Ordinance No. 4 of the President of UTK dated 20 March 2012. The inspection activities in this case were conducted in the seat of the applicant, i.e. the entity entitled to obtain the product type certificate (based on which the said activities were performed), or on the site of the product approval for use. Most certificates referred to the documents which served as the basis for confirming product compliance. These in general were operation and maintenance documentations providing general product information, and technical conditions on product construction and commissioning which the product had to comply with.

Tab. 33: The number of inspections verifying the compliance of product parameters with product type

Type of inspection	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Number of inspections conducted to verify the compliance of product parameters with product type	104	105	104	125	173	161	181	170	166	246	196	180	1911

Source: prepared by UTK

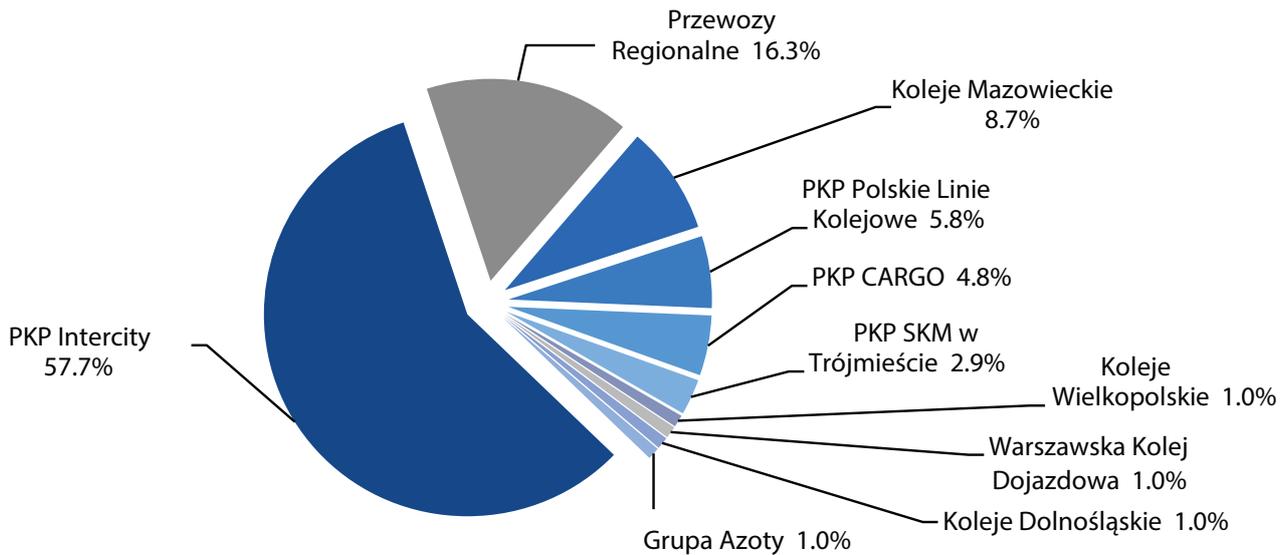
Ordinance No. 32 of the President of UTK entered into force on 20 December 2013, reversing the provisions of Ordinance No. 4 of the President of UTK dated 20 March 2012 on introducing in the Office of Rail Transport the procedure of issuing confirmations of product compliance with the product type approved by the President of UTK for use and on supervising the process of issuing confirmations of product compliance with product type as determined in the acceptance certificates issued by the President of UTK.

The entry into force of this Ordinance was preceded by an assessment of the importance of this amendment by an opinion-making body that examined the amendment entailing the abandonment of conducting the procedure of confirming product compliance with product type in each single case.

11.4. Administrative decisions issued by the President of UTK in 2013

Administrative proceedings conducted by the President of UTK differ from the inspection-related ones. The provisions that govern the course of administrative proceedings are set out in the Act of 14 June 1960 – the Code of Administrative Proceedings. Findings made through inspection activities can constitute a premise for instituting administrative proceedings by the President of UTK. The assessment and remarks included in the post-inspection statement are not binding on the administrative proceedings and their qualification is subject to change.

Fig. 117: Administrative decisions excluding or limiting the use of railway vehicles by entity

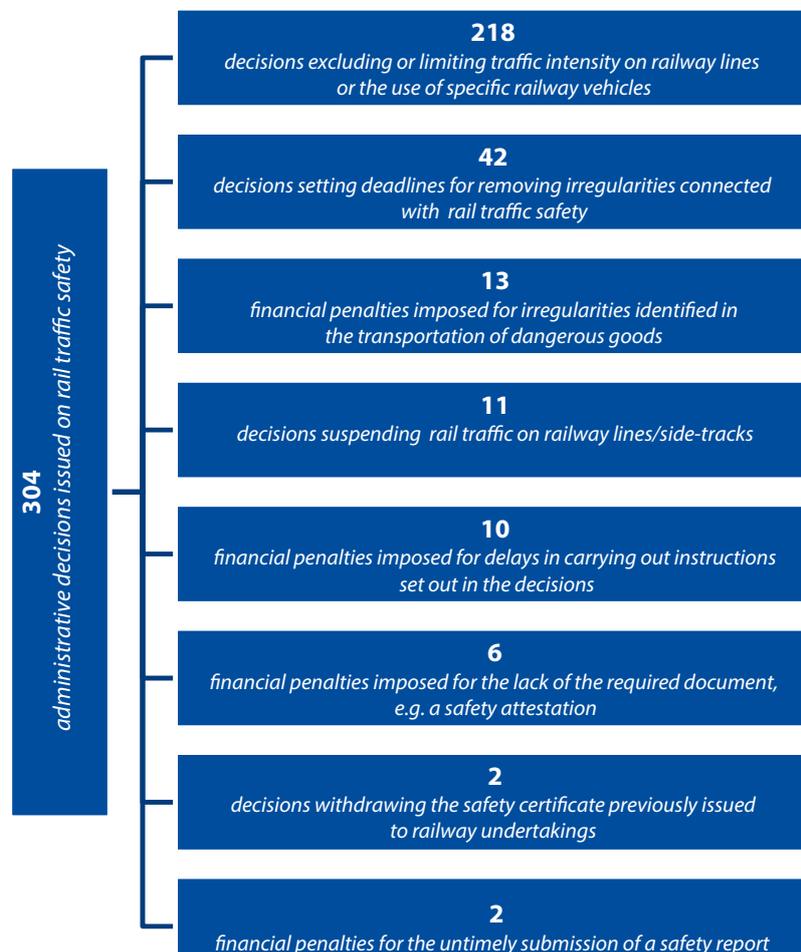


Source: prepared by UTK

The proceedings finish once the entire evidentiary material is analysed. The decision issued in the first instance by the President of UTK may be appealed against by the addressee by submitting, within 14 days, a motion to reconsider the case. The motion does not have to provide a detailed justification as the implication that the party is dissatisfied with the decision issued will suffice.

As a result of the supervisory activities undertaken, the President of UTK instituted administrative proceedings that led to issuing 304 administrative decisions regarding rail traffic safety, over 71% of which related to excluding or limiting traffic intensity on railway lines or the use of specific railway vehicles.

Fig. 118: Administrative decisions issued by the President of UTK in 2013, regarding rail traffic safety



Source: prepared by UTK

11.4.1. Administrative decisions concerning irregularities identified in the maintenance of the railway infrastructure

In 2013 the President of UTK issued 105 administrative decisions concerning irregularities identified in the maintenance of the railway infrastructure, one of which was eventually reversed. Taking into account the kind of violations, it can be inferred that 100% of those decisions were issued because of the poor technical condition of the railway infrastructure.

Tab. 34: A list of railway lines for which administrative decisions introducing operational restrictions were issued

No.	Line number and name	Type of violation
1.	Line No. 1 Warszawa Centralna – Katowice, Radziwiłłów Mazowiecki Station	Failure to use a temporary line block system in the course of construction work precluding rail traffic based on auxiliary signals
2.	Line No. 203 Tczew – Kostrzyn	The lack of rail section equipment visible under various weather conditions, including road signs and signals informing the train driver of the mileage of a given railway line
3.	Line No. 274 Wrocław Świebodzki – Zgorzelec Line No. 283 Jelenia Góra – Ławszowa	The lack of rail section equipment visible under various weather conditions, including road signs and signals informing the train driver of the mileage and gradient of a given railway line; the lack of visibility and ability to read the signs; the lack of proper visibility of semaphore signals, distant signals and repeated signals
4.	Line No. 274 Wrocław Świebodzki – Zgorzelec	The use of rail track sleepers without valid acceptance certificates issued for rail traffic structures
5.	The Oil Plant in Bodaczów	The lack of the required documents; failure to perform the order to remove irregularities concerning the technical condition of the railway infrastructure
6.	Line No. 355 Ostrów Wielkopolski – Grabowno Wielkie	The poor technical condition of tracks and junctions; illegible/obscured by greenery or incomplete signals and markers
7.	Line No. 9 Warszawa Wschodnia Osobowa – Gdańsk Główny	The lack of rail section equipment visible under various weather conditions, including road signs and signals informing the train driver of the mileage of a given railway line
8.	Line No. 203 Tczew – Kostrzyn, the Piła – Krajenka line	Failure to remove (since April 2007) the overhead tele-technical line damage due to a TKD cable having been stolen, and damage to a wooden overhead line structure (auxiliary signals)
9.	Line No. 282 the Jankowa Żagańska – Ruszów line Line No. 273 the Kostrzyn – Chyrzyno line	Damage to the line block system
10.	Line No. 14 Łódź Kaliska – Tuplice, the Leszno – Lasocice and Wschowa – Stare Drzewce lines	The unfilled position of the railway sign control operator in the La-1 and Sd-1 posts; failure to use the junction interlocking and the line block system (auxiliary signals)
11.	Line No. 1 Warszawa Centralna – Katowice	The lack of railway section equipment visible under various weather conditions, including road signs and signals informing the train driver of the mileage of a given railway line
12.	Line No. 204 Malbork – Braniewo the Młynary – Chruściel line	The unfilled position of the railway signal control operator in the Mn-1 post; failure to use the junction interlocking and the line block system (auxiliary signals)
13.	Line No. 133 Dąbrowa Górnicza Ząbkowice – Kraków Główny	The poor technical condition of the railway infrastructure
14.	Line No. 273 Wrocław Główny – Szczecin, the Bytom Odrzański – Nowa Sól section	The poor technical condition of the railway infrastructure
15.	Line No. 273 Wrocław Główny – Szczecin, the Stary Kisielin – Zielona Góra section	The poor technical condition of the railway infrastructure
16.	Line No. 273 Wrocław Główny – Szczecin, the Czerwieńsk Towarowy – Bytnica section	The poor technical condition of the railway infrastructure
17.	Line No. 273 Wrocław Główny – Szczecin, junctions in Zielona Góra Station	The poor technical condition of the railway infrastructure
18.	Line No. 281 Oleśnica – Chojnice	Poor technical condition; kilometre and hectometre markers obscured by greenery and trees growing into the railway vehicle's gauge
19.	Line No. 752 the Wrocław Gądów station	The poor technical condition of the railway infrastructure
20.	Line No. 752 the Wrocław Popowice station	The poor technical condition of the railway infrastructure
21.	Line No. 752 Wrocław Gądów – Wrocław Popowice	The poor technical condition of the railway infrastructure
22.	The Poznań Starołęka station	Long-term application of auxiliary signals, resulting from the temporary occupancy of isolated switch and track sections
23.	Line No. 276 Wrocław Główny – Międzyzlesie the Żorawina – Boreczek line	Damage to the line block system necessitating the use of auxiliary signals to run trains
24.	Line No. 353 Poznań Wschód – Skandawa	The poor technical condition of the railway infrastructure
25.	Line No. 960 Gdynia Główna – Gdynia Postojowa	Failure to remove infrastructure faults
26.	Line No. 93 Trzebinia – Zebrzydowice the Dankowice – Czechowice Dziedzice section	The poor technical condition of the railway tracks
27.	Line No. 156 Bukowno – Jaworzno Szczakowa	The poor technical condition of the railway infrastructure
28.	Line No. 190 Bielsko-Biała – Cieszyn the Skoczów Bładnice – Golezów section	The poor technical condition of the railway infrastructure

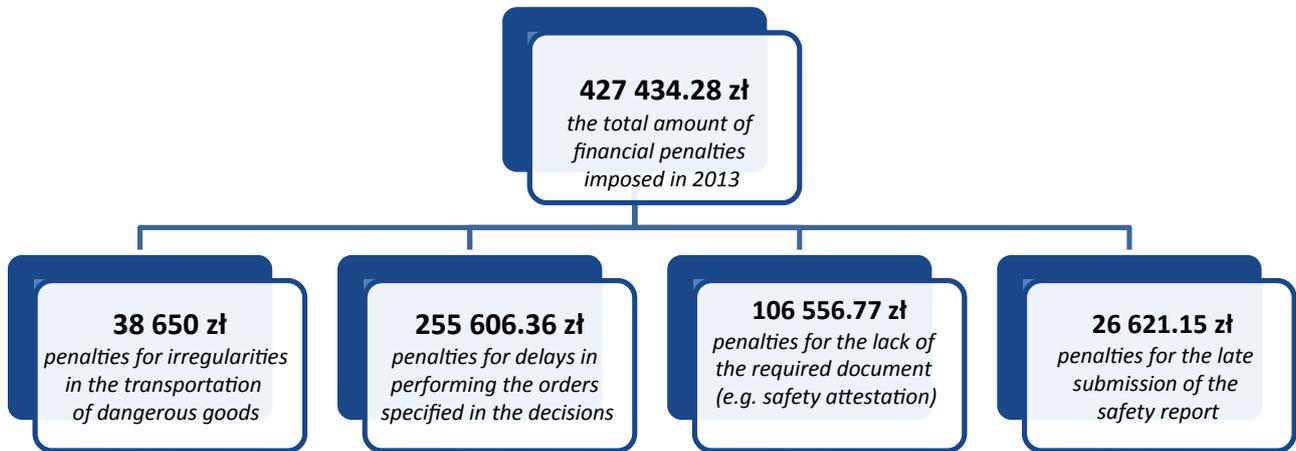
Source: prepared by UTK

11.4.2. Administrative decisions imposing financial penalties

As a result of the irregularities identified and the lack of the timely performance of administrative decisions regarding rail traffic

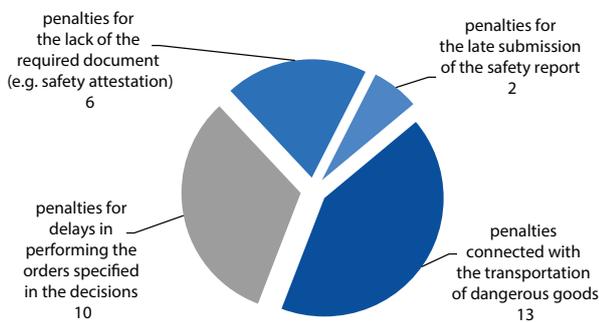
safety, the President of UTK imposed 31 financial penalties on rail market entities, amounting to PLN 427 434.28 in total. The amount of penalties in respect of various violation categories and the number of administrative decisions issued by violation category are presented in the figures below.

Fig. 119: Financial penalties by type of violation



Source: prepared by UTK

Fig. 120: The number of administrative decisions imposing financial penalties by violation category



Source: prepared by UTK

11.4.3. The supervision of management systems in rail transport

The supervision of management systems in rail traffic was the area in which the most substantial change was recorded in relation to 2012. This mainly resulted from personnel-related changes (including training and hiring new employees), combined with philosophy changes and changes in the attitude towards the supervision methodology.

The ECM audits were the first supervisory procedures facilitated through increased employment. They form part of the ECM certification process which entails verifying whether the maintenance management system (MMS) established by a given entity satisfies the requirements stipulated in Annex 3 to the European Commission Regulation No. 445/2011. In general, this process is conducted on the basis of PN-EN ISO 19011:2012 "Guidelines



for auditing management systems". Additional regulations and requirements, characteristic exclusively of the ECM certification process, were presented in two documents developed by the European Railway Agency, i.e. "ECM Sectoral Accreditation Scheme" and "ECM Certification Scheme".

The ECM audit implementation began in 2013, which was possible through acquiring new staff and training over 100 UTK employees in the field of auditing management systems. As of 31 December 2013, the number of ECM audits conducted reached 43. However, some of them have not led to issuing the appropriate certificate as the certification process, in the most extreme cases, can last up to 10 months (including the time necessary to remove the irregularities identified).

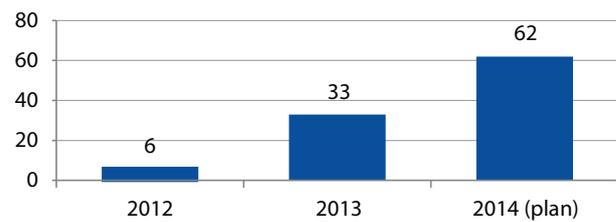
The supervision of the Safety Management Systems (SMS) used by railway undertakings and infrastructure managers is another area in which the scope and quality of the activities performed by the President of UTK saw certain modifications. The total number of SMS inspections conducted in 2013 amounted to 33. The new approach to SMS and MMS supervision in railway transport displays the following features:

- a process-oriented approach;
- an audit-based approach;

- the use of uniform assessment criteria;
- the appropriate employee competences.

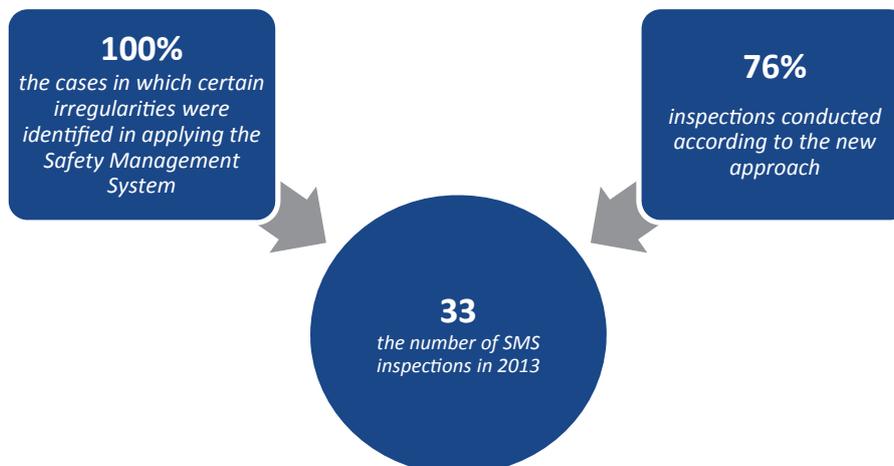
The application of this supervision methodology requires experienced staff who are continually improving their qualifications. The employees in charge of supervision must develop their skills in pace with the increasing level of market knowledge in this field. For this reason, they participate in workshops devoted to Safety Management Systems.

Fig. 121: The number of inspections conducted by the President of UTK in the years 2012–2014 regarding Safety Management Systems



Source: prepared by UTK

Fig. 122: A graphic presentation of Safety Management System inspections conducted in 2013



Source: prepared by UTK



The aforementioned changes have made it possible to effectively supervise the entities that operate mostly on the basis of the individually constructed and implemented Safety Management Systems which can be objectively supervised by competent personnel. The emerging threat that the best-trained staff might move to rail market entities that offer much better working conditions is unquestionable. This seems especially important in the context of the latest issues, such as management systems in rail traffic.

Tab. 35: A list of irregularities identified through SMS inspections (> 1%)

No.	Type of violation	Percentage share by violation category*
1.	Annex 2, Point B - R 1158/2010 - VEHICLE MAINTENANCE	17.4%
2.	Annex 2, Point A - R 1158/2010 - RISK MANAGEMENT	12.4%
3.	Annex 2, Point F - R 1158/2010 - ALLOCATION OF TASKS	7.9%
4.	Annex 2, Point L - R 1158/2010 - COMPLIANCE WITH STANDARDS AND CONDITIONS	6.7%
5.	Annex 2, Point R - R 1158/2010 - CRISIS SITUATIONS	5.9%
6.	Annex 2, Point S - R 1158/2010 - AUDITS	5.6%
7.	Annex 2, Point C - R 1158/2010 - MANAGEMENT OF SUPPLIERS	5.6%
8.	Annex 2, Point G - R 1158/2010 - MANAGEMENT INSPECTION	5.3%
9.	Annex 2, Point Q - R 1158/2010 - "RAILWAY EVENTS"	4.8%
10.	Annex 2, Point N - R 1158/2010 - STAFF COMPETENCE MANAGEMENT	4.2%
11.	Annex 2, Point M - R 1158/2010 - CHANGE MANAGEMENT	3.7%
12.	Annex 2, Point P - R 1158/2010 - DOCUMENTATION MANAGEMENT	3.4%
13.	Annex 2, Point O - R 1158/2010 - INFORMATION	2.8%
14.	Annex 2, Point E - R 1158/2010 - DOCUMENTATION MODEL	2.2%
15.	Annex 2, Point I - R 1158/2010 - CONTINUAL IMPROVEMENT	2.0%
16.	Annex 2, Point H - R 1158/2010 - EMPLOYEE INVOLVEMENT	1.7%
17.	Annex 2, Point K - R 1158/2010 - ORGANISATION GOALS	1.7%
18.	Annex 3 - R 1158/2010 - CERTIFICATION CRITERIA B	1.4%

*concerns the irregularities identified through inspections conducted in the period from 2013 to the 1st half of 2014

Source: prepared by UTK

The results of the Safety Management System inspections conducted so far, combined with the results of audits performed in the course of the ECM certification process, allowed the drawing of general conclusions, both positive and negative, regarding the implementation of management systems in the Polish railway sector.

The involvement of some applicants in the construction of maintenance and Safety Management Systems, followed by their implementation and development, is undoubtedly a positive aspect. Other advantages include the increasingly common use of IT solutions supporting certain processes, such as the maintenance of the rolling stock.

The negative aspects, however, include the strongly diversified quality of the management systems established and the generally low employee awareness regarding the new duties arising from such systems. Furthermore, as regards the ECM certification process, the continually low awareness of the tasks and roles of entities in charge of the maintenance of railway vehicles can still be noticed. The lack of adequate mechanisms embedded in the systems, such as change management or continual improvement, is obviously yet another drawback.

Specifically speaking, the most common irregularities occurring in the Safety Management Systems inspected and requiring further improvement include:

- Failure to implement organisation-specific management systems (non-compliance with specific procedures);
- The lack of understanding of the pro-active safety management approach (instead of which the reactive approach-based reasoning is employed, which entails drawing conclusions on the basis of the (expected) results without taking into consideration the possible threats);
- The "safeguarding" of operational employees against certain SMS elements (e.g. failing to provide easy access to procedures and referring to the previously existing internal regulations applicable to various companies, and approved by the President of UTK);
- The inconsistent treatment of documents falling within the SMS scope (the management and supervision are based on decisions, resolutions and internal regulations, rather than on procedures);
- The incomplete supervision of SMS – no management reviews or audits;
- Failure to apply internal technical supervision standards (i.e. failure to perform maintenance work at all levels, and the scope of activity inconsistent with the maintenance system documentation);
- The conducting of risk assessment to rationalise the violation of binding provisions;
- Failure to monitor the efficiency of risk control mechanisms;
- The risk assessment detached from the actual values represented by individual parameters applied in the organisation (e.g. the probability rate of threat occurrence in relation to the actual cases reported);

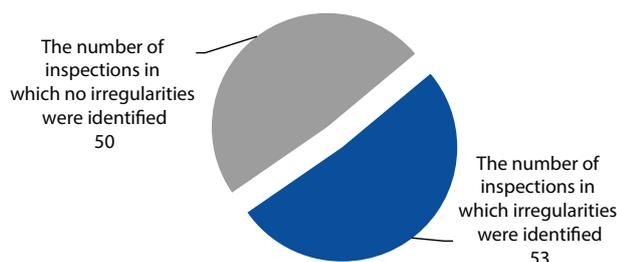
- Failure to draw conclusions from all events to improve the SMS.

11.4.4. Inspections of the transportation of dangerous goods by rail

The inspections conducted by the President of UTK cover all entities participating in the transportation of dangerous goods and performing transport-related activities, including especially railway infrastructure managers, railway undertakings, side-track users, entrepreneurs transporting goods through side-tracks and other rail market participants referred to in Point 1.4 of RID and Point 1.4 of Annex 2 to the SMGS agreement, which are subject to the provisions on the transportation of dangerous goods by rail, stipulated in the Transportation of Dangerous Goods Act, along with the implementing provisions.

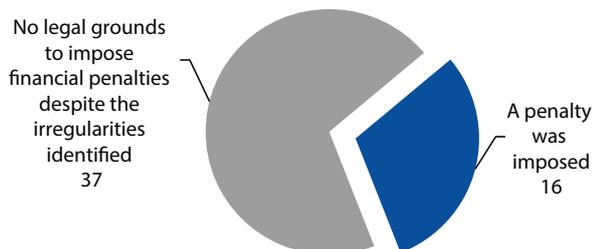
In 2013 the President of UTK performed 103 inspections regarding the safety of the transportation of dangerous goods, the overall results of which are presented below.

Fig. 123: The results of the inspections of the transportation of dangerous goods in 2013



Source: prepared by UTK

Fig. 124: The inspections conducted in 2013 in the course of which certain irregularities were identified and financial penalties were imposed

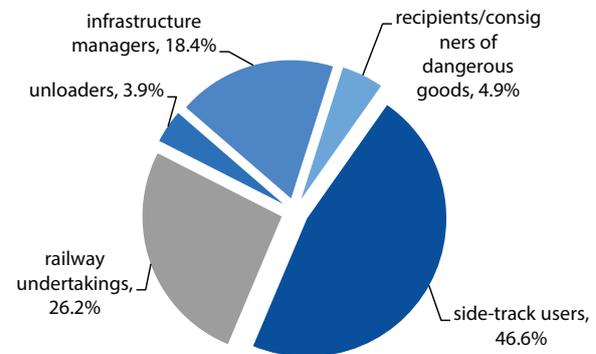


Source: prepared by UTK

As a result of the inspections conducted, in 53 cases (51.5% of all inspections) violations of the provisions concerning the railways and the transportation of dangerous goods by rail were identified, which in 16 cases led to imposing financial penalties in accordance with the requirements set out in the Annex to the Transportation of Dangerous Goods Act of 19 August 2011.

Most inspections conducted by the President of UTK concerned side-track users (46.6%), railway undertakings (26.2%) and infrastructure managers (18.4%). The remaining inspections covered other transport participants, i.e. recipients/consigners of dangerous goods (4.9%) and unloaders (3.9%).

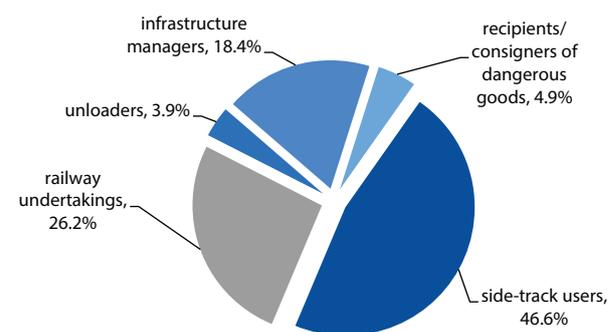
Fig. 125: The types of entities inspected in terms of the transportation of dangerous goods in 2013



Source: prepared by UTK

The Annual Supervision Plan of the President of UTK, developed for 2014, envisages 91 activities related to supervising the transportation of dangerous goods and pressure equipment. Considering the conducting of additional inspections resulting from the arrangements made in the course of the planned supervision, it can be assumed that the number of inspections in 2014 will be ca. 5% higher than in 2013.

Fig. 126: The percentage share of various entities in terms of the number of irregularities



Source: prepared by UTK

Most irregularities (over 41%) were identified while inspecting side-tracks. The most common violations included failure to comply with the requirements concerning the technical conditions of railway bays designated for reloading dangerous goods, the fact that employees did not hold the necessary licences, the lack of up-to-date internal instructions, and incomplete transport documents.

11.4.5. Inspections regarding the causes for applying the so-called auxiliary signals

An auxiliary signal is a visual signal used to authorise train movement in specific situations, such as the failure of rail traffic control devices, or in the circumstances defined in the Regulation on the general traffic conditions. The President of UTK advocates that the prolonged use of auxiliary signals or written orders in rail traffic is unacceptable. In consequence, supervisory actions were taken in respect of infrastructure managers, including especially PKP Polskie Linie Kolejowe S.A., as regards “the reasons for deploying auxiliary signals and the procedures related to such deployments”.

In June 2013 the President of UTK requested that PKP Polskie Linie Kolejowe S.A. provide information on the locations in which traffic was controlled through auxiliary signals for more than 3 days. As at 13 June 2013 the largest number of stations/traffic posts which used auxiliary signals was found in the Dolnośląskie Province (over 17% of all locations). A relatively large number of such instances was also recorded in the Pomorskie and Warmińsko-Mazurskie Provinces (12.6%), in the Wielkopolskie Province (11.5%) and in the Śląskie Province (10.3%). The percentage share of other locations did not exceed 10%. Only in the Podlaskie and Lubelskie Provinces there were no auxiliary signals used to control rail traffic.

Although there were only three locations in the Zachodniopomorskie Province, where auxiliary signals were applied, in one of those cases this situation lasted for over 22 years.

Tab. 36: A list of railway lines within which the President of UTK took actions aimed at eliminating the application of auxiliary signals in rail traffic

Line No.	Line name
1	Warszawa Centralna – Katowice (Radziwiłłów Mazowiecki and Baby stations)
7	Warszawa Wschodnia Osobowa - Dorohusk
14	Łódź Kaliska – Tuplice (the Leszno-Lasocice and Wschowa – Stare Drzewce paths)
203	Tczew – Kostrzyn (the Piła-Krajenka path)
204	Malbork – Braniewo (the Młynary-Chruściel path)
272	Poznań Starołęka
273	Wrocław Główny – Szczecin Główny (the Kostrzyn-Chyryzno path)
274	Wrocław Świebodzki – Zgorzelec (the following stations: Wałbrzych Miasto, Wałbrzych Fabryczny, Wałbrzych Główny, Boguszów Gorce Wschód, Boguszów Gorce, Boguszów, Gorce Zachód, Sędziszów, Marciszów)
276	Wrocław Główny – Międzyzylesie (the Żórawina-Boreczek path)
282	Miłkowice – Jasień (the Jankowa Żagańska – Ruszów path)
402	Koszalin – Goleniów (the Kołobrzeg station within the Ustronie Morskie – Kołobrzeg path)
404	Szczecinek – Kołobrzeg (the Kołobrzeg station within the Dygowo-Kołobrzeg path)

Source: prepared by UTK

Fig. 127: Selected stations/traffic posts at which the President of UTK took actions aimed at eliminating the application of auxiliary signals in rail traffic



Source: prepared by UTK

In 2013 the President of UTK issued 19 administrative decisions regarding „the reasons for deploying auxiliary signals and the

procedures related to such deployments”. It is worth stressing that such activities were considered a priority in 2013.

Owing to the inspection and administrative activities undertaken, the number of cases in which the infrastructure manager has eliminated, or has taken urgent measures to eliminate, an unjustified and prolonged use of auxiliary signals has been steadily growing.

Comparing the data for June and December 2013, it can be inferred that a drop in the number of locations in which traffic was controlled through auxiliary signals occurred in 9 provinces. The irregularities occurring at Kołobrzeg Station where the use of auxiliary signals had begun in 1990, were also removed. In the Dolnośląskie Province, the deployment of auxiliary signals which had been used since 2001, was eventually eliminated in practically all cases.

11.4.6. The supervision of operational difficulties

Operational difficulties, although they do not constitute serious accidents, accidents or incidents, cause certain inconveniences to rail traffic, such as traffic breaks or restrictions which do not affect safety.

As stipulated in the Ir-8 PKP Polskie Linie Kolejowe S.A. instruction, such difficulties may stem from:

- Improper discharge of duties by railway workers;
- Theft, damage or faulty performance by railway infrastructure elements;
- Damage to railway vehicles creating the need to exclude them from traffic or to replace them;
- Fires in rolling stock or on railway premises;
- People, vehicle, building and equipment robberies;
- Malicious, hooligan or reckless acts, such as the pelting of trains with stones, devastating power supply devices, communications devices or interlocking devices, and interfering with the operation of such devices;
- Other events caused by natural phenomena, such as floods, hurricanes or intensive precipitation, which result in traffic breaks or restrictions.

The most common operational difficulties faced by infrastructure managers are related to infrastructure and railway vehicle failures.

The supervision in this area is extremely important, given the erroneous classification of "railway events" by railway committee as "operational difficulties". In consequence, the statistical information provided in connection with the number and consequences of railway events is not comprehensive and makes it impossible to fully exploit the safety management devices owned by railway undertakings and infrastructure managers. Moreover, an internal analysis of various events other than

railway events (i.e. serious accidents, accidents and incidents) is required for the purpose of the common safety method (under the European Commission Regulations Nos 1158/2010 and 1169/2010) as part of criterion Q which also triggers the need to analyse various events that might lead to potential accidents or other dangerous events.

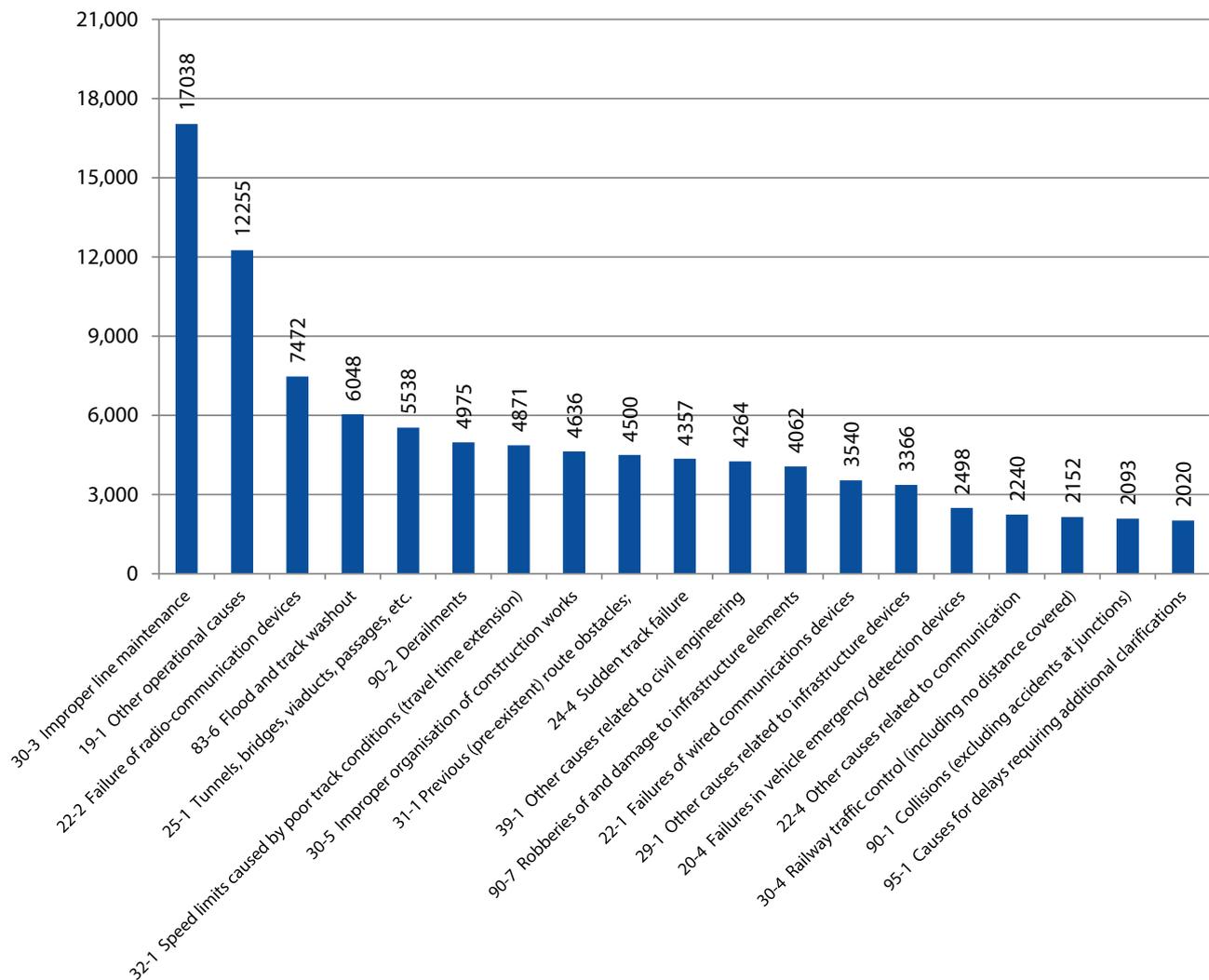
For this reason, the President of UTK took several measures aimed at standardising this issue. Among other things, he proposed amendments to the regulation concerning the handling of railway events. Amendments to internal regulations on this matter are currently under debate, and a number of administrative proceedings related to the failure to report railway events to the appropriate authorities are also in progress.

Summing up, by way of analysing the methods of recording railway events in Poland, it can be inferred that some managers have set up a new category of events, i.e. so-called operational difficulties, which find no reflection either in the national or EU law. This category moves some of the events identified within a registered incidents area to the domain of unregistered operational difficulties. Through such an approach to event recording, the underlying threats are not being taken into consideration within the pro-active safety management model employed by the National Railway Accident Investigation Committee (PKBWK) or in respect of the devices forming part of the construction and implementation of the safety management model. In the opinion of the President of UTK, this might pose a serious problem as regards identifying the main causes of railway events in Poland.

The most common operational difficulties encountered by infrastructure managers include:

- Failure of interlocking devices;
- Failure of level crossing devices;
- Traction network failures;
- Broken rails;
- Robberies and vandalism.



Fig. 128: The average duration (in minutes) of events recorded within PKP Polskie Linie Kolejowe S.A., taking into account events lasting over 1800 minutes, i.e. 30 hours

Source: prepared by UTK

Most operational difficulties recorded in 2013 by PKP PLK S.A. occurred in Zakłady Linii Kolejowych Warszawa, Tarnowskie Góry, Wrocław and Sosnowiec.

11.5. Making complaints related to the safety of rail traffic

In 2012 an e-mail box was launched which may be used by citizens to report any irregularities potentially endangering the safety of rail traffic. The safety box is a tool that facilitates collecting information on the state of the railway infrastructure within various railway lines, as well as on the irregularities identified on the rail market, regarding, among other things, the working time of train drivers, the conducting of exams for the positions related to rail traffic safety, etc. By using such information, the President of UTK can discharge his statutory safety supervision duties in a more effective way, inspecting those places where there is a real threat to rail traffic safety.

The complaints are handled in the following way. The complainant is informed of the measures being taken, after which the complaint, together with an inspection or verification activity request, is submitted to the appropriate field branch of UTK. The information collected is verified within the scope of authority held by the President of UTK, as defined in the binding regulations. All activities undertaken in connection with the complaint received are intended to increase the level of safety. On completion of the supervisory activities, a response to the claim is provided, including a description of the measures being taken.

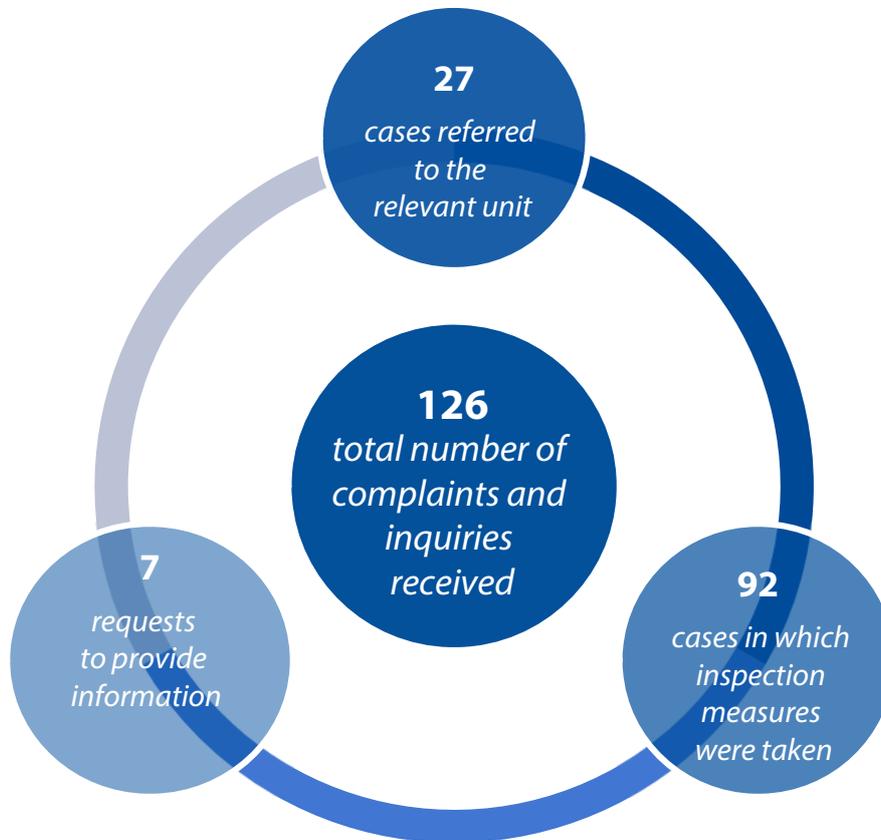
The complaints made in 2013 gave rise to several dozen inspections, as a result of which administrative decisions were issued in connection with violations of the provisions binding on railway infrastructure managers, regarding the safety of rail traffic, and requests were made to remove such violations without any delay.

The continually growing number of complaints sent to the e-mail box in question testifies to its growing popularity. One can also say that this safety box initiative has strengthened public trust in the supervisory authority, constituting a means of creating a railway safety culture in Poland.

In 2013 a total of 126 complaints and safety-related inquiries were sent to the e-mail box. As of 31 December 2013, 70% of them were successfully processed, i.e. responses were sent to the complainers or the cases were referred to the appropriate

organisational units of the Office. Certain inspection measures were taken in the remaining 30% of complaints, the processing of which was still in progress.

Fig. 129: A graphic presentation of cases reported to the safety e-mail box in 2013



Source: prepared by UTK



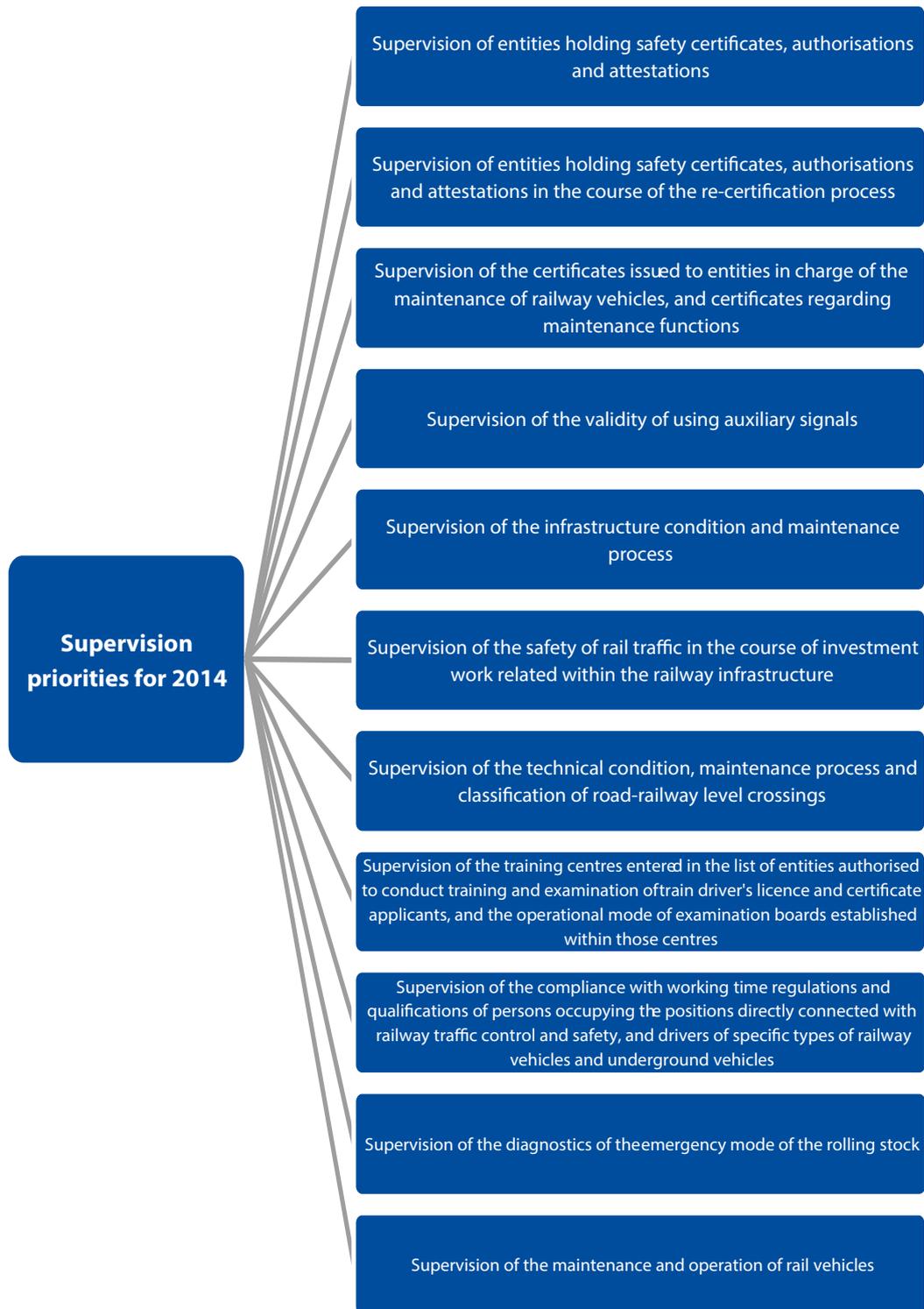
11.6. The priorities adopted by the President of UTK for 2014 – the supervision plan

The priorities, including mainly substantive ones, to be supervised in 2014, were primarily defined on the basis of the analyses conducted, concerning, among other things, the frequency of accident occurrences, operational performance, the validity dates of certificates, the impact of operational difficulties, and the degree of deterioration of the railway infrastructure.

The planning process entails the following stages:

- The supervision priorities are set on the basis of employee experience, proposed activities, the results of inspection, verification and monitoring activities, and also inquiries and complaints received;
- The priorities set provide the basis for establishing the annual supervision plan, which defines the number of activities and entities that can be supervised using the resources available, while also ensuring the proper quality of the activities undertaken.

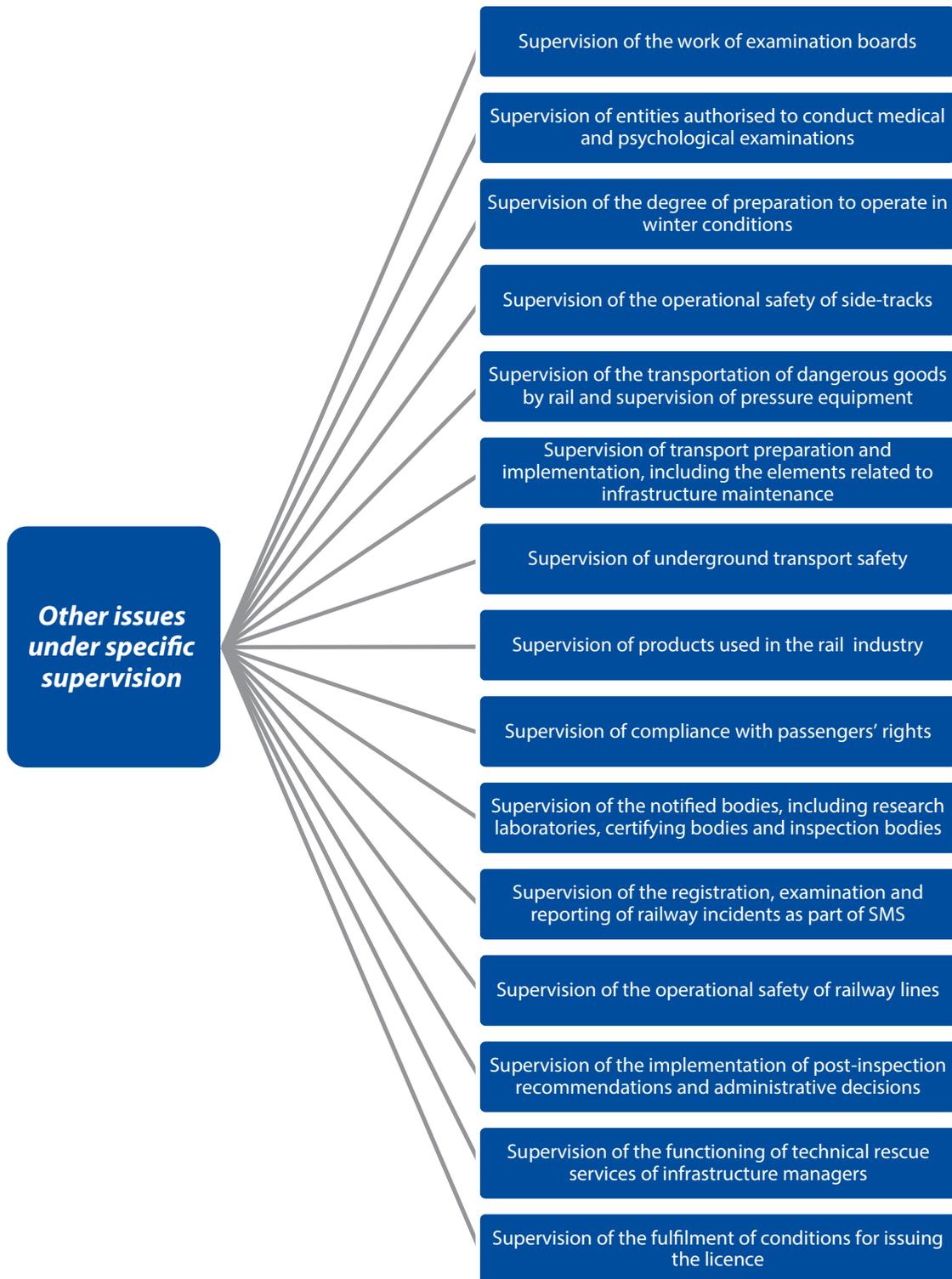
Fig. 130: The supervision priorities adopted by the President of UTK for 2014



Source: prepared by UTK

The criteria applied in the preparation of this plan were as follows:

- The time remaining until the renewal of safety certificates and authorisations;
- The number of previous inspections conducted as part of the new system-based approach;
- The operational performance of various entities (taking into consideration the results of previous analyses of the correlation between the number of railway events and transport performance that suggested conducting activities in "small" entities).

Fig. 131: Other issues under specific supervision of the President of UTK in 2014

Source: prepared by UTK

It should be emphasised that the planning process is thematic rather than entity-oriented, given the lack of consistent data regarding the previously conducted certification processes. Nevertheless, the Register of Entity-Specific Risk Parameters is currently under implementation, which will allow a more reliable assessment of various entities, taking into account a

number of parameters. The results obtained will be used in the planning processes in the following years.

12. Summary and conclusions

The level of safety in the national railway sector is gradually improving, in terms of both the number of events reported and the number of deaths and and serious injuries.

73.9% (i.e. 520) accidents, out of **704** accidents in total, involved entities that were external to the railway system, including especially persons who had made an unauthorised entry to the railway premises, level crossing users and people intentionally acting to the detriment of the railway system. These events triggered 228 deaths and 102 serious injuries in total. To compare, the average daily number of road deaths in Poland amounts to on average 9.2, and that of injuries to 120.7⁶.

From the railway system perspective, combatting events caused by unauthorised persons or level crossing users is very challenging, given the limited possibility to influence their behaviour. Converting level crossings into two-level crossings is likely to bring the best outcomes, eliminating the entire risk of collisions, but it requires considerable expenditures. The collision risk can also be limited through modernising level crossings by installing modern devices and upgrading the categories of the crossings.

Providing railway fencing, especially in urban areas, and constructing multi-level pedestrian crossings over and under the tracks, equipped with adequate devices, seems to constitute the most effective solution in the case of unauthorised persons entering railway premises. Such measures, however, call for substantial expenditures.

At the same time, one should note the significant imperfections of the Polish legal system, which shifts the entire responsibility for level crossing maintenance to the managers of railway infrastructure. Such regulations appear unreasonable, given that the vast majority of accidents on level crossings are caused by road users. For this reason, it is essential that specific measures are undertaken with a view to modifying the principles of level crossing maintenance so as to make road managers equally responsible for the safety on level crossings and require them to participate in the costs arising in this area.

A substantial role in ensuring level crossing safety is played by the police, whose activities could help to further discipline level crossing users by conducting more frequent inspections of the most dangerous crossings. Marking particularly dangerous crossings with signage stating about the number of deaths and serious injuries also seems a viable solution that could raise social awareness of this problem.

In 2013, being mindful of the problem areas related to acts of hooliganism within the railway network, as identified in the previous study, the President of UTK ordered that this kind of events be subject to special monitoring. Based on the data provided by external entities, an initial attempt was made as part of this study to identify the locations which display the highest frequency of dangerous acts that are detrimental to the railway system. For instance, it was revealed that train robberies and thefts of cargo are the most common in Silesia. This finding is hardly surprising but the actual scale of this phenomenon, expressed in numbers, appears shocking. Out of 2029 events of this kind, reported in 2013, as many as 1668, i.e. 82.2%, occurred in Silesia. The analysis also shows that, in average terms, the cases of train robbery and theft of cargo in some locations happen on a nearly daily basis (the Łazy station – 343 cases recorded in 2013). The Bytom area, including especially the Bytom Karb station and the adjacent lines, also displays a large number of train robberies and thefts, with a total of 305 cases recorded in 2013.

The frequent occurrence of theft of and damage to the railway infrastructure in the area of Szczecin (148 cases) and Wrocław (131) might seem surprising. The Warsaw area, in turn, is where most unauthorised alarm signals were transmitted. Out of 91 cases of this kind recorded in the Warsaw area, as many as 75 occurred within the city borders, accounting for 35% of all unauthorised alarm signal transmissions countrywide. This method of disrupting train journeys was most commonly used within Warszawa Zachodnia, Warszawa Praga and Warszawa Włochy stations.

In the opinion of the President of UTK, the areas identified in this study as displaying the most frequent occurrence of vandalism within the railway network should give an impulse to the relevant services to undertake adequate measures, such as extended supervision. However, the need to launch simultaneous activities oriented towards increasing the awareness of the relevant entities as regards an adequate classification of the events in question, so as to reflect the actual threats posed to the safety of the railway system, should also be borne in mind.

The President of UTK has taken formal actions with the aim to combat theft and damage of railway infrastructure by signing a memorandum with two other network market regulators. Its objectives include increasing the efficiency of law enforcement

⁶ *Mały rocznik statystyczny Polski 2014, Główny Urząd Statystyczny.*

bodies and influencing the penalty measures applied and their unavoidability. This stems from the fact that thefts of and damage to the railway infrastructure constitute a serious threat to the safety of rail traffic.

Finally, one should also note an important challenge to be faced by the President of UTK in 2014, and especially in 2015, which is when the safety certificates and authorisations held by over

50 railway undertakings and infrastructure managers, authorising them to conduct transport activity, will become invalid. This will trigger the need to conduct a prompt renewal process in compliance with the national and European requirements, including especially the principles arising from the common safety methods applicable to the assessment of compliance and supervision.



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Wydawca:

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