



STATE COMMISSION ON RAILWAY ACCIDENT INVESTIGATION

MINISTRY OF INTERIOR AND ADMINISTRATION

ANNUAL REPORT FOR THE YEAR 2021

FROM THE ACTIVITY OF THE STATE COMMISSION ON RAILWAY ACCIDENT INVESTIGATION

Approved by: .

Signature on the original

Tadeusz Ryś

Chairman

of the State Commission on Railway Accident Investigation

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1. Introduction

1.1 Legal bases for the functioning and tasks of the Commission

The permanent and independent State Commission on Railway Accident Investigation, hereinafter referred to as the “Commission” or “PKBWK,” has been investigating serious accidents, accidents and incidents since 17 April 2007.

The Commission was established in result of the implementation of Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 on safety on the Community’s railways repealed by Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety – OJ L 138, 26.5.2016, p. 102 hereinafter referred to as the “Directive.” In accordance with Article 22 of the Directive, the Republic of Poland has ensured that the investigation of accidents and incidents is carried out by an authority which is independent functionally, organisationally and with respect to the decision making of the safety authority, rail market regulator, railway undertakings, infrastructure managers as well as any other party whose interests could conflict with the operation of the investigation body. The “Commission” is the national investigative body as specified by the Directive in accordance with the national law. In terms of the organisational structure as well as legally, the Commission is fully independent from the entities specified in Article 22 of the Directive and represented externally by its Chairman.

The Commission acts pursuant to the provisions of Chapter 5a of the Railway Transport Act of 28 March 2003 (consolidated text: Journal of Laws of 2021, item 1984, as amended), hereinafter referred to as the “Rail Transport Act” or the “Act”

Beginning from 1 November 2019, the Minister responsible for internal affairs shall provide the budget and the Commission shall be serviced by the office serving that Minister (pursuant to Article 4 of the Act of 30 August 2019 *amending the Railway Transport Act* – Journal of Laws item 1979).

As of the date of entry into force of the aforementioned *Act amending the Act*, the minister responsible for transport or his or her office, concerning the functioning of the State Commission on Railway Accident Investigation, shall become a party to contracts and agreements concluded by the minister responsible for internal affairs or his or her office, respectively.

The primary task of the Commission is to carry out investigations following any serious railway transport accident (occurring on railway lines with a track gauge of up to 300 mm, railway networks functionally separated from the railway system and railway sidings) with an apparent (negative) impact on the regulation or management of railway safety, as provided for in Article 28e section 1 of the Act.

The Commission also has the right to investigate an accident or incident which – under slightly altered conditions – would be classified as a major accident causing the cessation of operations of structural subsystems or interoperability constituents of the trans-European rail system, as provided for in Article 28e section 2 of the Act. The decision to initiate the proceedings specified above shall be taken

by the Chairman of the Commission no later than 2 months from the date of receipt of the notifications provided for in Article 28e section 3a of the Act.

The Commission has the right to investigate an accident and incident other than those set out above if it has arisen in circumstances justifying such an investigation, in which case the decision to investigate under section 28e section 2a of the Railway Transport Act shall be taken by the Chairman of the Commission, with no specified time limit.

Another rationale for taking the decision to investigate accidents and incidents is that they occur in repeated situations caused by similar causes. Each decision to proceed with an accident or incident is preceded by the following considerations:

- the severity of the accident or incident;
- whether an accident or incident creates a series of accidents or incidents relating to the system as a whole;
- the impact of the accident or incident on railway safety at the Community level;
- requests from managers, railway undertakings, the minister responsible for internal affairs, the President of the Rail Transport Office, hereinafter referred to as the “President of UTK,” or the European Union Member States.

Within one week following the decision to initiate proceedings, the Commission shall inform the European Union Railway Agency, stating the date, time and place of the incident, as well as its nature and its consequences in terms of fatalities, injuries and material damage.

As part of its activities, the Commission carries out procedures (investigations) aiming to establish the causes, circumstances of incidents as well as to identify preventive measures to improve safety in rail transport. The Commission shall draw up a report on the proceedings containing recommendations for the improvement of safety and the prevention of serious accidents, incidents or accidents, adopting a dedicated resolution. Proceedings conducted by the Commission are not conclusive with respect to guilt or liability.

The members of the Commission hold ID cards authorising them to perform the activities specified in Article 28h section 2 of the Railway Transport Act. The template of the ID is defined in the Regulation of the Minister of Internal Affairs and Administration of 23 October 2020 on the template of the ID of a member of the State Commission on Railway Accident Investigation (Journal of Laws item 1894).

The ID is issued to a member of the Commission by the Minister responsible for internal affairs.

In cases where the Commission undertakes the investigation of an accident or an incident, the Railway Commission shall delegate the performance of the investigation to the Commission. PKBWK prepares the investigation report in accordance with Commission Implementing Regulation (EU) 2020/572 of 24 April 2020 *on the reporting structure to be followed for railway accident and incident*

investigation reports, hereinafter referred to as the “*Commission Implementing Regulation (EU)*,” which established the reporting structure for accident and incident investigations referred to in Article 20 section 1 and 2 of the Directive (EU) 2016/798.

Commission Implementing Regulation (EU) 2020/572 of 24 April 2020. (Official Journal of the European Union no. 132 of 27 April 2020), entered into force on 14 May 2020, is binding in its entirety and directly applicable in all Member States.

In the Act of 30 March 2021 amending the Railway Transport Act – Article 1 item 68(a), the Legislator repealed section 3 in Article 28l which reads as follows: “*3. The minister responsible for internal affairs shall determine, by regulation, the content of the report on the investigation of serious accidents, accidents or incidents, taking into account the consequences of serious accidents, accidents or incidents.*”

The Ordinance of the Minister of Infrastructure and Construction of 12 April 2016 amending the Ordinance on the contents of the report on the investigation of a serious accident, accident or railway incident (Journal of Laws item 560), which was in force until the entry into force of Commission Implementing Regulation (EU) 2020/572 of 24 April 2020.

1.2 The Commission’s Organisational Structure

As at 31 December 2021, the Commission included nine permanent members, including the Chairman, two Deputy Chairmen and the Commission Secretary.

The seat of the State Commission on Railway Accident Investigation is located in the building of the Ministry of Infrastructure at: ul. Chałubińskiego 4, building A, 00-928 Warsaw, Poland.

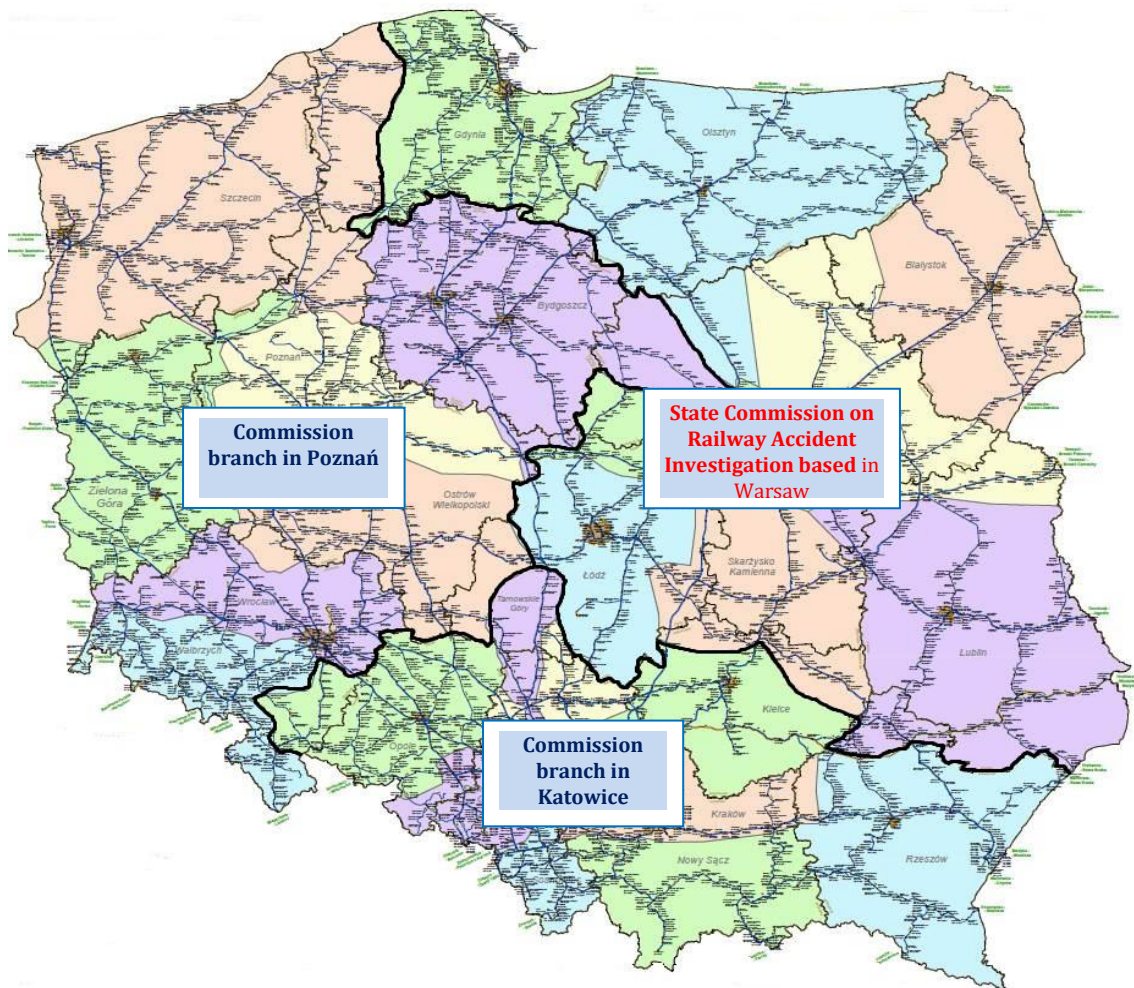
Pursuant to Article 28d section 4 of the Act of 28 March 2003 on Railway Transport (Journal of Laws of 2019, items 710, 730, 1214, 1979 and 2020), the Minister of the Interior and Administration issued Ordinance No. 3 of the Minister of the Interior and Administration of 31 January 2020 on the *Rules of Procedure of the State Commission on Railway Accident Investigation* (hereinafter referred to as the Commission Rules), published in the Official Journal of the Minister of the Interior and Administration under item no. 2.

Appendix no. 1 to the Ordinance no. 3 of the Minister of the Interior and Administration of 31 January 2020. (item 2) contains the *Rules of Procedure of the State Commission on Railway Accident Investigation*, effective as at 31 January 2020, setting out the directions of the Commission, the organisational structure and the obligations of the Office of the Minister of the Interior and Administration regarding servicing the Commission.

In accordance with the provisions of § 5 section (1) of the Commission Rules, the Chairperson coordinates the Commission’s tasks, ensures the proper organisation of the Commission’s work, its smooth operation and represents the Commission externally.

The organisational structure of the PKBWK is set out in Appendix no. 2 to the aforementioned Ordinance:

1. State Commission on Railway Accident Investigation based in Warsaw (5 FTEs – permanent members):
 - a) The Chairman
 - b) Deputy Chairman for Research,
 - c) Deputy Chairman for Technical Matters,
 - d) Commission Secretary,
 - e) standing member.
2. Commission Branch in Katowice (4 FTEs):
 - a) permanent member coordinating the works of the department,
 - b) permanent members (3 FTEs).
3. Commission Branch in Poznań (3 FTEs):
 - a) permanent member coordinating the works of the department,
 - b) permanent members (2 FTEs).



Employment levels as at 31 December 2021:

- Commission headquarters in Warsaw – 4 permanent members and 1 service employee*) of the Commission,
- Commission branch in Katowice – 2 permanent members,
- Commission branch in Poznań – 3 permanent members.

*) the services for the Commission are rendered by the office of the minister responsible for internal affairs, currently – 1 employee of the Ministry of Internal Affairs and Administration – employed at the Commission's headquarters in Warsaw.

2. Activities and forms of conducting the Commission's affairs and supervision by the Chairman in 2021

In 2021, the Commission carried out activities related to rail transport incidents, performing the following activities, among others:

1. Analysing the immediate report on the incident provided by the entities indicated in Article 28g of the Act.

The preliminary analysis aimed to determine the impact of the incident, (circumstances, cause, victims, losses as well as other important data affecting the incident). This was the scope of activities carried out by the members of the Commission, under the supervision of the Chairman of the Commission.

The preliminary information on the incident was provided to the Chairman of the Commission.

2. The decision for the members of the Commission to visit the site of the incident to carry out a visual inspection was taken by the Chairman of the Commission.
3. Direct participation of a member of the Commission in the inspection of the scene of the incident in the presence of the chairman of the railway commission – was used primarily in incidents where it was suspected that a poorly functioning railway safety management system contributed to the incident and requires analysis and possible corrective action, or there were other indications of the need to proceed – in accordance with Article 28e(2a) and (3) of the Railway Transport Act. Members took notes from the inspection of the scene, submitting them with their conclusions to the PKBWK Chairman.
4. The preliminary information collected and provided, i.e. the nature of the incident and the consequences including fatalities, serious injuries and material damage, enabled the Chairman of the Commission to assess the need to issue a decision to proceed with the incident.
5. The investigation of a serious accident, casualty or incident was carried out by a Commission Investigation Team appointed by the Chairman of the Commission.
6. Conduction of the proceedings by the Commission's Research Team appointed by the Commission's Chairman – is carried out by appointing the head of the Research Team and

subsequently, in consultation with the head, determining the composition of the Research Team from among the permanent and ad hoc members of the Commission. The Commission's investigation team carried out activities to determine the circumstances and cause of the incidents, preparing documentation describing the investigation process necessary for the Commission to adopt a resolution closing the investigation of a serious accident, incident or accident. The Head of the Investigation appointed and coordinated the activities carried out by the members of the Investigation Team and was responsible for the correctness of the activities carried out. The tasks and detailed scope of activities are laid down in the Commission Rules. The activities specified above were carried out under the supervision of the Chairman of the Commission.

The Commission issued recommendations to improve safety and prevent serious accidents, incidents or accidents during the proceedings.

The scope of the investigation plan carried out by the Investigation Team in each case depended on the conclusions the Commission intended to obtain in order to improve safety.

In 2021, reports were produced by the Commission's Investigation Teams pursuant to the provisions of the *Commission Implementing Regulation (EU)*.

The proceedings conducted were closed during the meetings of the Commission, during which the final version of the draft Report was adopted by resolution of the Commission, after accepting or rejecting the comments of the entities listed in section 2 of Article 28k of the Act.

In 2021, the Chairman of the Commission Tadeusz Ryś decided to take over the investigation and conduct of the Commission's Investigation Team in the following cases:

- 1) serious railway accident occurring on 26 January 2021 at 07:39 a.m. on category D level crossing at the station located on the route Zbąszynek – Lutot Suchy on track no. 1, at 10.196 km of railway line no. 367 Zbąszynek – Gorzów Wielkopolski;
- 2) railway incident that occurred on 05 February 2021 at 09:37 in Gogolin station track no. 6, 22.400 km of railway line no. 136 Kędzierzyn Koźle – Opole Groszowice;
- 3) railway incident that occurred on 26 February 2021 at 05:32 at Grodzisko Dolne station track two, 163.654 km of railway line no. 68 Lublin – Przeworsk;
- 4) a serious railway accident that occurred on 04 April 2021 at 09:10 on a category D level crossing located at the Oborniki Wielkopolskie – Rogozno Wielkopolskie route, on track no. 1, at km 30.453 of railway line no. 354 Poznań Główny POD – Piła Główna;
- 5) serious railway accident occurring on 15 June 2021 at 10:05 a.m. on category C level crossing at the station Kochanówka Pustków, track no. 1, 313.328 km of railway line no. 25 Łódź Kaliska – Dębica;

- 6) a railway accident that occurred on 30 April 2020 at 11:50 at the Świdnica Kraszowice – Jedlina Zdrój route on track no. 1, at 60.885 km of railway line no. 285 Wrocław Główny – Świdnica Przedmieście;
- 7) a serious railway accident occurring on 29 July 2021 at 06:15 a.m. on category C level crossing at the Szczecin Gumieńce - Tantow route on track no. 1 at 7.585 km of the railway route no. 409 Szczecin Gumieńce - State Border (Tantow);
- 8) incident of C57 category occurring on 16 October 2019 at 3:54 a.m. at Leszczyny station, at signal box “Lsz” at 31.738 km of railway line no. 140 Katowice Ligota – Nędza – continuation of proceedings undertaken in 2020.

The status of the Commission’s investigations is as follows:

- the investigations listed under items 1 to 7 were completed by the Commission’s Investigation Teams and the “Reports” of the prepared investigations were adopted by the resolutions of the Commission and published,
- the procedure specified under item 8, due to the Infrastructure Manager’s request of 09 September 2020 and the importance and safety impact relating to the system – as a whole, undertaken by the PKBWK by Chairman of the Commission’s Decision No . PKBWK.7.2020 of 01.10 .2020 – was continued by the Commission’s Investigation Team.

Details of ongoing investigations into these incidents are provided later in the report.

In addition, the Commission completed 4 investigations undertaken into incidents occurring in 2020 and produced reports which were published on the website.

7. It informed the entities listed in Article 28k section 2 of the Act of the proceedings on the incident and its progress, giving them the opportunity to submit their opinions on the proceedings and make comments.
8. The Commission cooperated with the competent entities investigating serious accidents, accidents or incidents in other Member States of the European Union, including Drážní Inspekce, the investigating authority in the Czech Republic, as provided for in Article 28j of the Act.
9. The Commission has participated in a programme of mutual evaluations carried out within the framework of international cooperation of the national investigative bodies of the European Union in, inter alia, Croatia, as stated in Article 28ja of the Act.
10. The Commission monitored the reported railway incidents and maintained a “Railway Incident Record (RIRS).”
11. In 2021, a joint examination of the railway incidents that had taken place was carried out by members of the railway committees and members of the Commission in terms of, among others taking measurements and tests, analysing documentation.

In the course of investigating the cause and circumstances of the incident, the Commission, with the involvement of the railway commission, attended meetings on the case.

12. Important factors influencing the functioning of the Commission included:

- Cooperation – between authorities acting in parallel and independently with mutual respect for each other’s competences in connection with a railway incident, pursuant to the “Agreement of 27 June 2014 between the State Commission on Railway Accident Investigation and the Attorney General.” The Agreement also applies to cooperation with the Police, the Internal Security Agency, the Military Police and the Border Guard (as defined by the authority conducting criminal proceedings – in § 1 item 5 of the Agreement). All provisions relating to the rights of the PKBWK also apply to the railway commission.
- Agreement of 16 December 2014 between the Commander-in-Chief of Police and the State Commission on Railway Accident Investigation concluded for the purpose of defining the principles of cooperation in the area of mutual support of activities undertaken at the level of training projects organised and conducted by them.
- Agreement of 3 June 2016 between the Chairman of the State Commission on Railway Accident Investigation and the President of the Office of Rail Transport on cooperation in the field of safety in railway transport of the Republic of Poland. The purpose of the agreement is to allow the parties to cooperate in order to develop and ensure safety in rail transport and to exchange information and experience on the work of the railway commissions.

The aforementioned Agreements are available on the following website:

<https://www.gov.pl/web/mswia>

bookmark: What do we do → State Commission on Railway Accident Investigation → Acts and documents.

- As part of the exchange of experience and for the purpose of improving the quality of the system for investigating incidents and enhancing safety in rail transport, the Commission organises training for the Public Prosecutor’s Office and the Police. Members of the Commission shall participate in training courses, conferences, seminars, meetings, plenary meetings, working groups, workshops, meetings organised by the European Union Railway Agency and by the bodies involved in the investigation of serious accidents, incidents and accidents in other Member States of the European Union.

3. Events investigated between 1 January and 31 December 2021.

3.1 Events communicated to the Commission by entities listed in Article 28g of the Act

The obligation of infrastructure managers, railway undertakings and users of railway sidings to immediately report serious accidents, accidents and incidents on railway lines to the Commission and to the President of UTK resulted from Article 28g(1) of the Railway Transport Act. On the other hand, the obligation to issue a written notification to the infrastructure manager or the railway siding user competent for the place of the incident resulted from § 7 sections 1-5 of the Regulation of the Minister of Infrastructure and Construction of 16 March 2016 on serious accidents, accidents and incidents in rail transport (Journal of Laws, item 369). The national legislation defines the classification of rail transport incidents into the following types:

- 1) **a serious accident – any accident caused by** a collision, derailment or any other event with an obvious impact on railway safety regulation or the management of safety: with at least **one fatality or at least five persons seriously injured** (seriously injured – a person who suffers disabling or disabling injury as a result of a serious accident or incident and is hospitalised for more than 24 hours as a result), or causing significant damage to a railway vehicle, the railway infrastructure or the environment, which can be immediately assessed by the accident investigation committee to be at least EUR 2 million;
- 2) **an accident** – an unintentional, sudden event or sequence of events involving a railway vehicle resulting in adverse consequences for human health, property or the environment; accidents include, in particular:
 - collisions,
 - derailments,
 - crossing incidents,
 - incidents involving persons caused by a railway vehicle in motion,
 - a railway vehicle fire;
- 3) **an incident** - any occurrence, other than an accident or a serious accident, associated with **rail traffic** and affecting its safety.

The aforementioned definitions of the type of incidents (serious accident, accident and incident) are defined in accordance with the provisions of the Railway Transport Act.

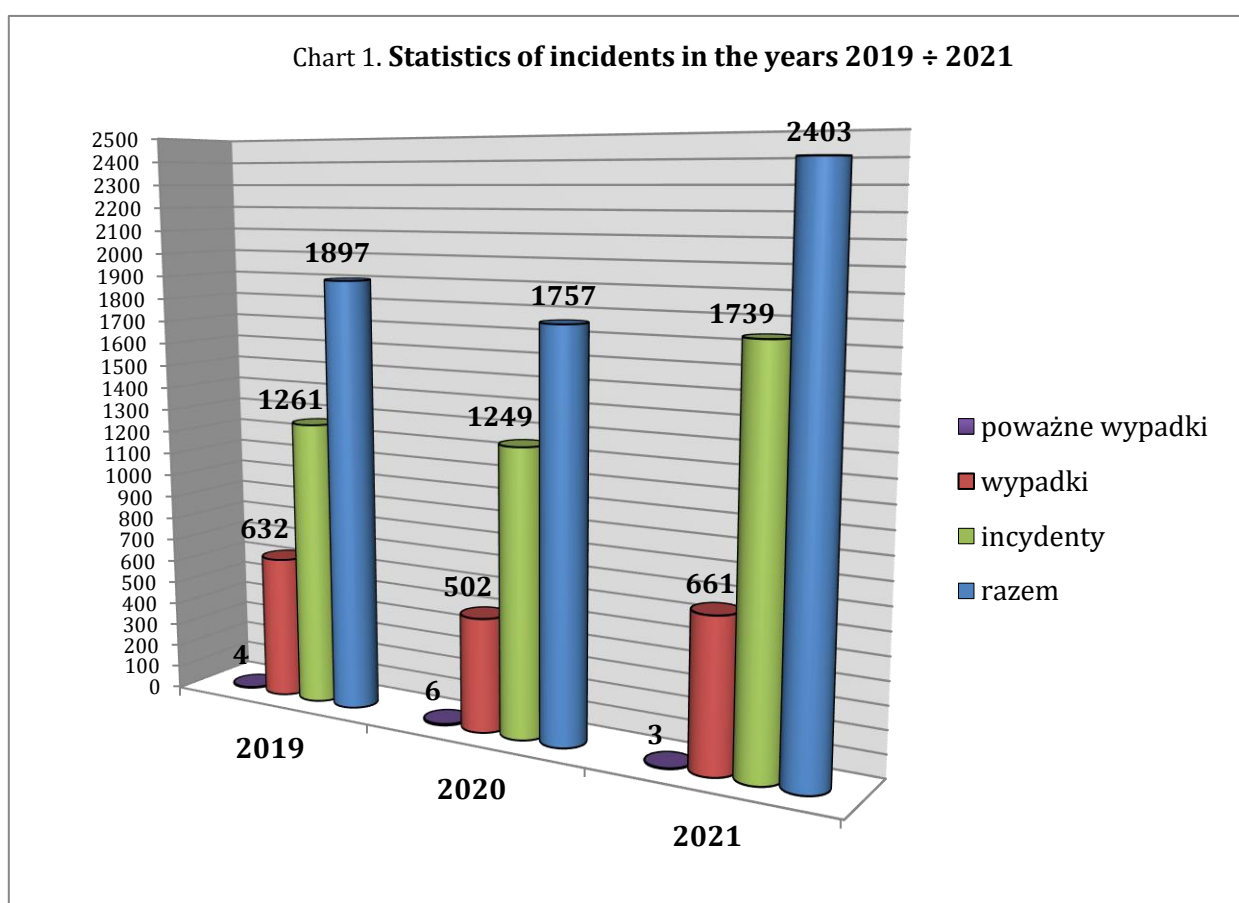
In the period from 01 January to 31 December 2021, a total of 2,403 railway incidents were reported to the Commission and registered in the Railroad Incident Recording System (RIRS) according to the direct cause qualification resulting from the Regulation of the Minister of Infrastructure and Construction of 16 March 2016 on serious accidents, accidents and incidents in railway transport out of which: 3 serious accidents, 661 accidents and 1,739 incidents.

The number and structure of incidents by type are shown in the table below.

Table 1. Events reported to the Commission in 2021 versus 2020.

Type of event (SA – serious accident, A - accident, I - incident)	2020	2021	Change 2021/2020
SA (cat. A)	6	3	-50.0%
A (cat. B)	502	661	+31.7%
I (cat. C)	1249	1739	+39.2%
Total number of railway incidents	1757	2403	+36.8%

The chart below provides a summary of serious accidents, accidents and incidents occurring in 2019, 2020 and 2021.



Incidents on railway sidings in 2021 – a total of 180 railway incidents were reported to the list (RIRS) manage at the PKBWK (including: 149 accidents and 31 incidents).

The table below shows the number of casualties (killed, seriously injured and injured) in incidents occurring in 2021 compared to 2020 (compiled on the basis of documents provided by the obliged entities).

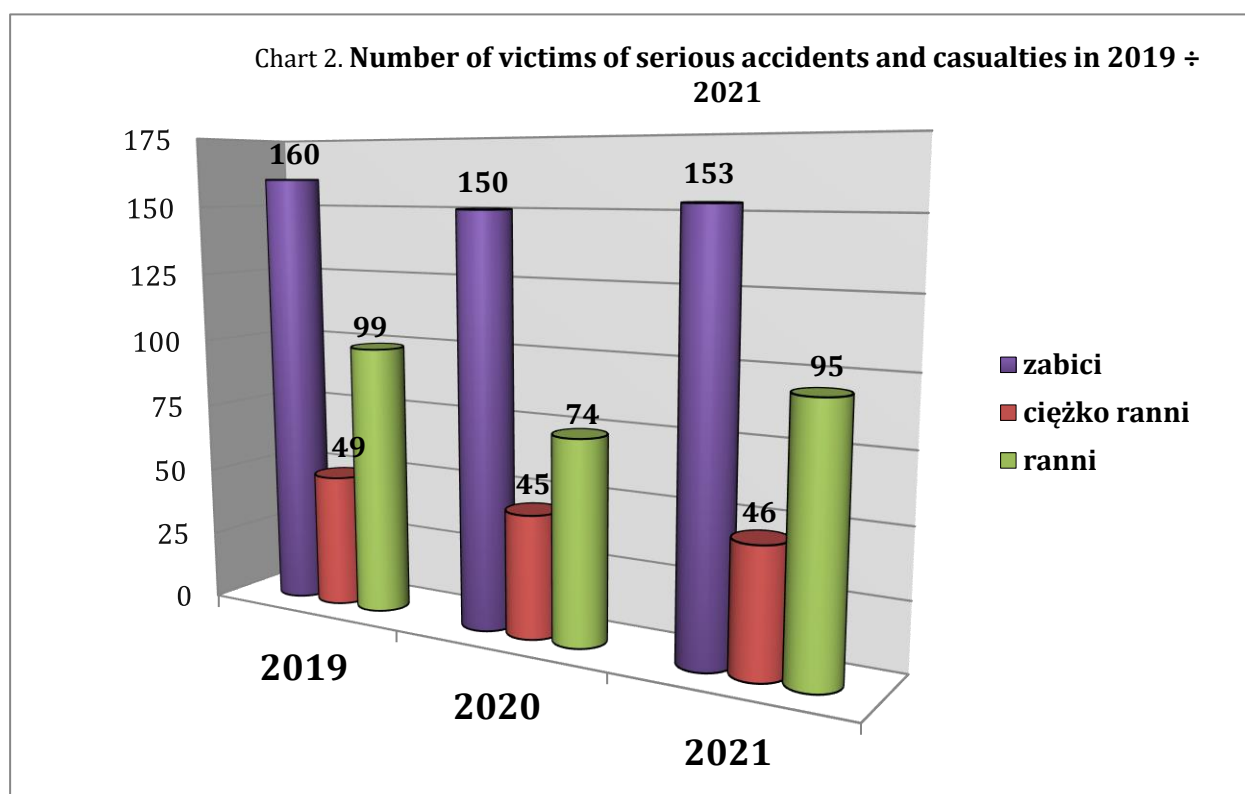
Table 2. Injured incidents in 2021 compared to 2020.

Injured*)	2020	2021	Change 2021/2020
Fatalities	150**)	153**)	+2.0%
Severely injured	45**)	46**)	+2.2%
Injured	74**)	95**)	+28.4%

*) Injured: fatalities, seriously injured and injured (including railway sidings) in accordance with the information provided as at the date of the Report (i.e. up to 19 August 2022), the injured classified in the prosecutor's decisions as suicides or suicide attempts were not included.

**) Statistics (figures): fatalities, seriously injured and injured shown on the basis of *Commission Reports* and *Final Findings Reports* prepared by the railway commissions and submitted to the PKBWK.

The chart below summarises the number of casualties: killed, seriously injured and injured in incidents occurring in 2019, 2020 and 2021 prepared on the basis of the *Commission Reports* and *Final Findings Report* prepared by the railway commissions and submitted to the PKBWK.

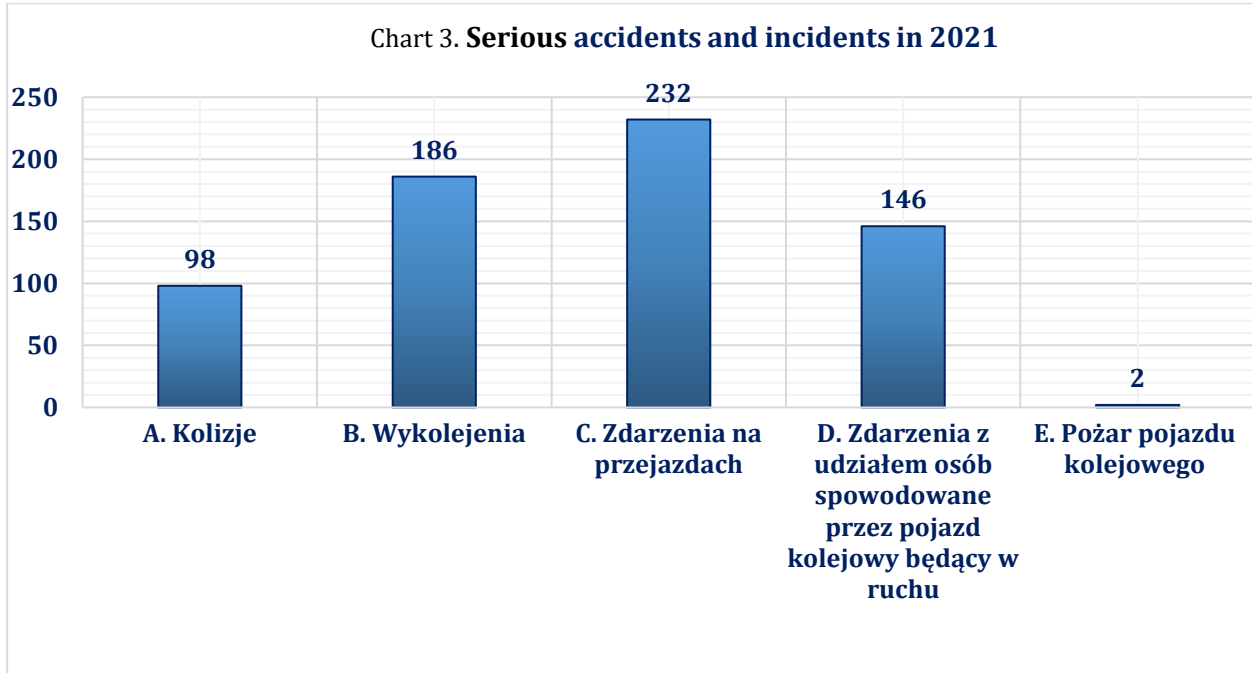


3.2 Breakdown of events notified to the Commission by the entities indicated in Section 28g of the Act

The allocation of incidents occurring in 2021 to the relevant types, made by the PKBWK is shown in the charts below:

a) serious accidents and incidents

- A. Collisions – 98
- B. Derailments – 186
- C. Incidents at level crossings – 232
- D. Incidents involving persons caused by a railway vehicle in motion – 146
- E. Railway vehicle fire – 2.



b) incidents

- A. Events (incidents) related to the **operation and maintenance of the train and railway vehicle** (including: *) categories of incidents: C44 – 137, C45 – 6, C46 – 4, C47 – 4).
Number of incidents in the aforementioned categories: 151
- B. Incidents **with persons involved in the movement of a railway vehicle**, without injury or adverse consequences for property or the environment (i.e. *) incidents category C65 - 28).
- C. Events (incidents) **at level crossings** – failure of a road vehicle to stop in front of a closed barrier (half-barrier) and damage to the barrier or traffic signals (i.e. *) incidents category C66 – 122); malicious, hooligan or reckless mischief, with no casualties or adverse consequences to property or the environment, posing a risk to passengers or train personnel (i.e. *) incidents category C64 – 498).
Number of incidents in the aforementioned categories: 620
- D. Incidents (incidents) involving **damage or poor maintenance of a railway vehicle** and fire (including: *) categories of incidents: C53 – 30, C54 – 226, C55 – 17).
Number of incidents in the aforementioned categories: 273

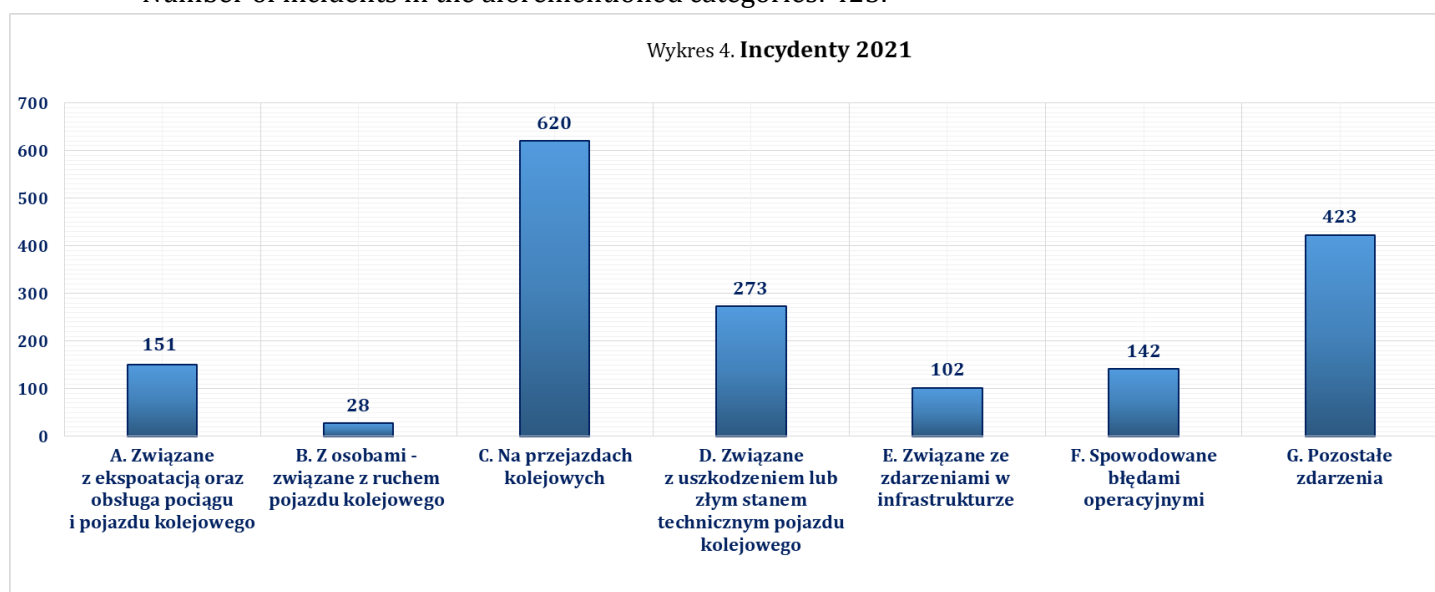
E. Events (incidents) related to incidents **(disruptions) to the infrastructure** (damage, malfunction of equipment, invasion of an obstacle and fire in the facility or near the track, i.e. *) categories of incidents: C51 – 42, C52 – 5, C57 – 1, C60 – 54).

Number of incidents in the aforementioned categories: 102

F. Events (incidents) due to **errors related to the routes** (starting, running, acceptance of a train or a railway vehicle) and train preparation for running (i.e. *) categories of incidents: C41 – 2, C42 – 2, C43 – 96, C48 – 3, C50 – 39). Number of incidents in the aforementioned categories: 142

G. Other events:

uncontrolled release of dangerous goods, natural disasters, malicious, hooligan or reckless misconduct (e.g. train robbery, theft of cargo from a train, etc., breaking up of a train or shunting consist not involving a runaway wagon, and other causes or the superposition of several causes simultaneously (i.e. *) categories of incidents: C59 – 4, C62 – 16, C64 – 87, C68 – 281, C69 - 35). Number of incidents in the aforementioned categories: 423.



*) categories of incidents – designation in accordance with the direct cause qualification contained in the Regulation of the Minister of Infrastructure and Construction of 16 March 2016 on serious accidents, accidents and incidents in rail transport (Journal of Laws 2016, item 369)

3.3 Events for which the Commission has started investigations in 2021.

3.3.1 Serious railway accident occurring on 26 January 2021 at 07:39 a.m. on category D level crossing at the station located on the route Zbąszynek – Lutot Suchy on track no. 1, at 10.196 km of railway line no. 367 Zbąszynek – Gorzów Wielkopolski

- As a result of the incident, the crossing user – the driver of the lorry – suffered a fatality. The train operator’s personnel or the train passengers did not suffer any injuries.
- Mercedes-Benz Atego truck destroyed. The had no load. There was no damage to belongings or luggage carried on the train. Damage to the front of rail vehicle SA139-006.



Photograph 1 – View of the site of the incident (PKBWK own material)

During the travel of a train on the route between Zbąszynek – Gorzów Wielkopolski on the Zbąszynek – Lutot Suchy route, at a crossing not equipped with traffic protection systems and devices, the driver of a lorry with a trailer drove directly in front of a rail bus travelling as a passenger train. The vehicle entered the crossing from the left side of the moving train. This resulted in a collision between a train and a road vehicle. The rail bus hit the right side of the truck cab. Due to the impact and the forces involved, the driver of the lorry fell out of the cab, which resulted in a fatality. The lorry was destroyed and thrown to the left side of the track in such a way that the cab, including the load bed, remained in the track gauge and the trailer blocked the road. The railway vehicle did not derail.

In result of the decision taken by the Chairman of the PKBWK to assign the proceedings to the Investigation Team, taking into account the provisions of Article 28e(4) of the Railway Transport Act, on 12 February 2021 the Commission communicated the assignment of the procedure to the European Union Agency for Railways (“EUAR”) through the “ERAIL” information system and the above event was registered in the ERAIL database under reference number **PL-10018**.

Recommendations made during the course of the investigation for the purpose of improving safety:

- A recommendation has been renewed for the municipal road manager for the missing signs to be completed during the commission’s inspection of visibility conditions at the level crossing cat. D at 10.196 km.
- On 01 September 2021, the chairman of the PKBWK issued a recommendation to permanently restrict the running speed of trains to 60 km/h in both directions for a distance of 550 metres before the level crossing cat. D at 10.196 km due to the difficulty in moving through the level crossing due to the fact that the width of the access road does not match the width of the crossing bridge.

The aforementioned speed limit should remain in force until the road width at the “*access to the level crossing*” has been adjusted to the width of the crossing and hardened over the entire

width (a road section of at least 30 m in length measured along the axis of the road on each side of the level crossing from the end points of the crossing – citation § 3 item 2 of the aforementioned regulation).

The Commission drafted a report no. PKBWK 05/2021 (dated 14 October 2021) in which it made the following recommendations:

- 1) The road manager, the Mayor of Trzciel, shall take measures to immediately remove the irregularities found during diagnostic tests or during inspections at crossings, as stated in the railway infrastructure manager’s findings.
- 2) Railway undertaking POLREGIO sp. z o.o. is going to carry out an inspection in all railway vehicles used in the company aiming to inspect the correctness of functioning of installed front view cameras and will undertake proper actions to ensure the technical fitness of these recorders.
- 3) The manager of the class L municipal road together with the manager of the railway infrastructure shall adjust the access to the level crossing over a length of at least 34 m, to a width of 2 x 2.75 metres (in accordance with the provisions of § 15 section 1 item 5 of the Regulation of the Minister of Transport and Maritime Economy of 2 March 1999 on the technical conditions which must be fulfilled by public roads and their location (i.e. Journal of Laws of 2016, item 124, as amended). The current width of the road meets the requirements set out in §14(3)(1) of the aforementioned Regulation and it is acceptable for the duration of the construction or for the reconstruction of the road.
- 4) The railway infrastructure manager is going to maintain the 60 km/h train speed limit until the width of the access road is adjusted to the width of the level crossing platform.

3.3.2 Railway incident that occurred on 05 February 2021 at 09:37 at Gogolin station track no. 6, 22.400 km of railway line no. 136 Kędzierzyn Koźle – Opole Groszowice

- No persons were injured in result of the incident.
- The incident did not cause damage to rolling stock, infrastructure or the environment.



Photograph 2 – View of the site of the incident (source: PKBWK)

Train no. 844000 on the route between Szczecin Port Centralny – Chałupki operated by the railway undertaking

PKP Cargo S.A. entered Gogolin station at the permissive signal on semaphore Z1/2 on the hardened track of the route, travelling from 2 6. This train moved on an incorrectly prepared route. The incorrectly set switch of turnout no. 42 (not dependent in the journey) was set in the direction of turnout no. 39ab, and later towards non-electrified side track no. 8. instead of towards main auxiliary track no. 6.

Having noticed the improperly prepared route, the train driver started immediate stop and lowered the pantographs. The front end of train no. 844000 came to a stop behind the points of turnout no. 39ab on track no. 8 at 22.455 km.

In result of the decision taken by the Chairman of the PKBWK to assign the proceedings to the Investigation Team, taking into account the provisions of Article 28e(4) of the Railway Transport Act, on 19 February 2021 the Commission communicated the assignment of the procedure to the European Union Agency for Railways ("EUAR") through the "ERAIL" information system and the above event was registered in the ERAIL database under reference number **PL-10022**.

Recommendations made during the course of the investigation for the purpose of improving safety:

On 26 February 2022, the Chairman of the Commission issued an interim recommendation for the Railway Department in Opole to implement the following measures aiming to improve safety in rail transport with respect to Gogolin station:

1. Making a board with active keys on the Gg2 dependent box at the Gogolin station and placing it in a place visible to the operating personnel.
2. Preparation of the consolidated text of the Regulations on Temporary Traffic Management during works on railroad tracks no. 12/2018 on the premises of PKP PLK S.A. Zakład Linii Kolejowych [Railway Facility] in Opole.

The Commission drafted a report no. PKBWK 06/2022 (dated 11 July 2022) in which it made the following recommendations:

- 1) The railway infrastructure manager PKP PLK S.A. shall take measures intended to:
 - a) increase the supervision of the Investment Performance Centre of the construction work contractors as part of ongoing investments.
 - b) improve the quality and depth of technical acceptance of individual stages of works in terms of inspecting the conformity of the design documentation with the condition on the ground.
 - c) the scope of the trainings for the personnel of the stations must include issues related to the operation of trains in the station and adjacent routes during restrictions, telephonic announcement of trains on the routes, telephonic recommendation and notification of the preparation of routes in the station.
- 2) Railway infrastructure manager PKP PLK S.A., within the framework of supervision of executed investments, shall extend the scope of control in the scope of compliance of executed phases with the documentation, in particular during changes between successive transitional phases of investment works related to railway traffic operation and safety.
- 3) After completion of each stage of an investment project containing phases, new temporary train traffic regulations should be drawn up during execution of works on the premises of PKP PLK S.A. Zakład Linii Kolejowych, which will constitute a continuation of the specific investment task.

3.3.3 Railway incident that occurred on 26 February 2021 at 05:32 at Grodzisko Dolne station track no. 2, 163.654 km of railway line no. 68 Lublin – Przeworsk

- Four persons were injured in result of the incident, i.e. the driver of the locomotive running loose and three passengers on the passenger train.
- Material losses have also occurred, i.e. severe damage to locomotives EU160-010 and 6Dg-140 and 3 passenger wagons with numbers: 50512978054-8, 50513978045-4 and 50512978062-1, and the point machine was damaged.



Photograph 3 – View of the site and the results of the incident (PKBWK own material)

Collision of two trains – during the journey of train MPE38100 of the carrier PKP Intercity S.A. led by locomotive EU160-010 to Leżajsk station on the organized way without stopping K1 – C from semaphore K1 to semaphore C on the main line second track in Grodzisko Dolne station, from the main additional track fourth, on the unprepared way, without the required permission, with “stop” signal communicated by semaphore D2, the train LSS335064 entered on track 2 – (sole locomotive 6Dg-140 belonging to the carrier Lotos Kolej Sp. z o.o.). The departing locomotive 6Dg-140 ran through the switch of turnout 6 and entered track two directly in front of passenger train MPE38100 without automatically changing the transmitted signal on semaphore C “proceed” to a “stop” signal due to the type of equipment. After noticing a locomotive in front of the train, the driver of train MPE38100 started to brake suddenly. Regardless, a collision occurred, i.e. the passenger train collided with a goods train travelling on the same track in the same direction.

In result of the decision taken by the Chairman of the PKBWK to assign the proceedings to the Investigation Team, taking into account the provisions of Article 28e(4) of the Railway Transport Act, on 12 March 2021 the Commission communicated the assignment of the procedure to the European Union Agency for Railways (“EUAR”) through the “ERAIL” information system and the above event was registered in the ERAIL database under reference number **PL-10030**.

There was no need to make recommendations to improve safety during the investigation.

The Commission drafted a report no. PKBWK 02/2022 (dated 09 March 2022) in which it made the following recommendations:

- 1) Infrastructure managers shall ensure that traffic officers must keep train drivers informed of the change in traffic organisation at the station when providing them with information to on the need to let trains pass.
- 2) For the purpose of ensuring the visibility of semaphore D at Grodzisko Dolne station PKP PLK S.A., Zakład Linii Kolejowych [Railway Facility] in Rzeszów is going to relocate the overhead line post 163-44 in the area of the GD1 control area.
- 3) Infrastructure managers shall carry out an emergency check of the visibility of semaphore signals during daytime and night-time at stations with overhead contact lines in the main and auxiliary tracks.

- 4) Rail operators shall take measures to improve passenger safety on trains by fitting tables in non-compartment carriages in order to guarantee the safety of passengers.
- 5) The Infrastructure Manager shall implement the recommendation set out in the protocol of diagnostic tests of signalling equipment (Protocol no. IZATA-I/3-22-068/2019 dated 21.06.2021) which reads as follows: *"Provide for the refurbishment of signalling equipment, the replacement of shaped semaphores with luminous semaphores and the installation of Eap interlocking on the adjacent routes to Tryńcza-Leżajsk station."*
- 6) For the purpose of ensuring the safety of train traffic on the routes a¹ b² and a²₃ PKP PLK S.A. Zakład Linii Kolejowych [Railway Facility] in Rzeszów shall restore the technical condition of the infrastructure at Grodzisko Dolne station to match the currently existing technical documentation.
- 7) Railway Undertakings and Infrastructure Managers shall introduce internal regulations regarding the restriction of use of multimedia devices not related to conducting traffic by train crew and operating personnel in working order that hamper the correct reception of transmitted acoustic and voice signals and include this in the programme of periodic instructions.
- 8) Railway undertaking LOTOS Kolej Sp. z o. o. is going to implement the order of the President of the Office of Rail Transport No. DBK-550/R03/KB/12 of 30.05.2012, addressed to railway undertakings regarding the obligation to install dashboard recording equipment – digital cameras or video recorders in newly built railway vehicles as well as those that are already in use in accordance with the recommendation of PKBWK – No. PKBWK-076-305/RL/R/11 of 22.11.2011.

3.3.4 A serious railway accident that occurred on 04 April 2021 at 09:10 on a category D level crossing located at the Oborniki Wielkopolskie – Rogozno Wielkopolskie route, on track no. 1, at km 30.453 of railway line no. 354 Poznań Główny POD – Piła Główna;

- The driver of the road vehicle suffered a fatality due to the accident.
- A Citroen Saxo passenger car was destroyed and the EN57ALc-2207 rail vehicle was damaged.

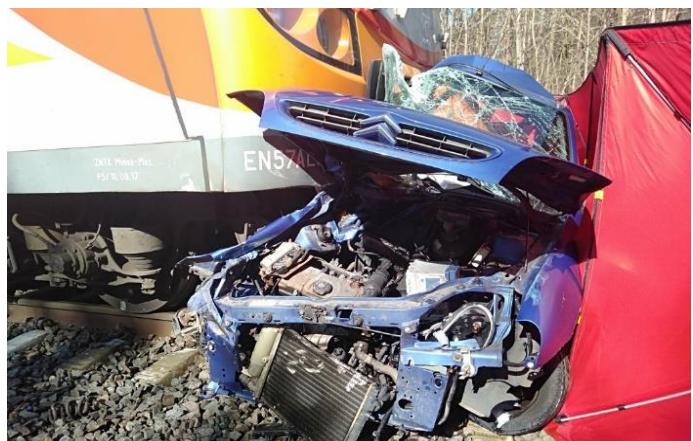


Figure 4 – View of the effects of the incident (source: PKBWK)

During the train journey on the route Poznań Główny – Piła Główna, at level crossing cat. D (not equipped with traffic protection systems and devices), the driver of a road vehicle (Citroen Saxo passenger car) drove directly in front of the electric multiple unit EN57ALc-2207 owned by the railway undertaking POLREGIO sp. z o.o., travelling as passenger train ROJ 78471. The vehicle entered the level crossing from the left side of the moving train. This resulted in a collision between a train and a road vehicle. The railway vehicle hit the right side of a passenger car. The impact

resulted in the car being pushed until the train came to a complete stop. The driver of the road vehicle died at the scene. The railway vehicle did not derail.

In result of the decision taken by the Chairman of the PKBWK to assign the proceedings to the Investigation Team, taking into account the provisions of Article 28e(4) of the Railway Transport Act, on 12 April 2021 the Commission communicated the assignment of the procedure to the European Union Agency for Railways ("EUAR") through the "ERAIL" information system and the above event was registered in the ERAIL database under reference number **PL-10041**.

Recommendations made during the course of the investigation for the purpose of improving safety:

On 13 April 2021, the Chairman of the PKBWK addressed a letter ref. no. PKBWK.4631.4.2.2021 to the Chairman of PKP PLK S.A., issuing the following recommendations regarding the level crossing at 30.453 km of line no. 354 Poznań Główny POD – Piła Główna:

- 1) introduce a train speed limit of $V_{ogr} = 60\text{km/h}$ along the length of section L of the railway line at this specific level crossing in both directions, install W6b signals adequately to this speed and leave the B-20 "stop" signs on the public road. This speed limit should remain in force until the road system has been rebuilt or the level crossing has been upgraded,
- 2) measure the visibility triangles of the train head (with Pc-1 signal) using a powered railway vehicle with members of the Commission's Investigation Team. This measurement, among others, is going to serve as the condition for maintaining or altering the V_{ogr} speed as stipulated in Appendix 3, Part B, item 6 to the Ordinance of the Minister of Infrastructure of 20 October 2015 on the technical conditions to be met by level crossings of railway lines and railway sidings with roads and their location (Journal of Laws of 2015, item 1744, as amended).
- 3) take measures aiming at extraordinary measurement of road and rail traffic in order to calculate the product of traffic, as provided for in item 8 of Appendix 1 to the Regulation specified in item 2.

The Commission drafted a report no. PKBWK 01/2022 (dated 23 February 2022) in which it made the following recommendations:

- 1) In order to ensure safety in the area of the level crossing, the infrastructure manager PKP PLK S.A. shall implement the arrangements for upgrading the category of the crossing resulting from Report no. IZ16KI.505.36.2021 of 20.04.2021.
- 2) Infrastructure managers shall take action on the effectiveness of supervision of the implementation of SMS procedures or internal rules. In the case of changes to railway line parameters regarding an increase in train speed in the area of level crossings, an assessment of the significance of the change should be carried out individually for each rail level crossing.
- 3) Infrastructure managers shall take action to improve the quality and scope of inspections, diagnostic tests and the manner of measuring the visibility triangle at level crossings. The process of measuring visibility triangles must take into account the fact that the visibility of the train's front end situated 5 metres away from the outermost rail must be continuous (not obscured by any objects as the train approaches the level crossing) and must include the signal lanterns of its front end. If this specific condition is not observed, the speed of trains in the area of level crossings must be reduced in accordance with the regulations in force.

3.3.5 Severe railway accident occurred on 15.06.2021 at 10:05 a.m. at category C level crossing at the station Kochanówka Pustków, track no. 1, 313.328 km of railway line no. 25 Łódź Kaliska – Dębica.

- The Citroen Nemo passenger car's movement directly in front of an oncoming WM-15A/PRT-00 motor car resulted in the fatality of the driver.
- The car was completely destroyed, while the WM-15A/PRT-00 No. 02 motor vehicle was damaged on the A-cab side.



Photograph 5. View of the effects of the incident (source: PKBWK)

On 15.06.2021 at 10:05 am in the station Kochanówka Pustków, in the course of the district road Brzeźnica – Krownice Nr 1283R, at the cat. C level crossing with a non-commissioned automatic crossing system (ssp), the driver of a Citroen Nemo passenger car disregarded the B20 “stop” sign and the P-12 stop line and entered the crossing from the right-hand side looking from the direction of the oncoming train ZNS 339009 between Rzeszów Główny – Kochanówka Pustków. This train, as an inspection train, was driven by railway vehicle WM 15A/PRT-00 no. 02. Due to the vehicle's entry on the level crossing, the train collided with the Citroen Nemo, which became caught up under the left bumper of the railway vehicle and was pushed by the train for a distance of 17 metres, to the location where the front of the train stopped. The front of the train stopped at 313.345 km.

In result of the decision taken by the Chairman of the PKBWK to assign the proceedings to the Investigation Team, taking into account the provisions of Article 28e(4) of the Railway Transport Act, on 23 June 2021 the Commission communicated the assignment of the procedure to the European Union Agency for Railways (“EUAR”) through the “ERAIL” information system and the above event was registered in the ERAIL database under reference number **PL-10075**.

Recommendations made during the course of the investigation for the purpose of improving safety:

In the course of the investigation, the Chairman of the PKBWK recommended for the District Road Authority in Dębica to take the following measures to improve rail and road safety with respect to the level crossing:

- 1) labelling the level crossing at 313.328 km of railway line no. 25 at the access roads of district road no. 1283R Brzeźnica – Krownice to the crossing with P-12 and B-20 signs pursuant to the applicable laws.
- 2) introducing a 50 km/h speed limit on road no. 1283R on the accesses to the crossing due to the occurrence of an increased risk of accidents related to excessive speed.
- 3) setting up temporary A-7 signs on the accesses to the crossing with “Stop” signs stating the distance from the location of the B-20 sign until the formal introduction of a speed limit.

The Commission drafted a report no. PKBWK 05/2022 (dated 31 May 2022) in which it made the following recommendations:

- 1) The Infrastructure Managers shall include an obligation in their internal regulations to turn away crossing traffic signals and to cover them in a manner that the signalling chambers are not visible to crossing users when the signals are erected but not yet commissioned.
- 2) Infrastructure managers shall take steps to introduce mechanisms for effective inspection of the correct execution of diagnostic tests for level crossings. In respect of level crossings where road traffic occurs, the obligation to carry out periodic diagnostic tests shall rest with the infrastructure manager.
- 3) It is imperative that dispatchers of special vehicles implement the outstanding recommendations of the PKBWK Reports: - Recommendation No. 3 of Report No. PKBWK/05/2018: “PKP PLK S.A. shall equip modernised auxiliary vehicles undergoing maintenance level P4 and P5 inspections, as well as newly purchased vehicles, with on-board recorders of driving parameters (registering at least the speed, pressure in the main line and brake cylinders, activation of the “attention” signal),” - Recommendation No. 3 of Report No. PKBWK/03/2020: “Recommendations No. 1 and No. 3 of the State Commission on Railway Accident Investigation, indicated in Report No. PKBWK/05/2018 of the investigation of category A18 severe accident occurring on 2 November 2017 at 18:49 at the cat. A level crossing with suspended service, located at 37.119 km of the Śniadowo – Łapy route, plain line no. 1 of the railway line no. 36 Ostrołęka – Łapy, referring to the equipment of auxiliary vehicles with reflective elements improving the side visibility of the vehicle as well as an on-board recorder of driving parameters (registering at least the speed, pressure in the main tube and brake cylinders, activation of the “attention” signal) for special vehicles.”
- 4) The Road Manager is going to introduce the speed limit up to 50 km/h on the road no. 1283R by the accesses to the level crossing due to the occurrence of an increased risk of accidents related to excessive speed (in accordance with the issued recommendation ref. no. PKBWK.4631.5.2.2021 dated 14 July 2021).

3.3.6 A railway accident that occurred on 30 April 2020 at 11:50 at the Świdnica Kraszowice – Jedlina Zdrój route on track no. 1, at 60.885 km of railway line no. 285 Wrocław Główny – Świdnica Przedmieście;

- As a result of the incident, the operator of the rail and road vehicle, an employee of DROMOSTTOR s.c. was seriously injured.
- In addition, a technical and utility wagon was destroyed and a rail welder and a rail-road vehicle were damaged.



Photograph 6 – View of the site and the results of the incident
(material issued by the Police)

During track reconstruction on the Świdnica Kraszowice – Jedlina Zdrój route of railway line no. 285, a rail welding machine type PRSM-4 no. 47, together with a coupled technical and economic wagon no. 000071 (Dolnośląskie Przedsiębiorstwo Napraw Infrastruktury Komunikacyjnej “Dolkom” sp. z o.o. “Dolkom Wrocław” Sp. z o.o.) located on the downhill side of the track, this set ran off and collided with a rail-road vehicle type ATLAS 1604 ZW, serial number 168Z301813, standing on the same track.

As a result of the convergence of the rail welder with the wagon, this train of machinery moved uncontrollably and crossed three level crossings before striking an Atlas-type two-way vehicle standing on this track at km 60.885 and pushing it a distance of approximately 60 m. This machine was immobilised as a result of the crash. On the Atlas excavator, there was an operator on the outside of the engine housing with the engine compartment hatch raised, trying to locate the fault.

In result of the decision taken by the Chairman of the PKBWK on 14 July 2021 to assign the proceedings to the Investigation Team, taking into account the provisions of Article 28e(4) of the Railway Transport Act, on 16 July 2021 the Commission communicated the assignment of the procedure to the European Union Agency for Railways (“EUAR”) through the “ERAIL” information system and the above event was registered in the ERAIL database under reference number **PL-10093**.

There was no need to make recommendations to improve safety during the investigation as the railway commission made recommendations on 29 December 2020 to Dolkom Ltd. stating:

- 1) During the daily briefings before commencing work, the Heads of units shall remind subordinate employees of their obligations towards the Employer in accordance with the provisions contained in the DOLKOM Company's Work Regulations and Article 211 of the Labour Code, the consequences of non-compliance with the provisions of the Employment Contract and the aforementioned regulations.
- 2) Prior to commencing work on a given day on a designated site, the main contractor's coordinator shall agree with the subcontractors' work managers, the scope of work stating the location of the machinery work, the subcontractor is to notify the main contractor's coordinator.
- 3) Discuss the incident during the next periodic briefing at the DOLKOM Company.

The Commission drafted a report no. PKBWK 03/2022 (dated 26 April 2022) in which it made the following recommendations:

- 1) Dispatchers of special vehicles shall implement recommendation no. 4 of Report PKBWK/03/2020 relating to the equipping of special vehicles with an on-board recorder for driving parameters and will additionally take measures to retrofit these vehicles with foreground and operating image recorders.
- 2) Authorised infrastructure managers shall develop rules for carrying out works on the railway line gradient using special self-propelled vehicles in combination with other non-propelled railway vehicles, which companies carrying out repair and maintenance work will be obliged to apply and will provide mechanisms for supervising the application of this procedure.
- 3) Undertakings carrying out repair and maintenance works on railway infrastructure organised in a long-term manner that does not allow direct contact with employees, shall implement a system of control regarding work discipline and compliance with regulations and instructions, in particular the running of traffic, the execution of work and the psycho-physical condition of employees.
- 4) Infrastructure managers:
 - a) not having adequate provisions for the operation of machinery and equipment running on the same track at the same time in different locations shall develop the provisions for communicating in such situations and implement the provisions,
 - b) those who already have such regulations shall carry out training sessions for reminding the employees of the applicable rules.
- 5) When drawing up the contract specifications in connection with planned investment/upgrading works, the authorised Infrastructure Managers shall take into account the recommendations made in relation to:
 - a) equipping track-mounted self-propelled rail welding machines with driving and working image recorders,
 - b) equipping employees with radio communication devices.

3.3.7 A serious railway accident occurring on 29 July 2021 at 06:15 a.m. on category C level crossing at the Szczecin Gumieńce - Tantow route on track no. 1 at 7.585 km of the railway route no. 409 Szczecin Gumieńce - State Border (Tantow)

- Nine persons were injured (the train driver, the driver of the road vehicle and seven passengers on the train). The passengers were released home after being treated at the scene. The train driver and the driver of the road vehicle were taken to hospital where they were released home after a medical examination.
- In result of heavy goods vehicle entering directly in front of an oncoming train, the train collided with the semi-trailer loaded with gravel and derailed the first multiple unit type VT646-030. The semi-trailer of the road vehicle was destroyed.



Photograph 7 – Consequences of the Incident (PKBWK own material)

During the journey of passenger train RMM 80681/5801 of railway undertaking DB Regio AG (consisting of three three-sectional diesel multiple units, type VT646) on the route Szczecin Główny – Berlin Gesundbrunnen, on the railway crossing cat. C at 7.585 kilometre of railway line no. 409 Szczecin Gumieńce – State border (Tantow), a road vehicle loaded with gravel drove directly in front of the train. The road vehicle entered the crossing from the right-hand side looking in the train travel direction. The train came into contact with the left side of the semi-trailer of the road vehicle. The first three-sectional diesel multiple unit derailed as a consequence of the impact. The road vehicle was thrown to the left side of the track in such a manner that the cab rotated 90 degrees to the direction of travel of the vehicle, while the chassis of the semi-trailer found itself under the first section of the VT646 multiple unit. The remaining part of the train, i.e. two VT646 three-sectional diesel multiple units have not derailed.

In result of the decision taken by the Chairman of the PKBWK to assign the proceedings to the Investigation Team, taking into account the provisions of Article 28e(4) of the Railway Transport Act, on 11 August 2021 the Commission communicated the assignment of the procedure to the European Union Agency for Railways (“EUAR”) through the “ERAIL” information system and the above event was registered in the ERAIL database under reference number **PL-10106**.

Recommendations made during the course of the investigation for the purpose of improving safety:

The Deputy Chairman of the PKBWK on 25.01.2022 issued a recommendation to introduce a permanent speed limit in front of a railway-road crossing for trains moving in both directions to 60 km/h on the entire section L, referred to in part B of appendix no. 3 of the *Regulation of the Minister of Infrastructure and Development of 20 October 2015 on technical conditions to be met by junctions of rail lines and railway sidings with roads and their location* (Journal of Laws of 2015 item 1744 as amended) and to set indicators W6b in accordance with the speed.

The aforementioned speed limit should remain in force until the road width at the “access to the level crossing” has been adjusted to the width of the crossing and hardened over the entire width

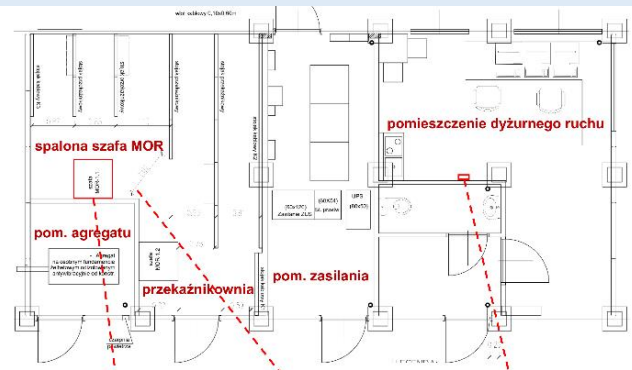
(a road section of at least 30 m in length measured along the axis of the road on each side of the level crossing from the end points of the crossing – citation § 3 item 2 of the aforementioned regulation).

The Commission drafted a report no. PKBWK 04/2022 (dated 11 May 2022) in which it made the following recommendations:

- 1) The mayor of the Kołbaskowo municipality shall implement measures to eliminate the current connection between the district road no. 3492Z and the access to the gravel pit by constructing a road in accordance with construction project No. P-872/2017 “Construction of a municipal road to service and production investment areas within the area of Barnisław,” approved by the Starost of Police.
- 2) Until the current connection of the district road no. 3492Z with the access to the gravel pit is removed, the administrator of the district road shall develop and introduce a new traffic organisation in the area of the access to the railway crossing guaranteeing the improvement of traffic safety.
- 3) The infrastructure manager PKP PLK S.A. will undertake actions aimed at increasing the category of this crossing in order to improve safety in the area of the railway crossing at 7.585 km.
- 4) Infrastructure managers shall take measures to put in place mechanisms to implement conclusions and recommendations from diagnostic checks at railway crossings.

Caution: In the case of incident of C57 category occurring on 16 October 2019 at 13:54 a.m. at Leszczyny station, at signal box “Lsz” at 31.738 km of railway line no. 140 Katowice Ligota – Nędza – continuation of proceedings undertaken in 2020.

- Fire in the MOR-1 system computer cabinet in the relay control room of the Leszczyny station Lsz control room.



Photograph 7 – Sketch of the layout of the rooms and certain equipment in the Lsz control room 1

The Commission published interim report no. PKBWK 02/T/2022 from the procedure (dated 13 May 2022). Due to the lack of relevance of the failure code and therefore the contributing factor to the fire, the final version of the Report has not been published. The determination of the meaning of the code lies with the person who installed the device in cooperation with the device manufacturer from the USA.

4. Analysis of incidents reported to PKBWK in 2021

Increase in the total number of incidents

In 2021, the total number of incidents reported to the Commission by infrastructure managers and users of railway sidings relevant to the location of the incident increased by 36.8% z compared to 2020, out of which:

- 3 serious accidents occurred, investigated by the Commission (in 2020, there were 6 serious railway accidents), i.e. categories*) A20 – 1 and A21 – 2,
- the number of accidents increased by 31.7% (from 502 occurring in 2020 to 661 in 2021),
- the number of incidents increased by 39.2 % (from 1,249 incidents in 2020 to 1,739 in 2021).

The analysis of incidents reported to the PKBWK in 2021 shows a large number of occurring railway incidents – on railway sidings – i.e. 180 (out of which 149 were classified as railway accidents and 31 as railway incidents (in 2020, respectively, a total of 141 railway incidents occurred: of which 110 were classified as railway accidents and 31 as railway incidents).

Accidents

An increase in the number of accidents in 22 categories*) (out of 40 total category B incidents).

Number of incidents occurring in specific categories*): B00 – 29; B02 – 1; B03 – 29; B04 – 33; B06 – 1; B07 – 1; B08 – 10; B09 – 58; B10 – 5; B11 – 16; B12 – 2; B13 – 55; B18 – 6; B19 – 19; B20 – 34; B21 – 150; B23 – 10; B24 – 2; B28 – 2; B32 – 7; B33 – 11; B35 – 9.

A slight decrease in the number of accidents compared to the previous year in 5 categories *) , i.e.: B15 – 20; B16 – 1; B17 – 8; B22 – 1; B30 – 2.

The largest increases in serious accidents and incidents occurred in the following categories:

A21+ B21 – an increase of 48 – incidents occurring at level crossings cat. D, in 2020 1+103 events occurred, while in 2021 – 2+150;

B09 – an increase by 25 – damage to or poor maintenance of a structure, e.g. pavement, bridge or viaduct, including improper execution of works, e.g. improper unloading of materials, pavement, leaving materials and equipment (including road machinery) on the track or in the gauge of a railway vehicle, or invading elements of the structure by a railway vehicle – 33 occurred in 2020 while in 2021 – 58 incidents;

B13 – an increase of 20 – a railway vehicle running into a railway vehicle or other obstacle (e.g. brake skid, luggage trolley, postal trolley) – 35 occurred in 2020 while in 2021 – 55 incidents;

B04 – an increase of 19 – failure of a railway vehicle to stop before a “Stop” signal or where it should stop, or starting a railway vehicle without the required authorisation – 14 occurred in 2020 while in 2021 – 33 incidents;

A20+ B20 – an increase of 7 – incidents occurring at level crossings cat. C in 2020 2+25 events occurred, while in 2021 – 1+33 events;

A19+B19 – an increase of 6 – incidents at level crossings cat. B, and in 2020 there were – 1 + 12 events and in 2021 – 0 + 19 events.

Incidents

*) categories of incidents – designation in accordance with the direct cause qualification contained in the Regulation of the Minister of Infrastructure and Construction of 16 March 2016 on serious accidents, accidents and incidents in rail transport (Journal of Laws 2016, item 369)

In comparison to the previous year, there was a **significant increase** in the number of reported incidents in 2021, i.e. by 39.2% – i.e. 490 (there were 1,739 incidents in 2021 and 1,249 incidents in 2020).

There was an increase in the number of incidents in 17 categories**) (out of 27 total category C incidents), i.e. C42 – 2; C43 – 96; C44 – 137; C46 – 4; C50 – 39; C51 – 42; C52 – 5; C53 – 30; C54 – 226; C55 – 17; C59 – 4; C60 – 54; C64 – 585; C65 – 28; C66 – 122; C68 – 281; C69 – 35.

There was a decrease in the number of incidents in only three categories after 1 incident, that is C47 – 5 occurring in 2020 to C47 – 4 in 2021, and C61 – 0; C63 – 0.

The largest increase in incidents occurred in the following categories:

- **C64** – from 356 occurrences in 2020 increasing to 585 occurrences in 2021 (+229) – malicious, hooligan or reckless misconduct (e.g. throwing stones at a train, stealing cargo from a moving train or marshalling yard, placing an obstacle on the track, vandalising power, communication, traffic control or surface equipment and interfering with such equipment) without victims or negative consequences for property or the environment, posing a risk to passengers or train personnel; mainly the remaining of motor vehicles between closed barriers, in situations where a category B crossing was equipped with a barrier closing the exit from the level crossing;
- **C68** – from 221 occurring in 2020, an increase to 281 in 2021 (+ 60) – train or shunting consist that did not result in collision of wagons;
- **C44** – from 86 occurring in 2020, an increase to 137 in 2021 (+ 51) – railway vehicle not stopping before a “Stop” signal or where it should stop, or a railway vehicle starting without the required authorisation;
- **C54** – from 191 occurring in 2020, an increase to 226 in 2021 (+ 35) – damage or poor technical condition of a wagon requiring excluding it from service due to the fact that the detection equipment indicated a failure of the rolling stock, further confirmed under workshop conditions (hot axle boxes, hot brake resulting in a displaced rim), as well as other defects in rolling stock in service noticed by operating personnel;
- **C43** – from 68 occurring in 2020, an increase to 96 in 2021 (+ 28) – railway vehicle’s departure, acceptance or running along an improperly laid, unsecured route, or improper operation or failure to operate traffic control equipment;
- **C69** – other causes or overlap of several causes – from 13 incidents in 2020, increasing to 35 in 2021 (+ 22).

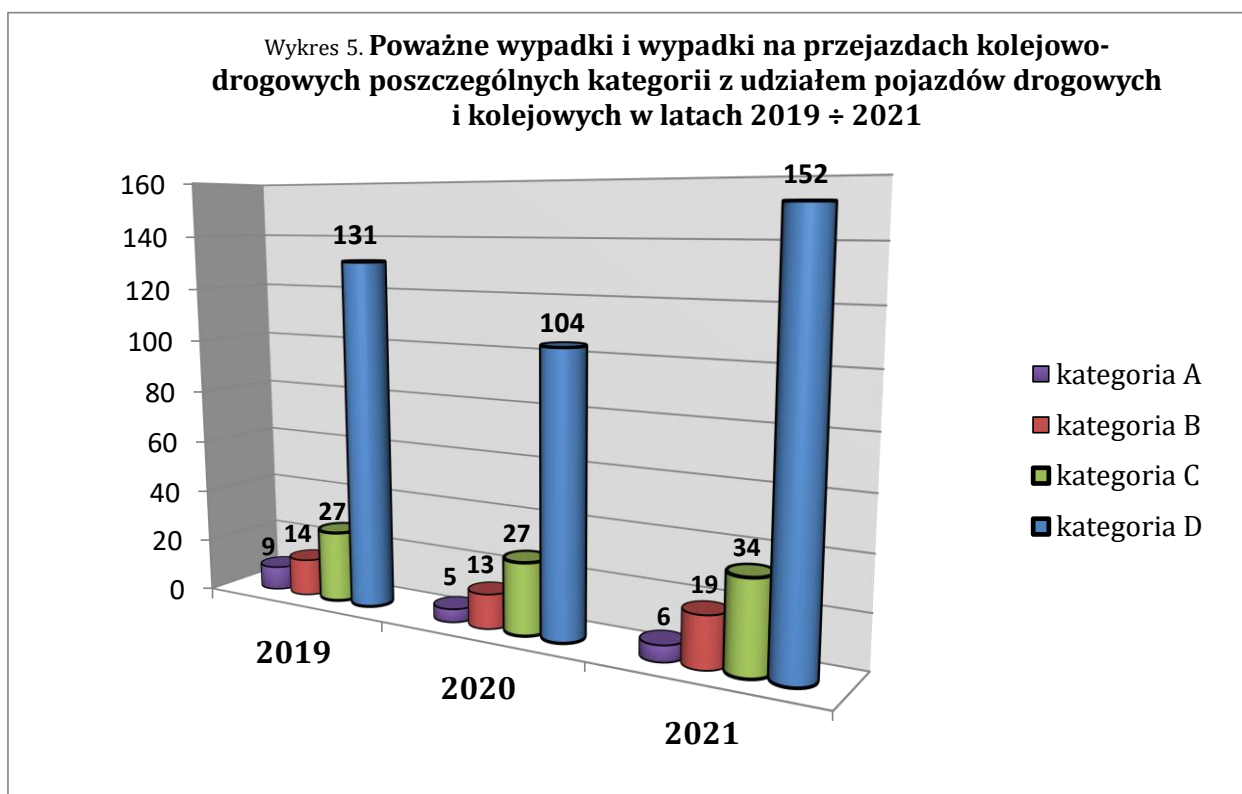
*) categories of incidents – designation in accordance with the direct cause qualification contained in the Regulation of the Minister of Infrastructure and Construction of 16 March 2016 on serious accidents, accidents and incidents in rail transport (Journal of Laws 2016, item 369)

Incidents at level crossings

In 2021, compared to 2020, there has been a **significant increase in the** total number of accidents at category A, B, C, D level crossings by **39.6%**, including:

- at category A level crossings an increase by 1 accident,
- at category B level crossings an increase by 6 accidents,
- at category C level crossings an increase by 7 accidents,
- at category D level crossings, an increase by 48 accidents (including users of railway sidings).

A comparative summary of serious accidents and accidents at level crossings involving road and rail vehicles in 2019 ÷ 2021 are shown in the graph below.



The main causes of incidents at level crossings continue to be, in particular:

- failure to comply with the prohibition of entering a crossing beyond a traffic signal transmitting a “red alternating flashing signal,” or two alternating flashing signals,
- failure to stop in front of a “Stop” sign and failure by drivers of road vehicles to exercise due care,
- passing under closing barriers,
- bypassing half-barriers,
- lack of the required visibility triangle,

- failure to take special precautions in front of a level crossing with closed barriers and fully operational traffic lights, and the failure of the passenger car driver to react to the audible “Attention” signal given by the train driver,
- blocking the level crossing by driving onto the tracks without the possibility to exit,
- failure to adjust speed to the prevailing road conditions,
- failure to observe signs and other traffic signals,
- inappropriate behaviour when the car is immobilised on the tracks,
- failure of the driver of a road vehicle to respond to the “Attention” signals given by the train driver when crossing a level crossing and consequently driving into the crossing directly under the oncoming train,
- failing to stop a road vehicle in front of a traffic signal with the traffic lights prohibiting vehicles from entering the crossing and the audible signal activated and passing directly in front of an oncoming train at a properly secured and signalised category C crossing,
- driving a road vehicle onto a level crossing, despite the warning on the traffic signals being switched on – driver failing to exercise caution and locking (closing) the car at a category B crossing,
- failing to stop a road vehicle in front of traffic signals despite not being able to continue due to traffic congestion and getting stuck at a level crossing after the barriers were closed,
- failure of a vehicle to stop in front of a traffic signal prohibiting entry to a level crossing, failure of a road vehicle to stop in front of a level crossing in spite of signals given on the traffic signals to warn of an oncoming train and the start of the closing of the barriers.

PKBWK’s railway incident records show that there have been 50 railway incidents involving a road vehicle running into the side of a railway vehicle on a train.

In 2021, there was a significant increase in rail incidents at all categories of level crossings compared to 2020 (i.e. from 149 incidents in 2020, an increase to 211 incidents in 2021).

Category A level crossings recorded 1 more accident in 2021 compared to 2020. The main causes of these accidents include:

- passenger vehicle’s entry onto a closed barrier at a level crossing, damaging it and driving a passenger car into a passing train,
- the crossing keeper’s failure to keep of the post, violation of the regulations for the operation of the crossing (failure to use the emergency switch to close the crossing),
- starting to close the barriers too late for the train to pass,
- failure of the driver of a road vehicle to comply with road signs and the road vehicle driving into the side of a passing train,

- the crossing of a category A level crossing by a road vehicle with open barriers while the crossing guard is not operating the barrier equipment.

At category B level crossings a **mass phenomenon occurs in the form of** road vehicles **entering** these crossings (when the barriers close) and later getting stuck between the barriers. An analysis of the *Final Findings Reports* submitted by the railway commissions shows that over **620** accidents (incidents) at level crossings were registered in 2021, i.e. failure of a road vehicle to stop in front of a closed barrier (half-barrier) and damage to the barrier or traffic signals (i.e. incidents of category C66 – 122); and malicious, hooligan or reckless mischief, with no casualties or adverse consequences to property or the environment, posing a risk to passengers or train personnel – road vehicles being stuck between barriers (i.e. incidents of category C64 – 498). In 2021, there was a significant increase in category C64 incidents (from 356 in 2020 to 585 in 2021) and category C66 incidents (from 89 incidents in 2020 to 122 in 2021). It should be mentioned that these incidents occurred without a collision with a railway vehicle, as the vehicles were outside the railway vehicle gauge.

The increase in such incidents is indicative of the reckless behaviour of road vehicle drivers or their lack of caution when crossing level crossings.

The circumstances and causes of incidents should be thoroughly investigated by railway committees and railway infrastructure managers and appropriate measures should be introduced to prevent future incidents.

In 2021, there was 1 serious accident and 33 accidents at category C level crossings, while in 2020 – 2 serious accidents and 25 accidents, an increase of 25.9% in accidents occurring in 2021 (+7) at category C level crossings.

There has been a worryingly large increase in incidents on Category D level crossings. Drivers driving road vehicles have a significant impact on the number and occurrence of these incidents.

In 2021, there were 2 serious accidents and 150 accidents at category D level crossings, while in 2020 – 1 serious accident and 103 accidents, an increase of 46.2% in accidents occurring in 2021 (+48) at category D level crossings.

A total of 211 railway accidents and serious railway accidents occurred at level crossings in 2021 – representing 32.5% of the total number of accidents occurring in 2021 (661+3).

There were 31 fatalities and 16 serious injuries in incidents (serious accidents and casualties) at level crossings in 2021, while at level crossings and level crossings involving persons, i.e. a total at cat. B18, B19, B20, B21 and B31, B32 and B33 there were 49 people killed and 18 seriously injured.

Safety is improved by the implementation and improvement of additional labelling (developed by the manager PKP PLK S.A.) of level crossings/rail level crossings **with stickers with an individual identification number and an emergency telephone number implemented by railway**

infrastructure managers – the so-called “Yellow Sticker” project. Additional signage allows a road user involved in or witnessing an accident or incident to quickly contact the emergency services.

In the event of an accident or incident at a crossing, after dialling 112 (in the event of an accident or threat of an accident) or an emergency number (in the event of an emergency) the caller provides the individual identification number of the crossing. With the information provided, the 112 operator or railway employee is able to exactly pinpoint the location of the crossing, which reduces the response time of the services in the event of an emergency.

The effectiveness of the implementation of this project depends on communicating the “yellow sticker” to as many users of level crossings and pedestrian crossings as possible.

Pursuant to the information provided by PKP Polskie Linie Kolejowe S.A.:

In 2021, a total of 7,107 calls were recorded through the Yellow Sticker programme. Due to the emergency call to 112, the following actions were taken:

- a reduction in the speed of trains was introduced to ensure the safety of passengers and those using level crossings in 458 cases; (from 01.01. to 30.06.2022 – 271 cases);
- train operations on railway lines were suspended in 160 cases; (from 01.01. to 30.06.2022 – 101 cases).

Considering the significant increase in accidents and incidents at level crossings, the implementation of projects for monitoring and incident analysis systems aiming to improve safety at category D crossings, including identifying compliance with current traffic regulations, must be accelerated.

In addition, the use of a radio-stop “Alarm” signal has been reported to avoid rail incidents in 2021.

In total, in 2021, PKP PLK S.A. recorded **706** uses of the “Alarm” signal, out of which 642 classify as unjustified uses.

In relation to 2020, the number of instances of use of the “Alarm” signal in 2021 increased by 2.2% (from 691 to 706 instances), mainly due to an increase in the number of legitimate signal instances, which increased by 28% (up from 50 in 2020 to 64 instances in 2021).

The “Alarm” signal was used by employees working in the positions specified below:

- the driver – in 31 cases deemed justified and 100 cases deemed unjustified,
- train dispatcher – in 27 cases deemed justified and in 17 cases deemed unjustified,
- crossing keeper – in 6 cases deemed justified and in 2 cases deemed unjustified,

Throughout 2021, out of a total of 706 uses of the “Alarm” signal, 460 cases were found where the sender was not identified, accounting for more than 65.2 per cent of these calls, with a 6.1 per cent decrease in 2021 compared to 2020 (i.e. from 488 in 2020 to 460 in 2021) unjustified uses of the

“Alarm” signal were observed in the greatest number among the professional group of train drivers – i.e. 100 cases.

Injured in accidents

In 2021, compared to 2020 the number of fatalities in rail incidents increased by 2.0 per cent, while the number of serious injuries increased by 2.2 per cent (Table 2). Among the injured (killed and seriously injured), the vast majority include: persons crossing the tracks in prohibited places or at level crossings, people hit by railway vehicles, people jumping in and out of moving railway vehicles and users of level crossings. The number of injured has significantly increased from 74 incidents in 2020 to 95 in 2021.

Table 3. Persons injured in events occurring in 2021.

Category of victims of incidents occurring in 2021.	Fatalities	Severely injured	Injured
a) passengers	1	1	18
b) employees including persons employed by subcontractors	2	1	8
c) users of level crossings or road crossings	49	18	14
d) persons not authorised to remain on the railway area	101	25	46
e) others	-	1	9
Total	153	46	95

5. Recommendations on safety improvements made by the Commission in its reports annual reports up to 2021 pursuant to Article 28l section 6 of the Railway Transport Act of 28 March 2003

5.1 Recommendations issued in 2021 and published in September 2021 in the PKBWK 2020 Annual Report

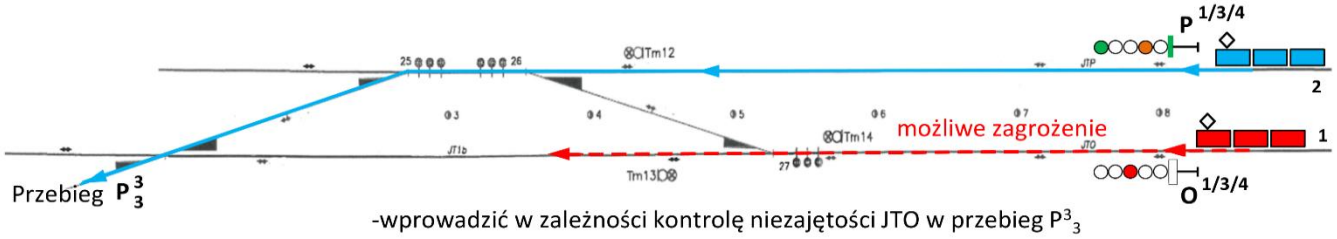
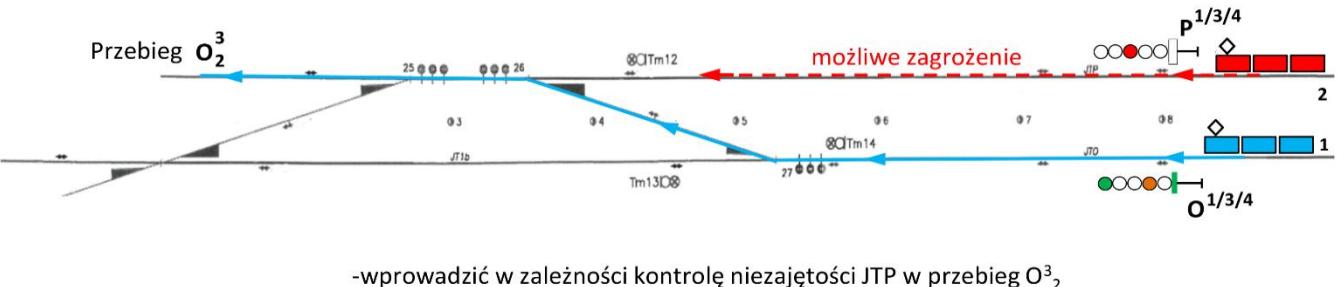
Pursuant to Article 28l section 6 of the Railway Transport Act, the Commission issued the following recommendations on safety improvements in 2021.

From the **“Information on the implementation of the recommendations of the PKBWK for the year 2021”** (provided by UTK letter ref. no.: DPN-WDZK.47.20.2022.1.KG of 29 April 2022), it appears that the President of UTK, by a letter from UTK ref. no.: DPN-WDZK.47.31.2021.2.KG dated 03 November 2021 – forwarded the revised recommendations to the railway market operators and **analysed the information on their implementation.**

The contents of the recommendations amended as to their content by the Commission and forwarded to the rail market operators by the President of UTK is contained in the following summary of the **“Recommendations issued in 2021 by the PKBWK in the 2020 Annual Report.”**

Recommendations made in 2021 by PKBWK in the 2020 Annual Report	
Contents of the recommendations made by the PKBWK in the 2020 Annual Report	The content of the Commission's recommendations as amended by the President of UTK and forwarded for implementation to: certified railway undertakings, authorised infrastructure managers, users of railway sidings, operators of narrow gauge railways and managers of railway networks that are functionally separate from the Union railway system and intended only for provincial or local transport (operating on the basis of safety certificates).
<p>1) The Rail Infrastructure Managers shall implement the recommendation 2 of the 2018 Annual Report (repeating the recommendation made in 2019 and published in the 2018 Annual Report) which reads:</p> <p>"Infrastructure managers shall eliminate exit barriers for automatic crossing systems at category B level crossings for solutions with four half-barriers and, where justified by local conditions, shall notify the road manager of the need to protect the access to a category B level crossing against the possibility of road vehicle access by a lane allowing the closed barrier to be bypassed, in particular through the use of separation strips or separators.</p> <p>The current condition does not comply with the provisions of Appendix 4, item 6.2 of the Regulation of the Minister of Infrastructure of 3 July 2003 on detailed technical conditions for road signs and signals and road traffic safety devices and their placement conditions on the roads (consolidated text: Journal of Laws of 2019, item 2311), which states as follows: "<i>U-13a and U-13b full-width barriers shall be used on category A level crossings, while U-13c half-barriers shall be used on category B crossings. The half-barriers shall be placed so that the right half of the roadway is closed on each side of the crossing (also when half-barriers are used on one-way carriageways).</i>"</p>	<p>Annual Report 2020_1 Authorised Rail Infrastructure Managers, Rail Siding Users and WKD shall implement recommendation 2 of the 2018 Annual Report (repeating the recommendation made in 2019 and published in the 2018 Annual Report) which reads:</p> <p>"Infrastructure managers shall eliminate exit barriers for automatic crossing systems at category B level crossings for solutions with four semi-crossings and, where justified by local conditions, shall notify the road manager of the need to protect the access to a category B level crossing against the possibility of road vehicle access by a lane allowing the closed barrier to be bypassed, in particular through the use of separation strips or separators.</p> <p>The current condition does not comply with the provisions of Appendix 4, item 6.2 of the Regulation of the Minister of Infrastructure of 3 July 2003 on detailed technical conditions for road signs and signals and road traffic safety devices and their placement conditions on the roads (consolidated text: Journal of Laws of 2019, item 2311, as amended), which states as follows: "U-13a and U-13b full-width barriers shall be used on category A level crossings, while U-13c half-barriers shall be used on category B crossings. The half-barriers shall be placed so that the right half of the roadway is closed on each side of the crossing (also when half-barriers are used on one-way carriageways)."</p>
<p>2) The railway infrastructure manager PKP Polskie Linie Kolejowe S.A. as well as the other railway infrastructure managers shall implement recommendation No. 9 from Report No. PKBWK/02/2018 which reads:</p> <p>"PKP PLK S.A., and the other railway infrastructure managers, shall inspect level crossings for the correct road gradient in relation to the platform at level</p>	<p>Annual Report 2020_2 Authorised railway infrastructure managers, users of railway sidings, narrow gauge railways and WKD shall implement Recommendation No. 9 of Report No. PKBWK/02/2018, which reads as follows:</p> <p>"PKP Polskie Linie Kolejowe S.A., and the other railway infrastructure managers, shall inspect level crossings for the correct road gradient in relation to the</p>

<p>crossings, and if unevenness is found at level crossings, will request the road manager to erect A-11 “uneven road” signs.”</p>	<p>platform at level crossings, and if unevenness is found at level crossings, will request the road manager to erect A-11 “uneven road” signs.”</p>
<p>3) Railway (freight) operators and those responsible for organising freight transport and those responsible for loading, unloading and securing cargo or other loading activities will result in increased supervision of the preparation and putting of wagons (railway vehicles) into service, with a consequent reduction in the number of category C50 incidents.</p>	<p>Annual Report 2020_3 Certified rail (freight) operators shall increase supervision of the preparation and integration of wagons (railway vehicles) into traffic, with a consequent reduction in the number of category C50 incidents, and shall communicate the recommendation for use to those responsible for organising freight transport and those responsible for loading, unloading and securing cargo or other loading operations and apply effective mechanisms to control the implementation of this recommendation within their safety management systems.</p>
<p>4) Railway Infrastructure Managers shall take appropriate measures to minimise the number of category B15 accidents – premature dissolution of the route or reversal of the closure and the passing of the switch under the railway vehicle.</p>	<p>Annual Report 2020_4 Authorised railway infrastructure managers and users of railway sidings will take appropriate measures to avoid or minimise the number of accidents of category B15 - premature dissolution of the route or override of a closure and switch under the railway vehicle.</p>
<p>5) Railway Undertakings shall implement appropriate measures to further reduce the number of category C44 and B04 incidents involving the failure of a railway vehicle to stop before a “Stop” signal or where it should have stopped, or the starting of a railway vehicle without the required authorisation.</p>	<p>Annual Report 2020_5 Certified Railway Undertakings shall implement appropriate measures to further reduce the number of category C44 and B04 incidents involving the failure of a railway vehicle to stop before a “Stop” signal or where it should have stopped, or the starting of a railway vehicle without the required authorisation.</p>
<p>6) To increase traffic safety in the signalling circle in case of simultaneous movement of trains on the tracks in the same direction – of the same station and when a train (red) with the signal “stop” given on the home signal fails to stop to cause a previous change of the permissive picture to the “stop” signal for a train (blue) approaching the adjacent track to the home signal with the transmitted signal “proceed”;</p> <p>For signalling control systems equipped with unoccupied track section control behind the entrance semaphores from multi-track routes, and which are part of their mutually conflicting paths, introduce their relationship as in the examples shown in the following figures:</p>	<p>Annual Report 2020_6 Authorised managers of railway infrastructure, in order to increase traffic safety in the signalling circle in case of simultaneous train movement on the main line in the same direction – same station and failure to stop a train (red) with the signal “stop” given on the home signal to cause an earlier change of the enabling image to the “stop” signal for a train (blue) approaching the adjacent track to the home signal with the transmitted signal “proceed,” shall introduce: in control-command and signalling systems equipped with unoccupied track section control, the relation as shown in the examples in the following figures, which are in the running order behind the entrance semaphores from multi-track routes and which are part of their mutually conflicting routes:</p>

 <p>-wprowadzić w zależności kontrolę niezajętości JTO w przebieg P₃³</p>	 <p>-wprowadzić w zależności kontrolę niezajętości JTP w przebieg O₂³</p>
<p>7) Rail Infrastructure Managers shall identify level crossings where the angle of the crossing of the railway line with the road does not meet the condition set out in § 26 section 2 of the Regulation of the Minister of Infrastructure and Development of 20 October 2015 on the technical conditions to be met by the crossings of railway lines and railway sidings with roads and their location (Journal of Laws, item 1744 as amended), assess the risk of incidents occurring at these crossings and take appropriate preventive action in accordance with their safety management systems.</p>	<p>Annual report for 2020_7 Rail Infrastructure Managers shall identify level crossings where the angle of the crossing of the railway line with the road does not meet the condition set out in § 26 section 2 of the Regulation of the Minister of Infrastructure and Development of 20 October 2015 on the technical conditions to be met by the crossings of railway lines and railway sidings with roads and their location (Journal of Laws, item 1744 as amended), assess the risk of incidents occurring at these crossings and take appropriate preventive action in accordance with their safety management systems.</p>
<p>In accordance with Article 28l section 8 of the Act of 28 March 2003 on Railway Transport (i.e. Journal of Laws of 2020, item 1043, as amended), the above recommendations were addressed to the President of the Railway Transport Office.</p>	

5.2 Recommendations made in 2022 by the Commission in the 2021 Annual Report

Pursuant to Article 28l section 6 of the Railway Transport Act of 28 March 2003, the Commission makes the following recommendations on improving safety:

- 1) PKP PLK S.A. and other infrastructure managers shall accelerate the implementation, at category D level crossings, of monitoring and event analysis systems (detecting an approaching road vehicle, warning drivers of the approach to a level crossing, recording vehicle behaviour at the crossing), as well as identifying compliance with current traffic regulations.

This recommendation is a result of the need to take effective systemic action to reduce the number of incidents at Category D level crossings. In 2021, there was a significant increase of 48 accidents at Category D level crossings – i.e. 103 accidents + one serious accident in 2020 and in 2021 – 150 accidents + two serious accidents. Systemic measures, aimed at both the Company's employees and external stakeholders, will allow to increase safety levels.

- 2) The State Commission on Railway Accident Investigation will apply to the competent ministers to supplement *the Regulation of the Ministers of Infrastructure and Internal Affairs and Administration of 31 July 2002 on road signs and signals* (Journal of Laws 2019 item 2310 as amended) in Section 5: Light signals given by devices placed on the road – *Light signals for drivers and pedestrians – Appendix: List of specimen traffic signs and signals – Traffic signals*, sample of a signal resulting from the applicable provision: § 98 section 5. A flashing red signal or **two alternating flashing red signals** indicate that it is prohibited to drive behind a traffic signal or other device that transmits these signals, e.g. with a



traffic signal design **“S-8 - signal with signal prohibiting entry at a crossing”** (i.e. two horizontal red lights placed side by side – transmitting alternating flashing red signals).

Rationale: The current regulation lacks a model of a traffic signal giving two alternating flashing red signals, which are commonly used in road transport (at level crossings equipped with traffic safety devices). The aim of this amendment is to clarify and unify the provisions and, consequently, to eliminate ambiguous provisions, which in particular should be used during the training of persons as drivers of road vehicles.

- 3) Railway undertakings shall take organisational and technical measures to minimise damage and the poor technical condition of wagons and powered vehicles making it necessary to put them out of service as a result of indications by rolling stock fault detection devices confirmed in workshop conditions (hot axle boxes, hot brake resulting in a displaced rim), as well as other defects in railway vehicles in service observed by operating personnel.

The implementation of the recommendation may contribute to minimise the persistently high number and increase of incidents of category C54 – damage or poor condition of a wagon (increase from 191 incidents in 2020 to 226 in 2021) and C53 damage or poor condition of a powered railway

vehicle (increase from 27 incidents in 2020 to 30 in 2021) and incidents of category B11 – damage or poor condition of a wagon, among others (increase from 10 incidents – in 2020 to 16 incidents in 2021) and B10 – damage or poor condition of a powered railway vehicle (increase from 1 incident – in 2020 to 5 incidents in 2021) incidents – in 2020 to 16 incidents in 2021) and B10 – damage to or poor condition of a powered railway vehicle (increase from 1 incident in 2020 to 5 incidents in 2021). This recommendation is a restatement of the recommendation included in the 2019 Annual Report.

- 4) Rail Infrastructure Managers with category B level crossings in operation and maintenance, as well as railway operators shall take measures to minimise category C64 incidents involving users of level crossings, which consisted in bypassing closed barriers and leaving road vehicles in the dangerous zone of the crossing (closed between the barriers), by applying, among others, the provisions included in § 21 of the Ordinance of the Minister of Infrastructure of 13 September 2018 amending the Ordinance on technical conditions to be met by railway crossings and railway sidings with roads and their location (Journal of Laws of 2018, item 1876).

The above recommendation indicates the need to use traffic channelisation islands or separators to eliminate incidents involving the bypassing of closed barriers on the entrance lane and the remaining of road vehicles in the danger zone of the crossing, between closed half-barriers (barriers), when users of a level crossing do not comply with the provisions of the Road Traffic Law. The decrease in the number of these incidents will result in an improvement in safety at Category B level crossings (reducing the likelihood of collisions, avoiding collisions with oncoming railway vehicles) and ultimately in an improvement in users' compliance with the applicable regulations when approaching and crossing level crossings (increasing driver discipline). This recommendation is a restatement of the recommendation included in the 2019 Annual Report.

- 5) Railway Undertakings and Railway Infrastructure Managers shall take measures to eliminate railway incidents caused by a railway vehicle failing to stop before the “Stop” signal or at the place where it should have stopped or starting a railway vehicle without the required authorisation.

The recommendation is due to a significant increase in the number of category C44 incidents and category B04 incidents involving a railway vehicle failing to stop before a “Stop” signal or where it should have stopped or starting a railway vehicle without the required authorisation (there were 86 category C44 in 2020, and 137 incidents in 2021; in 2020 there were – 14 accidents cat. B04, and in 2021 – 33 accidents). The causes of these incidents may be related, for example, to driver training improper driving technique, exceeding working time standards, lack of knowledge of the route, etc. This recommendation restates the recommendation made in the 2019 Annual Report with an extension to infrastructure managers who employ drivers and train drivers.

The Commission's issuing of the aforementioned recommendations, follows the analysis presented in section 4, indicating an increase in events in 2021 compared to 2020.

6. Implementation of recommendations made in 2021 by PKBWK (according to information from the President of the Railway Transport Office)

On 29 April 2022, the Commission has received information on the implementation of the recommendations made by the Commission in 2021 from the President of the Office of Rail Transport, hereinafter referred to as "UTK."

In 2021, the PKBWK submitted to the President of UTK, 5 reports on completed investigations in 2021 on railway incidents occurring in 2020 and 2021 and the Annual Report for 2020 on the activities of the State Commission on Railway Accident Investigation with the following recommendations:

- 1) REPORT No. PKBWK 01/2021 from the investigation of a serious accident of category A 13 occurring on 09 March 2020 at 04:15 at Szymankowo station, in track no. 2, at km 287.360 of railway line No. 9 Warszawa Wschodnia Osobowa – Gdańsk Główny
- 2) REPORT No. PKBWK 02/2021 from the investigation of a serious accident of category A20 occurring on 21 October 2020 at 12:52 on a category C level crossing, located on the Rokiciny – Baby route, on track no. 2, at 120.779 km of the railway line no. 1 Warszawa Zachodnia – Katowice
- 3) REPORT No. PKBWK 03/2021 from the investigation of a serious accident of category A21 occurring on 03 September 2020 at 13:50 at the category D level crossing, located on the route Przybówka – Jasło Towarowa, in track no. 1, at 55.924 km of the railway line no. 106 Rzeszów Główny – Jasło
- 4) REPORT No. PKBWK 04/2021 from the investigation of a serious accident of category A20 occurring on 18 August 2020 at 07:29 on a category C level crossing, located on the Lublin Główny – Przeworsk route, on track no. 1, at 119.080 km of the railway line no. 68 Lublin Główny – Przeworsk
- 5) REPORT No. PKBWK 05/2021 serious railway accident occurring on 26 January 2021 at 07:39 a.m. on category D level crossing at the station located on the route Zbąszynek – Lutot Suchy on track no. 1, at 10.196 km of railway line no. 367 Zbąszynek – Gorzów Wielkopolski;
- 6) Annual Report for the year 2020 on the activities of the State Commission on Railway Accident Investigation.

Within the framework of the supervision of the implementation of the recommendations issued by PKBWK by the entities of the railway market, the President of UTK analysed the recommendations addressed to him and having made changes to their content, forwarded them for implementation to infrastructure managers, railway undertakings, entities responsible for the maintenance of railway vehicles and entities operating special vehicles.

Addressees of recommendations which do not have a safety/maintenance management system in place should implement the recommendations based on their internal regulations.

Recommendations resulting from the above reports were communicated by the President of UTK to the entities in writing (letters with safety sheets).

The recommendations made by the PKBWK in 2021, were successively forwarded by the President of the UTK to the entities for implementation. Each time, all materials and information regarding the forwarded recommendations from a particular report were posted on the UTK website.

UTK developed a questionnaire and, pursuant to its contents, the entities provided information on the stages of implementation of the recommendations received from the President of UTK.

6.1 Analysis of information on the implementation of recommendations

The President of the UTK analysed the recommendations addressed to him, taking into account the need to ensure a systemic approach to safety management and risk minimisation in rail transport.

The President of UTK may take into account the recommendations and accept them for implementation, or delegate them in whole or in part for implementation to administrators, railway undertakings or other entities whose activities affect the safety of railway traffic and the safety of railway operation, subject to regulation under the provisions of the Railway Transport Act.

A total of 32 recommendations were forwarded by the President of UTK to railway market entities for implementation.

The Commission issued a total of **37 recommendations in the 5 aforementioned reports and in the Annual Report for 2020** out of which 32 recommendations were addressed to railway market entities under the statutory supervision of the President of UTK and 5 recommendations to other entities (i.e. vehicular road managers not under the supervision of the President of UTK).

Based on the information provided, an analysis and evaluation of the way in which the recommendations of the PKBWK were dealt with was carried out at UTK. In cases where the timetable presented by the entity for the implementation of the measures was not in doubt, the lack of 100% implementation of the recommendation did not negatively affect the evaluation of the measures presented. In addition, the presented averaged stage of implementation of the recommendations (in the analysis below, as **an average percentage of implementation**) was determined based on the submitted data received by the President of UTK in the period January 2021 – April 2022 (some of the entities to which the recommendations were addressed updated the previously submitted information in March 2022).

“Positive assessment” indicates that the proposed implementation of the recommendations has been accepted, recognising that the declared actions are moving towards the correct implementation of the PKBWK recommendations.

In cases identified as **“insufficient response,”** the information provided was found to be incomplete or the justification was not accepted.

On the other hand, those who have not provided information on the implementation of the recommendations (“no response”) are subject to administrative action, including requests for information, written warnings and, in cases of gross negligence, proceedings for the withdrawal of documents authorising them to operate.

The status of the analysis of the information on the implementation of the recommendations according to the information provided by the President of UTK is as follows:

Ad. 1) REPORT No. PKBWK 01/2021 of the investigation of a category A13 serious accident occurred on 09 March 2020 at 04:15 at Szymankowo station, in track no. 2, at 287.360 km of railway line No. 9 Warszawa Wschodnia Osobowa – Gdańsk Główny	
Recommendations of the State Commission on Railway Accident Investigation stated in the report	From the “ Information on the implementation of the recommendations of the PKBWK for the year 2021 ” (letter ref. no, UTK DPN.47.20.2022.1.KG of 29 April 2022), it follows that the President of UTK by letter UTK No. DPN-WDZK.47.6.2021.3.IF of 13 April 2021 – forwarded the recommendations to market entities and analysed the information on the implementation of the aforementioned recommendations
	Contents of the recommendations forwarded for the implementation by the President of the UTK
1. The Infrastructure Manager of PKP PLK S.A., in accordance with the Safety Management System (SMS) in force, will assess and evaluate the risks in relation to the hazards identified in this Report, which contributed to the occurrence or constituted other irregularities related to the investigated event. The infrastructure manager shall also take appropriate measures to mitigate the risks of the aforementioned hazards.	PKBWK 01/2021_1 Authorised Infrastructure Managers, in accordance with their Safety Management Systems (SMS), will carry out a risk assessment in relation to the hazards identified in the Report that contributed to the occurrence of the incident or were other anomalies related to the incident under investigation. Authorised infrastructure managers shall also take appropriate measures to mitigate the risks of the aforementioned hazards. WKD and PKM shall implement the aforementioned recommendation pursuant to the procedures and internal regulations other than the Safety Management System (SMS).
2. The infrastructure manager PKP PLK S.A. shall complete the risk register with the following risk: “ <i>use of mobile phones for giving orders related to railway traffic operation instead of measures allowed by internal regulations</i> ” and will assess and evaluate this risk and will take appropriate measures to reduce the risk of this risk occurring.	PKBWK 01/2021_2 Authorised Infrastructure Managers, Certified Railway Undertakings shall complete the hazard register with the following hazard: <i>use of mobile phones for giving orders related to railway traffic operation instead of measures allowed by internal regulations</i> and shall assess the risk and take appropriate measures to mitigate the risk of this hazard occurring. WKD and PKM shall implement the aforementioned recommendation pursuant to the procedures and internal regulations other than the Safety Management System (SMS).
3. The infrastructure manager PKP PLK S.A. shall implement the recommendation contained in the 2013 Annual Report on the activities of PKBWK, which reads as follows: “The number of internal controls in the following scope shall be reviewed: a) an obligation to periodically (in accordance with internal instructions) listen to calls made using communications and radio communications, b) the correctness of the entries in the technical and operational documentation kept at the traffic stations, including the operating logs, in particular with regards to their legibility and current validity,	PKBWK 01/2021_3 Authorised Infrastructure Managers, based on the risk assessment carried out, shall review the frequency and effectiveness of internal controls from the scope referred to in the 2013 PKBWK Annual Report, i.e.: a) <i>an obligation to periodically (in accordance with internal instructions) listen to calls made using communications and radio communications,</i> b) <i>the correctness of the entries in the technical and operational documentation kept at the traffic stations, including the operating logs, in particular with regards to their legibility and current validity,</i> c) <i>the types and recurrence frequencies of signalling equipment faults and their legibility.</i>

c) the types and recurrence frequencies of signalling equipment faults and their legibility.	WKD and PKM shall implement the aforementioned recommendation pursuant to the procedures and internal regulations other than the Safety Management System (SMS).
4. The infrastructure manager PKP PLK S.A. shall include in the training programme principles related to the entry, exit and passage of trains on the basis of § 61 of the Ir-1 Instruction and to the organisation of the work process by the train dispatcher, giving orders, issuing authorisations and in communication with the driver and the driver of the working train (§ 23 of the Ir-1 Instruction).	PKBWK 01/2021_4 authorised Infrastructure Managers and WKD and PKM shall include in the training programme the rules related to the entry, exit and passage of trains and the organisation of the work process by the train dispatcher, giving orders, issuing authorisations and communicating with the driver and the driver of the working train. Infrastructure manager PKP Polskie Linie Kolejowe S.A. shall elaborate the above mentioned training programme on the basis of requirements resulting from § 23 and § 61 of Train Driving Instruction (Ir-1), hereinafter referred to as "Instruction Ir-1."
5. Infrastructure manager PKP PLK S.A. and carrier HSL Polska Sp. z o.o. shall take action to address other non-causal anomalies included in this Report under section IV.6.	PKBWK 01/2021_5 Infrastructure Manager PKP Polskie Linie Kolejowe S.A. and the carrier HSL Polska sp. z o.o. shall take measures to eliminate other irregularities, not causally related to the incident, included in item IV.6 of the Report.
6. The infrastructure manager PKP PLK S.A. shall effectively implement a ban on the use of mobile phones during official duties related to the operation of railway traffic, shunting works, trains related to closures – in accordance with the order of the Vice-President of UTK of 30.05.2012 included in the letter ref. no. DBK 550/R03/KB/2012.	PKBWK 01/2021_6 Authorised Infrastructure Managers, Certified Railway Undertakings and WKD and PKM shall implement the recommendation included in the PKBWK Annual Report 2011 and communicated by letter from the Vice President of the Office of Rail Transport dated 30 May 2012, ref. no.: DBK-550/R-03/KB/2012, consisting of a ban on the use of mobile phones during official duties related to the operation of railway traffic, train shunting work related to closures. The addressees of the recommendation shall implement systematic mechanisms of supervision for the ongoing monitoring of compliance with the restriction.
7. Infrastructure manager PKP PLK S.A. enforces obligation of signalling closed track with "D1" shield according to provisions of § 53 section 6 of Instruction Ir-1 together with application of auxiliary means (warning signs) according to provisions of § 50 of Instruction Ir-1.	PKBWK 01/2021_7 Authorised Infrastructure Managers and WKD and PKM shall enforce the use of the obligation to signal a closed track with a "D1" disc together with the use of auxiliary measures (warning signs). Infrastructure manager PKP Polskie Linie Kolejowe S.A. shall enforce the obligation expressed above pursuant to provisions of § 53 section 6 of Instruction Ir-1
In accordance with Article 28e section 8 of the Railway Transport Act of 28 March 2003 (consolidated text: of Laws of 2020, item 1043, as amended), the above recommendations were addressed to the President of the Railway Transport Office. Individual entities shall implement the recommendations contained in this Report and adopted by resolution of the SCRAI.	

Table 4. **Analysis of information on the implementation of recommendations contained in the Report No. PKBWK 01/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Statistical analysis of the information on the implementation of the recommendations stated in the Report no. PKBWK 01/2021	
Number of addressees of the recommendations	129
Responses provided in time	115
Failure to respond in time	14
Number of requests submitted to entities	14
Number of responses submitted after a request	12
Failure to respond to the request	2

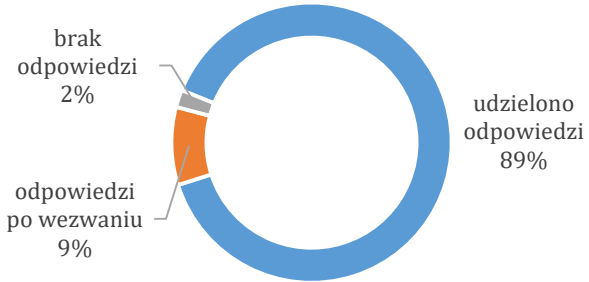


Table 5. **Assessment of the information provided on the implementation of recommendations contained in the Report No. PKBWK 01/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Evaluation of the information on the implementation of the recommendations stated in the Report no. PKBWK 01/2021							
Recommendations	PKBWK 01 /2021_1	PKBWK 01 /2021_2	PKBWK 01 /2021_3	PKBWK 01 /2021_4	PKBWK 01 /2021_5	PKBWK 01 /2021_6	PKBWK 01 /2020_7
Assessed positively	13	125	12	12	2	125	12
Insufficient answer	1	2	1	1	0	2	1
Average percentage of implementation of the recommendation	96	85	92	91	100	83	89

Chart 6. **Average percentage of implementation of individual recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 01/2021** (in

accordance with the information from the President of UTK)

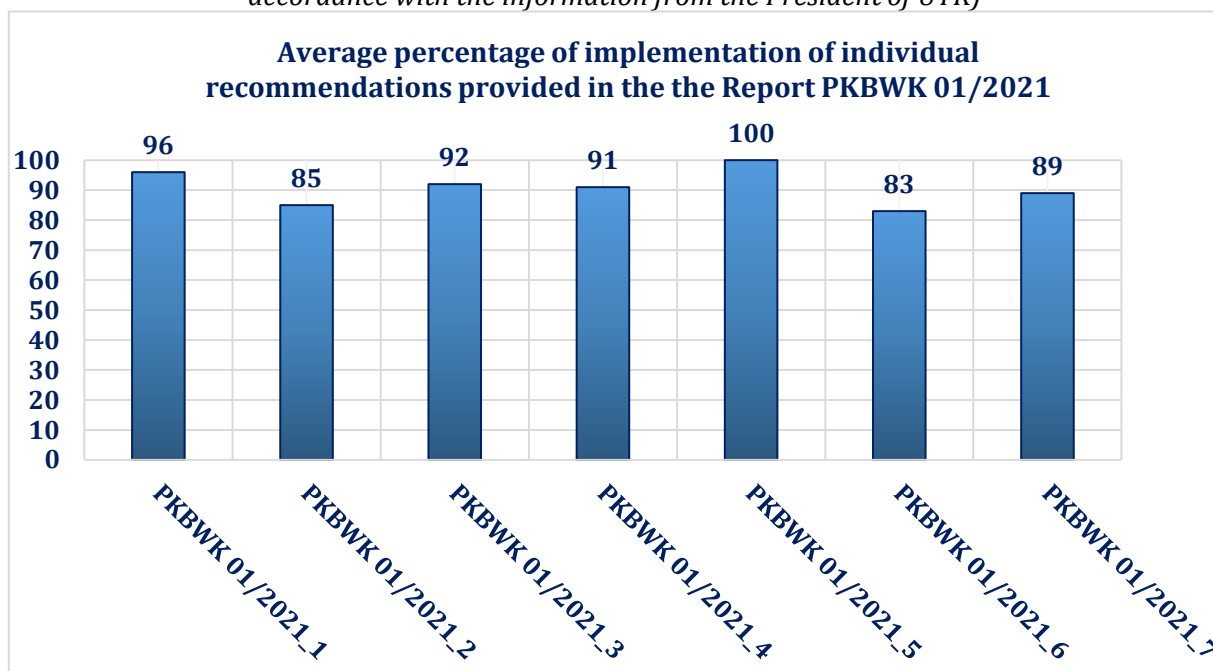
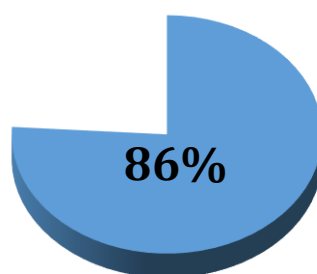


Chart 7. **Average percentage of implementation of the recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 01/2021** (in accordance with the information from the President of UTK)



The average percentage of implementation of the recommendations was determined by UTK based on the declarations of the addressees of the respective recommendation. The lack of a 100% recommendation is due to the entity's timetable for implementing actions to fully implement the recommendations issued by the PKBWK.

Table 6. **Implementation of recommendations by the entities listed by the Commission in Report no. PKBWK 01/2021** – pursuant to information provided to SCARI in March and April of 2022.

Recommendations arising from the Report No. PKBWK 01/2021 (issued in 2021)	Entity to which the recommendation is issued	Date of implementation of the recommendation	Average percentage (%) of the recommendation realized by the entities listed in column 2/ (implementation stage)
1	2	3	4
Recommendation 1	¹⁾ PKP PLK S.A. (²⁾ IM + ³⁾ WKD Sp. z o.o. + ⁴⁾ PKM S.A.)	2021-05-20	100 (% – realized – by PKP PLK) 96 (% – in progress – by: IM + WKD + PKM) *)
Recommendation 2	PKP PLK (IM + ⁵⁾ CRU + WKD + PKM)	30/06/2021	100 (% – realized – by PKP PLK) 85 (% in progress by: CRU + IM + WKD + PKM) *)

Recommendation 3	PKP PLK (IM + WKD + PKM)	29/07/2021	100 (% - realized - by PKP PLK) 92 (% - in progress by: IM + WKD + PKM) *)
Recommendation 4	PKP PLK (IM + WKD + PKM)	30/06/2021	95 (% - in progress by PKP PLK) 91 (% - in progress by: IM + WKD + PKM) *)
Recommendation 5	PKP PLK 6) HSL Sp. z o.o.	25/02/2022	100 (% - realized - by PKP PLK) 100 (% - realized - by HSL) *)
Recommendation 6	PKP PLK (IM + CRU + WKD + PKM)	2021-04-03	100 (% - realized - by PKP PLK) 83 (% - in progress by: IM + CRU + WKD + PKM) *)
Recommendation 7	PKP PLK (IM + WKD + PKM)	31/12/2021	100 (% - realized - by PKP PLK) 89 (% - in progress by: IM + WKD + PKM) *)

*) in accordance with the Information on the implementation of the recommendations of PKBWK for the year 2021 - communicated by the UTK by letter - DPN-WDZK.47.20.2022.1.KG dated 2022-04-29 - (regarding the implementation of recommendations submitted by the President of UTK to the entities of the railway market)

1) PKP PLK S.A. - means: PKP Polskie Linie Kolejowe S.A. - hereinafter referred to as "PKP PLK"

2) IM - means: authorised rail infrastructure manager

3) WKD sp. z o.o. - means: Warszawska Kolej Dojazdowa sp. z o.o. - hereinafter referred to as "WKD"

4) PKM S.A. - means: Pomorska Kolej Metropolitarna S.A. - hereinafter referred to as "PKM"

5) CRU - means: certified railway undertaking

6) HSL Sp. z o.o. - means: railway undertaking - hereinafter referred to as "HSL"

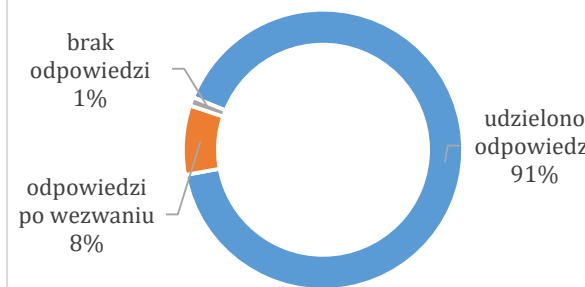
Ad. 2) REPORT No. PKBWK 02/2021 of the investigation of a category A20 serious accident occurring on 21 October 2020 at 12:52 on a category C level crossing, located on the Rokiciny – Baby route, on track no. 2, at 120.779 km of the railway line no. 1 Warszawa Zachodnia – Katowice	
Recommendations of the State Commission on Railway Accident Investigation stated in the report	From the “ Information on the implementation of the recommendations of the PKBWK for the year 2021 ” (letter ref. no, Office of Rail Transport UTK - WDZK.47.20.2022.1.KG of 29 April 2022), it follows that the President of UTK by letter UTK No. DPN-WDZK.47.11.2021.2.KG of 06 May 2021 – forwarded the recommendations to market entities and analysed the information on the implementation of the aforementioned recommendations
1. The Tomaszów Mazowiecki District Road Administration shall complete the F-6a road sign at the road approaching district road No. 4321E (access road to the crossing) on the left side of the railway-road crossing at km 120.779 of railway line no. 1.	Contents of the recommendations forwarded for the implementation by the President of the UTK The recommendation does not apply to the President of the Office of Rail Transport, which has statutory supervision of infrastructure managers and railway undertakings.
2. The Tomaszów Mazowiecki District Road Administration will take steps to ensure that any irregularities reported by the infrastructure manager PKP Polskie Linie Kolejowe S.A. resulting from inspections and diagnostic tests of level crossings carried out by the infrastructure manager PKP PLK S.A. are immediately rectified.	The recommendation does not apply to the Chairman of the Office of Rail Transport, which has statutory supervision of infrastructure managers and railway undertakings.
3. The Tomaszów Mazowiecki District Road Administration will remove the B-20 signs at the level crossing at km 120.779 of railway line no. 1 and at the remaining level crossings cat. C located on the vehicular roads under its management in agreement with the railway infrastructure manager in accordance with the applicable regulation of the Minister of Infrastructure and Development issued pursuant to Article 7 section 2 item 2 and section 3 item 2 of the Act of 7 July 1994 Construction Law. The above constitutes an obligation for all road managers.	The recommendation does not apply to the President of the Office of Rail Transport, which has statutory supervision of infrastructure managers and railway undertakings.
4. The Tomaszów Mazowiecki District Road Administration will carry out measures to remove trees and bushes at level crossings to ensure the continued visibility of traffic lights, barrier devices and road signs.	The recommendation does not apply to the President of the Office of Rail Transport, which has statutory supervision of infrastructure managers and railway undertakings.
5. The infrastructure manager PKP Polskie Linie Kolejowe S.A. and other infrastructure managers shall take measures to ensure that the employees of these managers, including the personnel of traffic	PKBWK 02/2021_1 Authorised railway infrastructure managers and WKD shall take measures to oblige employees in positions directly related to the operation and safety of railway traffic, in particular the personnel of traffic stations reporting incidents at level

stations reporting incidents at level crossings to the Emergency Call Centre, use the identification number of level crossings, which will contribute to quicker initiation of rescue action and these entities will regulate this matter in the technical regulations of the stations.	crossings to the Emergency Call Centre, to use the level crossing identification number, which will contribute to a faster activation of the rescue action. These entities shall regulate the above matter in the technical regulations of the stations.
6. The infrastructure manager PKP Polskie Linie Kolejowe S.A. and other infrastructure managers shall include in the subject of periodic instructions for traffic officers the principles of proceeding in case of traffic safety danger and railway incidents included in § 69 – 79 of Instruction Ir-1 of PKP PLK S.A. and in relevant regulations of other infrastructure managers.	PKBWK 02/2021_2 Authorised infrastructure managers, certified railway undertakings, WKD and PKM shall include in the subject matter of periodic instructions, for employees working in positions directly related to the operation and safety of railway traffic, the principles of conduct in case of traffic safety hazards and railway incidents included in § 48 – 58 of Chapter 7 of the Ordinance of 23 January 2015 on general conditions for railway traffic operation and signalling (consolidated text: Journal of Laws of 2015, item 360, as amended).
7. Rail Infrastructure Managers and road managers shall take measures to improve cooperation during the design, implementation and final acceptance phases of investment tasks in accordance with current legislation on access to level crossings.	PKBWK 02/2021_3 Authorised rail infrastructure managers and WKD shall take measures to improve cooperation with road managers during the design, implementation and final acceptance stages of investment tasks in accordance with the applicable regulations for access to level crossings.
8. The infrastructure manager PKP Polskie Linie Kolejowe S.A. will dismantle the unused control-signalling equipment supply cabinet situated on the right-hand side of the level crossing. In addition, during diagnostic testing of all crossings, it should be checked each time whether there are power cabinets for SSP equipment or other objects obstructing the visibility of the front of the train in the field of view from the approach roads from 5 metres from the crossing and, if found, they should be removed or moved to another location to improve visibility. The infrastructure manager PKP Polskie Linie Kolejowe S.A. will carry out the physical decommissioning of non-functional equipment and facilities as a matter of urgency after operational acceptance.	PKBWK 02/2021_4 Authorised Rail Infrastructure Managers and WKD, during diagnostic testing of all level crossings, will each time check whether there are power cabinets for SSP equipment or other objects obstructing the visibility of the train front end from the access roads from 5 metres from the crossing. In the event the aforementioned objects are discovered, they must immediately remove them or move them to another location in order to improve visibility. The infrastructure manager PKP Polskie Linie Kolejowe S.A. will dismantle the unused control-signalling equipment supply cabinet situated on the right-hand side of the cat. C level crossing at 120.779 km of railway line no. 1 Warszawa Zachodnia – Katowice. Authorised railway infrastructure managers and WKD shall physically and urgently decommission the inoperable equipment and facilities after operational acceptance.
9. Infrastructure manager PKP Polskie Linie Kolejowe S.A. shall accelerate its activities with regard to the installation at level crossings of devices monitoring the offences of drivers using these crossings, resulting in the imposition of fines, as agreed on 27.06.2019 with the General Inspectorate of Road Transport on the initiative of the Chairman of the State Commission on Railway Accident Investigation.	PKBWK 02/2021_5 Infrastructure manager PKP Polskie Linie Kolejowe S.A. shall accelerate measures for the installation of innovative security systems at level crossings enabling: – alerting drivers about the approach to a crossing and – monitoring their compliance with the applicable rules, resulting in the imposition of fines in the case of offences.
10. The carrier PKP Intercity S.A. will take measures to ensure that parameters are correctly registered in the recorders installed on powered railway vehicles. In addition, PKP Intercity S.A. shall	PKBWK 02/2021_6 the carrier PKP Intercity S.A. will take measures to ensure that parameters are correctly registered in the recorders installed on powered railway vehicles. In addition, PKP Intercity S.A. shall include carrying out additional inspections of the

include carrying out additional inspections of the correctness of parameter recordings in the recorders of powered railway vehicles as part of the safety improvement programmes of the safety management system (SMS).	correctness of parameter recordings in the recorders of powered railway vehicles as part of the safety improvement programmes of the safety management system (SMS).
11. The carrier PKP Intercity S.A. will continue to systematically equip powered railway vehicles, including locomotive EP07-411, with track monitoring systems (digital cameras), implementing the order of the President of the Office of Rail Transport in this regard.	PKBWK 02/2021_7 the carrier PKP Intercity S.A. shall continue to systematically equip powered railway vehicles, including locomotive EP07-411, with route monitoring systems (digital cameras).
<p>The aforementioned recommendations were addressed:</p> <ul style="list-style-type: none"> – recommendations 1-4 – to the road manager, i.e. Tomaszów Mazowiecki District Road Administration, – the recommendations no. 2, 3, 5-11 – to the President of the Office of Rail Transport who has statutory supervision of infrastructure managers and railway undertakings. <p>Individual entities shall implement the recommendations contained in this Report and adopted by resolution of the SCRAI.</p>	

Table 7. **Analysis of information on the implementation of recommendations contained in the Report No. PKBWK 02/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Statistical analysis of the information on the implementation of the recommendations stated in the Report no. PKBWK 02/2021	
Number of addressees of the recommendations	129
Responses provided in time	117
Failure to respond in time	12
Number of requests submitted to entities	12
Number of responses submitted after a request	10
Failure to respond to the request	2



brak odpowiedzi	1%
odpowiedzi po wezwaniu	8%
udzielono odpowiedzi	91%

Table 8. **Assessment of the information provided on the implementation of recommendations contained in the Report No. PKBWK 02/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Evaluation of the information on the implementation of the recommendations stated in the Report no. PKBWK 02/2021							
Recommendations	PKBWK 02 /2021_1	PKBWK 02 /2021_2	PKBWK 02 /2021_3	PKBWK 02 /2021_4	PKBWK 02 /2021_5	PKBWK 02 /2021_6	PKBWK 02 /2021_7
Assessed positively	12	126	12	12	1	1	1
Insufficient answer	0	1	0	0	0	0	0
Average percentage of implementation of the recommendation	85	71	97	88	100	100	100

Chart 8. **Average percentage of implementation of individual recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 02/2021** (in accordance with the information from the President of UTK)

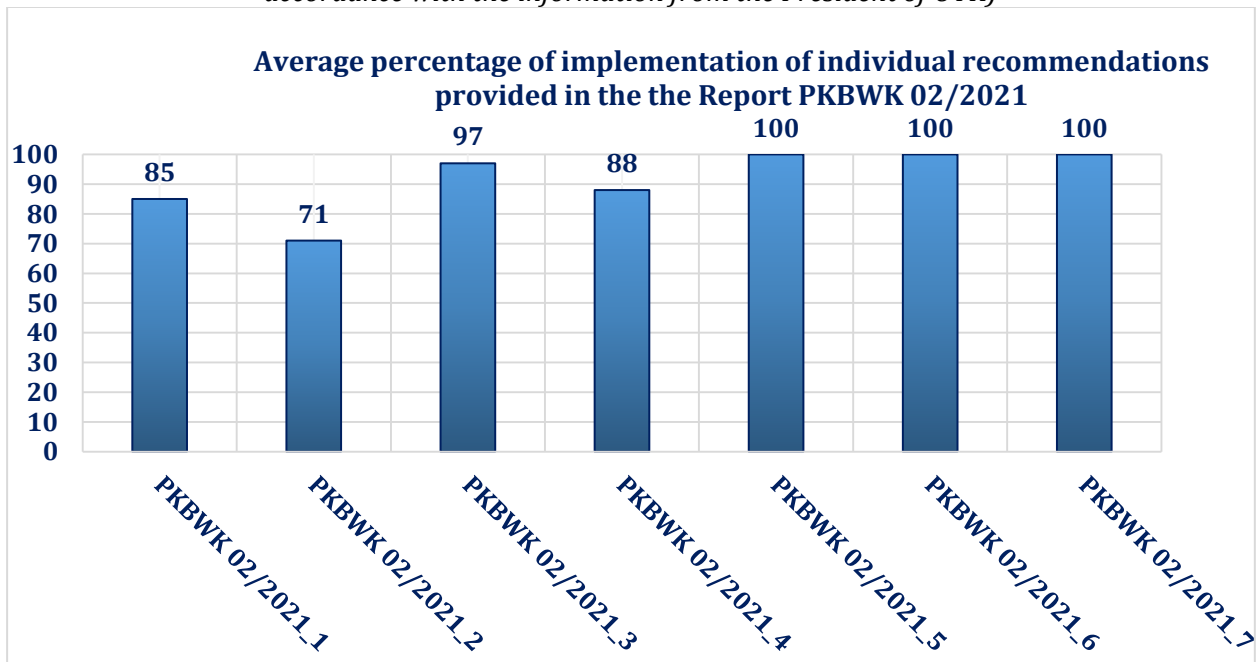
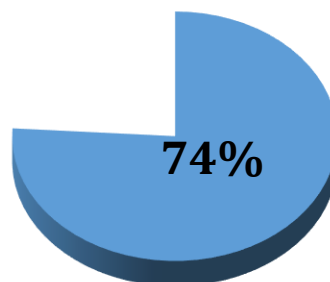


Chart 9. **Average percentage of implementation of the recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 02/2021** (in accordance with the information from the President of UTK)



The average percentage of implementation of the recommendations was determined by UTK based on the declarations of the addressees of the respective recommendation. The lack of a 100% recommendation is due to the entity's timetable for implementing actions to fully implement the recommendations issued by the PKBWK.

Table 9. **Implementation of recommendations by the entities listed by the Commission in Report no. PKBWK 02/2021** – pursuant to information provided to SCARI in March and April of 2022.

Recommendations arising from the Report No. PKBWK 02/2021 (issued in 2021)	Entity to which the recommendation is issued	Date of implementation of the recommendation	Average percentage (%) of the recommendation realized by the entities listed in column 2/ (implementation stage)
1	2	3	4
Recommendation 1	District Road Administration in Tomaszów Mazowiecki	8)	8) 100%
Recommendation 2	District Road Administration in Tomaszów Maz.	8)	8) 100%
Recommendation 3	District Road Administration in Tomaszów Maz.	8)	8) 100%
Recommendation 4	District Road Administration in Tomaszów Maz.	8)	8) 100%
Recommendation 5	PKP PLK (IM + WKD)	31/08/2022	80 (% - in progress by PKP PLK) 85 (% - in progress - by: IM + WKD)*)
Recommendation 6	PKP PLK (IM + CRU + WKD + PKM)	30/06/2021	85 (% - under implementation by PKP PLK) 71 (% - ongoing implementation by: CRU + IM + WKD + PKM)*)
Recommendation 7	PKP PLK (IM + WKD)	29/07/2021	100 (% - realized - by PKP PLK) 97 (% - in progress by: IM + WKD + PKM)*)
Recommendation 8	PKP PLK (IM + WKD)	30/08/2021	100 (% - realized by PKP PLK) 88 (% - in progress by: IM + WKD)*)
Recommendation 9	PKP PLK	31/12/2021	100 (% - realized - by PKP PLK)
Recommendation 10	7) PKP Intercity S.A	31/07/2021	100 (% - realized - by PKP IC)
Recommendation 11	PKP IC	15/07/2021	100 (% - realized - by PKP IC)

*) in accordance with the Information on the implementation of the recommendations of PKBWK for the year 2021 – communicated by the UTK by letter – DPN-WDZK.47.20.2022.1.KG dated 2022-04-29 – (regarding the implementation of recommendations submitted by the President of UTK to the entities of the railway market)

7) PKP Intercity S.A. – means: railway undertaking - hereinafter referred to as “PKP IC”

8) By letter No. PKBWK.4631.8.13.2020 of 30 March 2021. State Commission on Railway Accident Investigation in accordance with Article 28l, paragraph 4 of the Railway Transport Act of 28 March 2003 (Journal of Laws of 2020, item 1043.),

communicated to the District Road Administration in Tomaszów Mazowiecki the completion of the proceedings in the case of a serious accident occurring on 21 October 2020. at 12:52 a.m. at the category C level crossing located on the Rokiciny – Baba track, in track no. 2, at km 120.779 of the railway line no. 1 Warszawa Zachodnia – Katowice, together with the Report of PKBWK 02/2021.

The implementation of recommendations 1, 2, 3 and 4 was confirmed by the Tomaszów Mazowiecki County Roads Authority by letter ZDP.4176.88.6.2021 dated 2022-07-19.

Ad. 3) REPORT No. PKBWK 03/2021 of the investigation of a category A21 serious accident occurring on 03 September 2020 at 13:50 on a category D level crossing, located on the Przybówka-Jasło Towarowa route, on track no. 1, at 55.924 km of the railway line no. 106 Rzeszów Główny – Jasło	
Recommendations of the State Commission on Railway Accident Investigation stated in the report	From the “ Information on the implementation of the recommendations of the PKBWK for the year 2021 ” (letter ref. no, Office of Rail Transport UTK - WDZK.47.20.2022.1.KG of 29 April 2022), it follows that the President of UTK by letter UTK No. DPN-WDZK.47.13.2021.2.KG of 11 August 2021 – forwarded the recommendations to market entities and analysed the information on the implementation of the aforementioned recommendations
	Contents of the recommendations forwarded for the implementation by the President of the UTK
1. Due to the local conditions and the train speed of 100 km/h at this level crossing, the railway infrastructure manager PKP PLK S.A. Zakład Linii Kolejowych [Railway Facility] in Rzeszów will carry out an operational risk assessment to consider reducing the running speed of trains along the length of sections where the front of the train is visible from the public road.	PKBWK 03/2021_1 Infrastructure manager PKP Polskie Linie Kolejowe S.A., due to local conditions and the applicable train speed (100 km/h) at the level crossing cat. D at 55.924 km of railway line 106 shall carry out an operational risk assessment to determine whether it is necessary to implement a safety measure in the form of a reduction in the running speed of trains along the length of sections in cases where the front of the train is visible from the public road.
2. The infrastructure manager PKP Polskie Linie Kolejowe S.A. will, during periodic briefings and ad hoc training sessions, remind the employees of the obligation to use the Individual Identification Number (crossing number) of the level crossing, especially in the event of accidents and when calling the emergency services, so that the situation presented in the PKBWK 02/2021 Report does not occur again.	PKBWK 03/2021_2 Authorised railway infrastructure managers and WKD will, during periodic briefings and ad hoc training, remind the employees concerned of the obligation to use the individual level crossing identification number, especially when dealing with accidents and calling emergency services, in order to eliminate the situation referred to in Report No. PKBWK 02/2021 (i.e. the delay in activating emergency services caused by not providing the operator with the identification number of the level crossing where the incident occurred).
3. In the event of discovering irregularities in the maintenance and organisation of traffic in the area of access roads to level crossings, Rail Infrastructure Managers will immediately inform the relevant road managers indicating these irregularities and their location.	PKBWK 03/2021_3 Authorised managers of railway infrastructure, users of railway sidings, narrow gauge railways and WKD, in the event of discovering irregularities in the maintenance and organisation of traffic in the area of access roads to level crossings, will immediately inform the relevant road managers, indicating the irregularities that have occurred and their location, and monitor the implementation of corrective measures within the framework of risks caused by parties outside the railway system
4. Railway Undertakings operating powered railway vehicles equipped with an “emergency braking” device shall include in trainings for train drivers issues related to the methods	PKBWK 03/2021_4 certified railway undertakings and WKD operating powered railway vehicles equipped with an “emergency braking” device will include in train driver training topics related to the ways and principles of braking trains in emergency situations, i.e. the use of the emergency brake (mushroom) to reduce the braking distance.

and rules for braking trains in emergency situations, i.e. the use of the emergency brake (mushroom) to reduce the braking distance – as established in point IV.4 of this Report.	
5. Railway Undertaking PKP Intercity S.A. shall introduce requirements for vehicle manufacturers and maintenance service regarding the installation of emergency power supply for video recorders, so that the continuity of recording images from cameras mounted on railway vehicles is preserved (when ordering by writing in ToR), thus properly implementing the order of Chairman of Office of Rail Transport No. DBK-550/R03/KB/12 of 30.05.2012, addressed to railway undertakings on the obligation to install pre-field recording devices – digital cameras or video recorders in newly built as well as the already used railway vehicles, according to the recommendation of PKBWK – No. PKBWK-076-305/RL/R/11 of 22.11.2011.	GDPRK 03/2021_5 certified railway undertakings and WKD will introduce requirements for vehicle manufacturers and maintenance services concerning the installation of emergency power supply for video recorders so that the continuity of recording of images from cameras mounted on railway vehicles is maintained (when procuring by stating in the ToR), thus properly implementing the recommendation of GDPRK No. GDPRK-076-305/RL/R/11 of 22 November 2011 communicated for implementation to railway undertakings by letter of the President of the Office of Rail Transport no. DBK-550/R03/KB/12 of 30 May 2012, on the obligation to install pre-field recording devices – digital cameras or video recorders in railway vehicles newly built and in service. In addition, certified railway operators and WKD shall inspect the correct operation of the video recorders and the compliance of their use with the operating instructions by employees driving the railway vehicles.
The recommendations specified above were submitted to the President of the Office of Rail Transport. Individual entities shall implement the recommendations contained in this Report and adopted by resolution of the PKBWK.	

Table 10. **Analysis of information on the implementation of recommendations contained in the Report No. PKBWK 03/2021 submitted by the President of UTK to the railway market entities** *(in accordance with the information obtained from the President of the UTK)*

Statistical analysis of the information on the implementation of the recommendations stated in the Report no. PKBWK 03/2021	
Number of addressees of the recommendations	486
Responses provided in time	434
Failure to respond in time	166
Number of requests submitted to entities	166
Number of responses submitted after a request	115

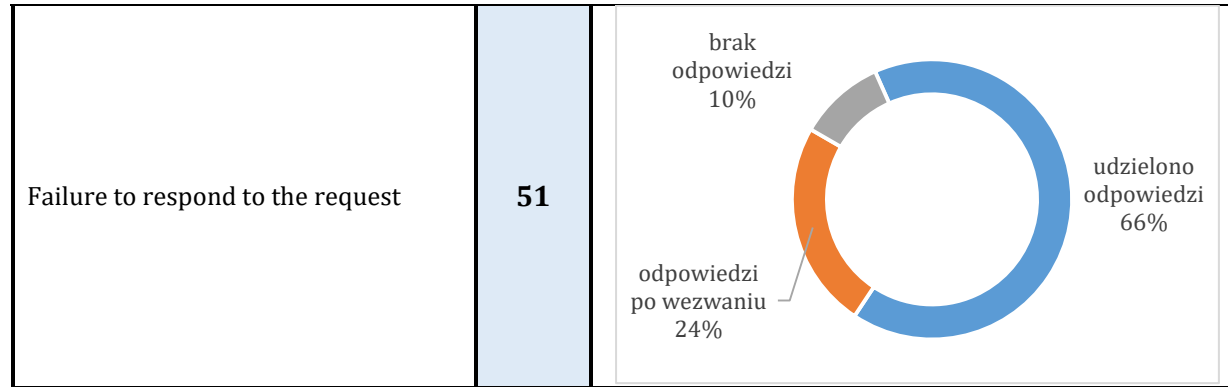


Table 11. Assessment of the information provided on the implementation of recommendations contained in the Report No. PKBWK 03/2021 submitted by the President of UTK to the railway market entities (in accordance with the information obtained from the President of the UTK)

Evaluation of the information on the implementation of the recommendations stated in the Report no. PKBWK 03/2021					
Recommendations	PKBWK 03 /2021_1	PKBWK 03 /2021_2	PKBWK 03 /2021_3	PKBWK 03 /2021_4	PKBWK 03 /2021_5
Assessed positively	1	10	309	115	114
Insufficient answer	0	1	41	1	3
Average percentage of implementation of the recommendation	100	99	81	71	68

Chart 10. Average percentage of implementation of individual recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 03/2021 (in accordance with the information from the President of UTK)

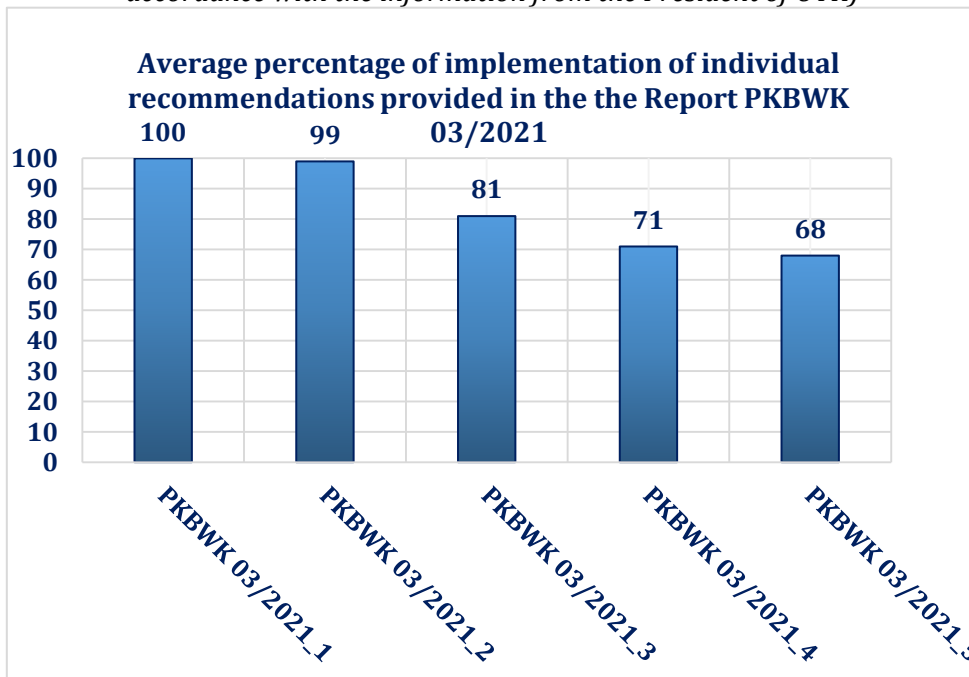
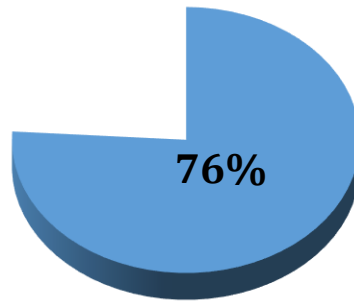


Chart 11. Average percentage of implementation of the recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 03/2021 (in accordance with the information from the President of UTK)



The average percentage of implementation of the recommendations was determined by UTK based on the declarations of the addressees of the respective recommendation. The lack of a 100% recommendation is due to the entity's timetable for implementing actions to fully implement the recommendations issued by the PKBWK.

Table 12. **Implementation of recommendations by the entities listed by the Commission in Report no. PKBWK 03/2021** – pursuant to information provided to SCARI in March and April of 2022.

Recommendations arising from the Report No. PKBWK 03/2021 (issued in 2021)	Entity to which the recommendation is issued	Date of implementation of the recommendation	Average percentage (%) of the recommendation realized by the entities listed in column 2/ (implementation stage)
1	2	3	4
Recommendation 1	PKP PLK	31/08/2022	100 (% – realized by PKP PLK)
Recommendation 2	PKP PLK (IM + WKD)	30/06/2021	85 (% – in progress by PKP PLK) 99 (% – in progress by: IM + WKD)*)
Recommendation 3	IM (IM + ⁹⁾ US+ ¹⁰⁾ NGR + WKD)	31/12/2021	100 (% – realized – by PKP PLK) 81 (% – in progress by: IM + US + NGR + WKD) *)
Recommendation 4	(CRU + WKD)	71 (% – in progress by: CRU + WKD) *)
Recommendation 5	PKP IC (PK + WKD)	26/12/2026	82 (% – in progress by PKP IC) 68 (% – in progress by: CRU + WKD)*)

*) in accordance with the Information on the implementation of the recommendations of PKBWK for the year 2021 – communicated by the UTK by letter – DPN-WDZK.47.20.2022.1.KG dated 2022-04-29 – (regarding the implementation of recommendations submitted by the President of UTK to the entities of the railway market)

⁹⁾ US – users of sidings

¹⁰⁾ NGR – narrow gauge railways

Ad. 4) REPORT No. PKBWK 04/2021 of the investigation of a category A20 serious accident occurring on 18 August 2020 at 07:29 on a category C level crossing, located on the Lublin Główny – Przeworsk route on track no. 1, at 119.080 km of the railway line no. 68 Lublin Główny – Przeworsk	
Recommendations of the State Commission on Railway Accident Investigation stated in the report	From the “ Information on the implementation of the recommendations of the PKBWK for the year 2021 ” (letter ref. no, Office of Rail Transport UTK - WDZK.47.20.2022.1.KG of 29 April 2022), it follows that the President of UTK by letter UTK No. DPN-WDZK.47.23.2021.2.KG of 13 September 2021 – forwarded the recommendations to market entities and analysed the information on the implementation of the aforementioned recommendations
1. The infrastructure manager PKP Polskie Linie Kolejowe S.A. will assess the significance of the change and the risk taking into account the anomalies included in items II.1.5., IV.5.3., IV.5.4., IV.6. Of the Report.	<p style="text-align: center;">Contents of the recommendations forwarded for the implementation by the President of the UTK</p> <p>PKBWK/04/2021_1 the infrastructure manager PKP Polskie Linie Kolejowe S.A. will assess the significance of the change and the risk taking into account the anomalies included in items 11.1.5., IV.5.3., IV.5.4., IV.6. of the Report.</p>
2. Rail Infrastructure Managers shall extend the obligations to carry out checks: <ul style="list-style-type: none"> a) visibility of the crossing from the access roads, b) regularities in maintaining visibility triangles, c) correct positioning of traffic signal compartments and their visibility from access roads, d) the validity of the trip metrics and their alignment with the parameters on the ground for all personnel carrying out maintenance as well as inspections and diagnostic tests of the journeys 	<p>PKBWK 04/2021_2 authorised railway infrastructure managers, users of railway sidings, operators of narrow gauge railways and WKD shall extend the obligations to carry out inspections of:</p> <ul style="list-style-type: none"> a) visibility of the crossing from the access roads, b) regularities in maintaining visibility triangles, c) correct positioning of traffic signal compartments and their visibility from access roads, d) the trip metrics are up to date and in line with the parameters on the ground for all personnel carrying out maintenance as well as inspections and diagnostic tests of the trips.
3. Railway infrastructure manager PKP Polskie Linie Kolejowe S.A. will, within the framework of the safety management system (SMS), undertake measures aimed at improving the effectiveness of the implementation of SMS procedures, in particular procedures SA-01 and PR-03, as well as improving the effectiveness of performed checks and diagnostic tests of level crossings, and will implement effective mechanisms of supervision over the implementation of obligations resulting from these procedures.	<p>PKBWK 04/2021_3: Authorised Rail Infrastructure Managers will, as part of their Safety Management System (SMS), take measures to:</p> <ul style="list-style-type: none"> a) improving the efficiency of the implementation of SMS procedures, in particular those related to the maintenance of railway lines in technical and organisational condition and those related to change management, b) improving the efficiency of the checks and diagnostic tests carried out on level crossings.
the recommendations no. 1, 2 and 3 were submitted to the President of the Office of Rail Transport who has statutory supervision of infrastructure managers and railway undertakings. The listed entities should implement the recommendations contained in this Report.	

Table 13. **Analysis of information on the implementation of recommendations contained in the Report No. PKBWK 04/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

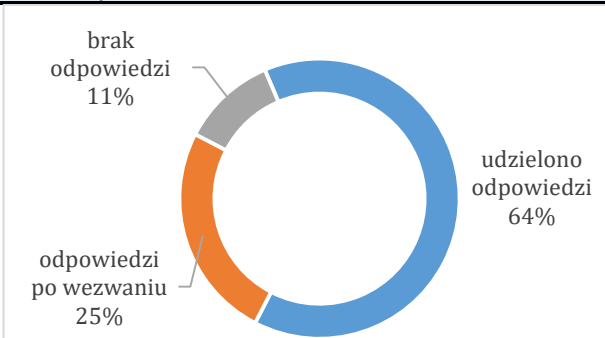
Statistical analysis of the information on the implementation of the recommendations stated in the Report no. PKBWK 04/2021		
Number of addressees of the recommendations	417	
Responses provided in time	266	
Failure to respond in time	151	
Number of requests submitted to entities	151	
Number of responses submitted after a request	104	
Failure to respond to the request	47	

Table 14. **Assessment of the information provided on the implementation of recommendations contained in the Report No. PKBWK 04/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Evaluation of the information on the implementation of the recommendations stated in the Report no. PKBWK 04/2021			
Recommendations	PKBWK 04 /2021_1	PKBWK 04 /2021_2	PKBWK 04 /2020_3
Assessed positively	1	298	12
Insufficient answer	0	56	1
Average percentage of implementation of the recommendation	100	85	83

Chart 12. **Average percentage of implementation of individual recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 04/2021** (in accordance with the information from the President of UTK)

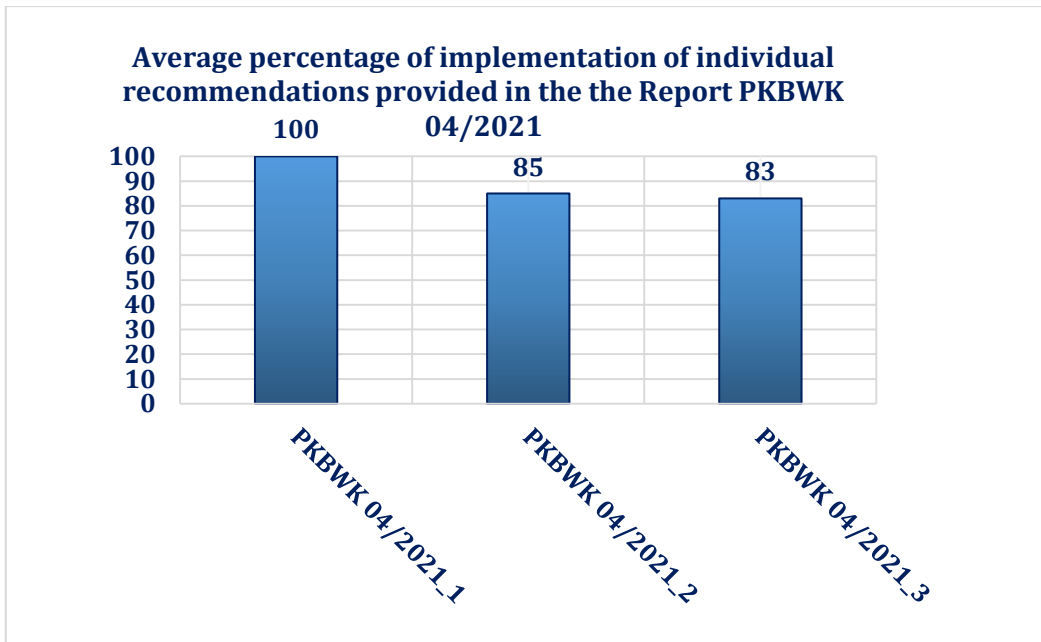
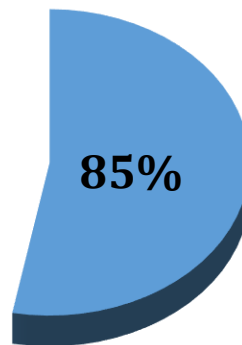


Chart 13. **Average percentage of implementation of the recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 04/2021** (in accordance with the information from the President of UTK)



The average percentage of implementation of the recommendations was determined by UTK based on the declarations of the addressees of the respective recommendation. The lack of a 100% recommendation is due to the entity’s timetable for implementing actions to fully implement the recommendations issued by the PKBWK.

Table 15. **Implementation of recommendations by the entities listed by the Commission in Report no. PKBWK 04/2021** – pursuant to information provided to SCARI in March and April of 2022.

Recommendations arising from the Report No. PKBWK 04/2021 (issued in 2021)	Entity to which the recommendation is issued	Date of implementation of the recommendation	Average percentage (%) of the recommendation realized by the entities listed in column 2/ (implementation stage)
1	2	3	4
Recommendation 1	PKP PLK	16/03/2022	100 (% - realized - by PKP PLK)
Recommendation 2	PKP PLK (IM+ US + ¹¹) NGRO + WKD)	31/12/2021	100 (% - realized - by PKP PLK) 85 (% in progress by: IM + US + NGRO + WKD)*)

Recommendation 3	PKP PLK (IM)	31/12/2021	100 (% – realized – by PKP PLK) 83 (% in progress by IM)*)
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*) in accordance with the Information on the implementation of the recommendations of PKBWK for the year 2021 – communicated by the UTK by letter – DPN-WDZK.47.20.2022.1.KG dated 2022-04-29 – (regarding the implementation of recommendations submitted by the President of UTK to the entities of the railway market)

11) NGRO – means: narrow gauge railway operator – hereinafter referred to as “NGRO”

Ad. 5) REPORT No. PKBWK 05/2021 of the investigation of a serious railway accident occurring on 26 January 2021 at 07:39 a.m. on category D level crossing at the station located on the route Zbąszynek – Lutot Suchy on track no. 1, at 10.196 km of railway line no. 367 Zbąszynek – Gorzów Wielkopolski;	
Recommendations of the State Commission on Railway Accident Investigation stated in the report	From the “ Information on the implementation of the recommendations of the PKBWK for the year 2021 ” (letter ref. no, Office of Rail Transport UTK - WDK.47.20.2022.1.KG of 29 April 2022), it follows that the President of UTK by letter UTK No. DPN-WDK.47.33.2021.2.KG of 24 November 2021 – forwarded the recommendations to market entities and analysed the information on the implementation of the aforementioned recommendations
1. The road manager, the Mayor of Trzciel, shall take measures to immediately remove the irregularities found during diagnostic tests or during inspections at crossings, as stated in the railway infrastructure manager’s findings.	Contents of the recommendations forwarded for the implementation by the President of the UTK The recommendation does not apply to the President of the Office of Rail Transport, which has statutory supervision of infrastructure managers and railway undertakings.
2. Railway undertaking POLREGIO sp. z o.o. is going to carry out an inspection in all railway vehicles used in the company aiming to inspect the correctness of functioning of installed front view cameras and will undertake proper actions to ensure the technical fitness of these recorders.	PKBWK 05/2021_1 Railway undertaking POLREGIO sp. z o.o. is going to carry out an inspection in all railway vehicles used in the company aiming to inspect the correctness of functioning of installed front view cameras and will undertake proper actions to ensure the technical fitness of these recorders.
3. The manager of the class L municipal road together with the manager of the railway infrastructure shall adjust the access to the level crossing over a length of at least 34 m, to a width of 2 x 2.75 metres (in accordance with the provisions of § 15 section 1 item 5 of the Regulation of the Minister of Transport and Maritime Economy of 2 March 1999 on the technical conditions which must be fulfilled by public roads and their location (i.e. Journal of Laws of 2016, item 124, as amended). The current width of the road meets the requirements set out in §14(3)(1) of the aforementioned Regulation and it is acceptable for the duration of the construction or for the reconstruction of the road.	PKBWK 05/2021_2 The manager of the class L municipal road together with the manager of the railway infrastructure shall adjust the access to the level crossing over a length of at least 34 m, to a width of 2 x 2.75 metres (in accordance with the provisions of § 15 section 1 item 5 of the Regulation of the Minister of Transport and Maritime Economy of 2 March 1999 on the technical conditions which must be fulfilled by public roads and their location (consolidated text: Journal of Laws of 2016, item 124, as amended). The current width of the road meets the requirements set out in § 14(3)(1) of the aforementioned Regulation and it is acceptable for the duration of the construction or for the reconstruction of the road.
4. The railway infrastructure manager is going to maintain the 60 km/h train speed limit until the width of the access road is adjusted to the width of the level crossing platform.	PKBWK 05/2021_3 the railway infrastructure manager is going to maintain the 60 km/h train speed limit until the width of the access road is adjusted to the width of the level crossing platform.
The recommendations specified above were submitted to the President of the Office of Rail Transport. Individual entities shall	

implement the recommendations contained in this Report and adopted by resolution of the PKBWK.	
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Table 16. **Analysis of information on the implementation of recommendations contained in the Report No. PKBWK 05/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)


Statistical analysis of the information on the implementation of the recommendations stated in the Report no. PKBWK 05/2021		
Number of addressees of the recommendations	2	
Responses provided in time	2	
Failure to respond in time	0	
Number of requests submitted to entities	0	
Number of responses submitted after a request	0	
Failure to respond to the request	0	

Table 17. **Assessment of the information provided on the implementation of recommendations contained in the Report No. PKBWK 05/2021 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Evaluation of the information on the implementation of the recommendations stated in the Report no. PKBWK 05/2021			
Recommendations	PKBWK 05 /2021_1	PKBWK 05 /2021_2	PKBWK 05 /2020_3
Assessed positively	1	1	1
Insufficient answer	0	0	0
Average percentage of implementation of the recommendation	100	40	100

Chart 14. **Average percentage of implementation of individual recommendations provided by the President of the Office of Rail Transport (UTK) – from the Report No. PKBWK 05/2021** (in accordance with the information from the President of UTK)

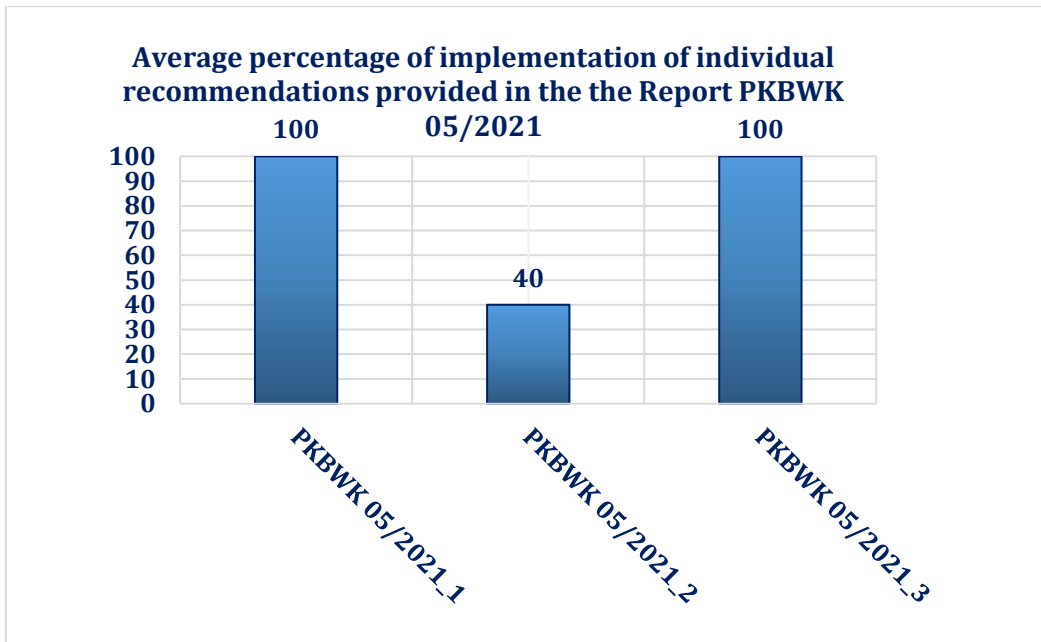
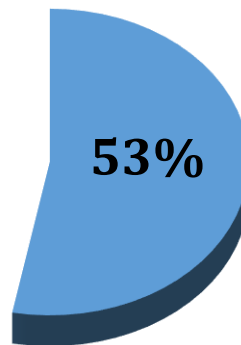


Chart 15. **Average percentage of implementation of recommendations provided by the President of UTK from Report No. PKBWK 05/2021** (in accordance with the information from the President of UTK)



The average percentage of implementation of the recommendations was determined by UTK based on the declarations of the addressees of the respective recommendation. The lack of a 100% recommendation is due to the entity's timetable for implementing actions to fully implement the recommendations issued by the PKBWK.

Table 18. **Implementation of recommendations by the entities listed by the Commission in Report no. PKBWK 05/2021** – pursuant to information provided to SCARI in March and April of 2022.

Recommendations arising from the Report No. PKBWK 05/2021 (issued in 2021)	Entity to which the recommendation is issued	Date of implementation of the recommendation	Average percentage (%) of the recommendation realized by the entities listed in column 2/ (implementation stage)
1	2	3	4
Recommendation 1	Road Manager, Mayor of Trzciel Town and Municipality	¹²⁾ 31/12/2022	¹²⁾ during implementation by the road manager
Recommendation 2	POLREGIO S.A.	30/03/2022	100 (% – realized by POLREGIO S.A)

Recommendation 3	PKP PLK + administrator of L- class municipal road	30/06/2023	40 (% - in progress - by PKP PLK + manager of L class municipal road) *)
Recommendation 4	PKP PLK	09/02/2021	100 (% - realized - by PKP PLK)

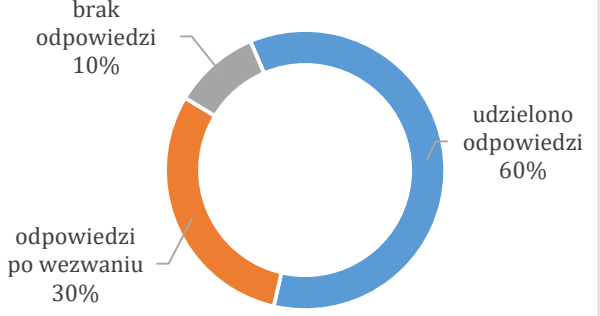
*) in accordance with the Information on the implementation of the recommendations of PKBWK for the year 2021 - communicated by the UTK by letter - DPN-WDZK.47.20.2022.1.KG dated 2022-04-29 - (regarding the implementation of recommendations submitted by the President of UTK to the entities of the railway market)

¹²⁾ in letter no. PKBWK.4631.1.18.2021 dated 28 October 2021 the State Commission on Railway Accident Investigation pursuant to Article 28l, paragraph 4 of the Railway Transport Act of 28 March 2003 (Journal of Laws of 2020, item 1043), has provided the Mayor of the Town and Municipality of Trzciel with information on the completion of proceedings in the case of a serious accident occurring on 26 January 2021. at 07:39 at the D category level crossing located on the route Zbąszynek - Lutol Suchy, in track no. 1, at 10.196 km of the railway line no. 367 Zbąszynek - Gorzów Wielkopolski, together with the PKBWK Report 05/2021.

The Mayor of the Municipality of Trzciel provided information to the PKBWK in letter No. GKM.7234.14.2022 of 2022-08-05 concerning the implementation of recommendation no. 1, i.e. the declaration that the works related to the execution of the access to the railway-road crossing on a length of 34 m were carried out in full by 31 December 2022.

Table 19. **Analysis of information on the implementation of recommendations contained in the Annual Report on the activity of the PKBWK submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Statistical analysis of the information on the implementation of the recommendations stated in the Annual Report for the year 2020	
Number of addressees of the recommendations	454
Responses provided in time	270
Failure to respond in time	184
Number of requests submitted to entities	184
Number of responses submitted after a request	137
Failure to respond to the request	47



Implementation Status	Percentage
udzielono odpowiedzi	60%
odpowiedzi po wezwaniu	30%
brak odpowiedzi	10%

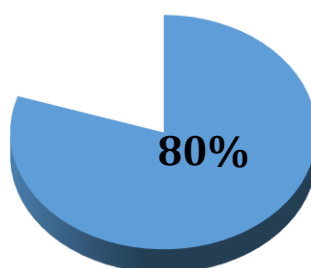
Table 20. **Assessment of the information provided on the implementation of recommendations contained in the Annual Report for the year 2020 submitted by the President of UTK to the railway market entities** (in accordance with the information obtained from the President of the UTK)

Evaluation of the information on the implementation of the recommendations stated in the Annual Report for the year 2020							
Recommendations	Annual Report 2020_1	Annual Report 2020_2	Annual Report 2020_3	Annual Report 2020_4	Annual Report 2020_5	Annual Report 2020_6	Annual Report 2020_7
Assessed positively	261	273	101	237	120	11	13
Insufficient answer	40	55	4	53	2	0	2
Average percentage of implementation of the recommendation	83	78	80	77	81	93	77

Chart 16. **Average percentage of implementation of individual recommendations provided by the President of UTK from the Annual Report 2020 on the activities of PKBWK** (according to information from the President of UTK)



Chart 17. Average percentage of implementation of the recommendations provided by the President of UTK from the 2020 Annual Report on the activities of the PKBWK (based on information from the UTK)



The average percentage of implementation of the recommendations was determined by UTK based on the declarations of the addressees of the respective recommendation. The lack of a 100% recommendation is due to the entity's timetable for implementing actions to fully implement the recommendations issued by the PKBWK.

Table 21. Status of the implementation of the PKBWK recommendations made in 2021 and published in the 2020 Annual Report based on information submitted to the PKBWK in March 2022 (and based on information from the UTK)

Recommendations from the 2020 Annual Report (issued in 2021)	Entity to which the recommendation is issued	Date of implementation of the recommendation	Average percentage (%) of the recommendation realized by the entities listed in column 2/ (implementation stage)
1	2	3	4
Recommendation 1	PKP PLK (IM + US + WKD)	28/02/2022	100 (% - alternative measures taken - by PKP PLK) 83 (% - in progress by: IM + US + WKD) *)*13)
Recommendation 2	PKP PLK (IM + US + NGR+ WKD)	30/06/2022	90 (% - in progress by PKP PLK) 78 (% - in progress by: IM + US + NGR + WKD) *)*13)

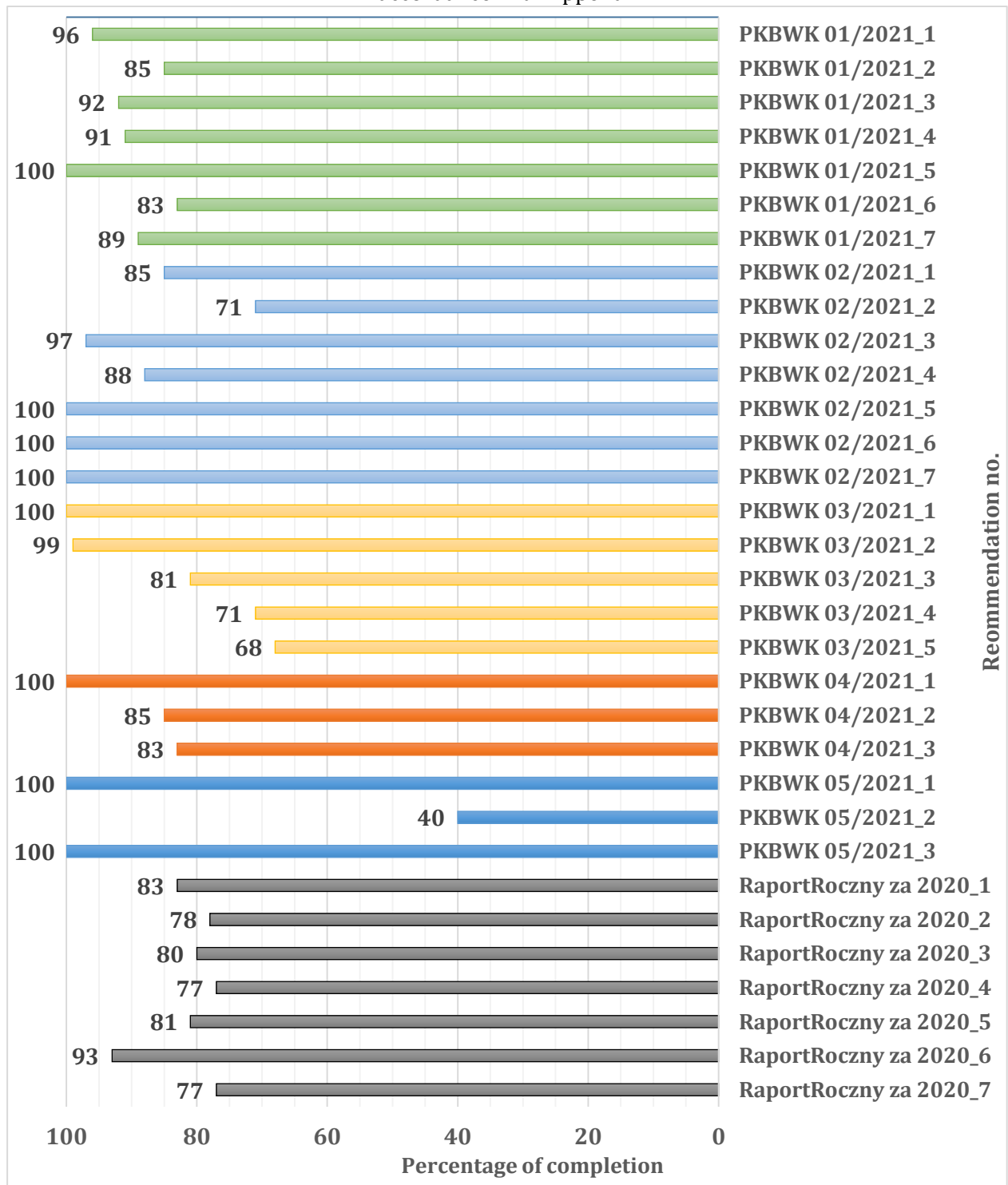
Recommendation 3	(CRU) (freight)	80 (% – in progress by: CRU (freight)) ^{*)*13)}
Recommendation 4	PKP PLK (IM + US)	31/12/2021	100 ((% – realized by PKP PLK) 77 (% – in progress by: IM + US) ^{*)*13)}
Recommendation 5	(CRU)	81 (% – in progress by the CRU) ^{*)*13)}
Recommendation 6	PKP PLK (IM)	31/12/2022	90 (in progress, alternative measures taken by PKP PLK) 93 (% – in progress by IM) ^{*)*13)}
Recommendation 7	PKP PLK (IM)	31/10/2022	50 (% – in progress by PKP PLK) 77 (% – in progress by IM) ^{*)*13)}

^{*)} in accordance with the Information on the implementation of the recommendations of PKBWK for the year 2021 – communicated by the UTK by letter – DPN-WDZK.47.20.2022.1.KG dated 2022-04-29 – (regarding the implementation of recommendations submitted by the President of UTK to the entities of the railway market)

^{*13)} the content of the recommendations forwarded for implementation by the President of UTK is included in the summary in point 5.1 of this report

Information on the **average percentage of implementation of individual recommendations referred for implementation by the President of UTK** is included in Appendix A to this Annual Report. Information on the implementation of the PKBWK recommendations made in 2021 to other stakeholders (pursuant to Article 28l section 8 of the Railway Transport Act) is contained in Appendix B.

Chart 18. Average percentage of implementation of PKBWK recommendations for 2021
in accordance with Appendix A



The President of the UTK in 2021 continued to follow up on the recommendation of the PKBWK issued in Report No. PKBWK/07/2019 from the accident cat. B11 on line 272, Taczanów – Pleszew route with the following contents: *The President of the Office of Rail Transport shall take action on the introduction of mandatory registration of wheelsets for freight wagon axles in accordance with the Guide to the implementation of European wheelset registration (EWT) for freight wagon axles developed in Brussels on 26 July 2010 by the Joint Sectoral Group ERA Task Force for freight wagons/axles, which has been agreed with the National Safety Authority (NSA).*

In 2021, a test version of the NCR system was launched for selected rail market players and proposals for legislative changes were submitted to the Ministry of Infrastructure. The introduction of a wheelset register – due to the scale of its impact – requires further testing of the prepared IT application and its wide availability to maintenance entities and railway vehicle keepers, as well as the amendment of the provisions of the Railway Transport Act and the introduction of a dedicated regulation into the legal order.

6.2 Summary of the implementation of the Commission's recommendations (as reported by the President of UTK)

In 2021, the President of the UTK submitted opinions to 5 draft reports on incidents in which the PKBWK conducted proceedings. The President of UTK presented a position paper proposing amendments to the provisions of the draft reports under review.

To entities of the railway market (certified railway undertakings, authorised infrastructure managers, users of railway sidings, operators of narrow gauge railways and managers of railway networks that are functionally separated from the Union railway system and intended only for provincial or local transport (operating on the basis of safety certificates), the President of UTK sent a total of 1617 letters, including 32 recommendations resulting from the reports of PKBWK.

The designated entities were obliged to inform the President of the UTK within a certain period of time on how they would deal with the recommendations of the PKBWK.

UTK carried out a qualitative analysis of the responses sent by the railway market entities and, on this basis, assessed the manner in which the recommendations issued (recommendations) were implemented.

The analysis mainly contains the President of the UTK's assessment of the declared implementation of recommendations by entities operating on the basis of a safety management system or a maintenance management system. In the proportionally few cases identified as "inadequate response," the Chairman found deficiencies in at least one of the required elements, which may ultimately negatively affect the effectiveness of the implementation of the PKBWK recommendations.

These issues will be monitored during the ongoing UTK surveillance activities, taking into account the potential safety risk and the seriousness of the non-compliance.

By 01 April 2022 – 57 entities had not responded about the implementation of recommendations arising from at least one PKBWK report. According to the President of UTK, those who evade answering are mainly entities that operate on the basis of a safety certificate, such as users of railway sidings or operators of narrow gauge railways.

Between January 2021 and April 2022, the President of UTK issued decisions revoking the operating document – the safety certificate (two cases) and the certificate of the entity in charge of maintenance – in three cases.

The President of UTK, within the framework of his supervision (pursuant to Article 28l section 9 of the Act), in the period January 2021 – April 2022, inspected the implementation of selected recommendations resulting from the reports of the PKBWK issued in 2021. During the period indicated, 42 supervisory activities were carried out, including 18 inspections of safety management systems, during which the implementation of recommendations was verified on a systemic basis, and 24 supervisory activities aimed at supervising the implementation of the recommendations of the PKBWK.

Supervisory activities covered 26 certified railway undertakings, 10 authorised infrastructure managers and 6 users of railway sidings. Twenty-six different recommendations of the PKBWK were audited, representing more than 80 per cent of all recommendations made in 2021, while the implementation of over 300 recommendations was verified during surveillance activities in 42 entities.

During the audit, 17 irregularities were found, which related to the lack of implementation or irregularities in the implementation of the recommendations from Reports No. PKBWK 01/2021, PKBWK 02/2021, PKBWK 03/2021, PKBWK 04/2021, Annual Report 2020.

In addition, the President of UTK continued in 2021 to follow up on the recommendation of the PKBWK contained in Report No. PKBWK/07/2019 published on 20 November 2019 on accident cat. B11 on line 272, route Taczanów – Pleszew, caused by a broken axle of a wheelset.

7. Other aspects relating to the functioning of the Commission in 2021.

In 2021, the Commission carried out its activities by pursuing its planned objectives and challenges, based on the allocated funding for the year. Within the allocated funding, 11 permanent Commission members were employed and from October 2021 – 9 permanent members of the Commission.

Within the framework of its activities, the Commission cooperated with other organisational units of the Ministry of the Interior and Administration, among others, in terms of analysing draft legislation, sectoral programmes, budget preparation or organisational and personnel matters.

The Commission's activities included:

- cooperation with the Office of Rail Transport (UTK),
- cooperation with railway committees investigating the causes and circumstances of incidents,
- travels by the standing members of the Committee to the scene of incidents at the order of the Committee Chairman – (travels to 28 incidents);
- starting an investigation of the accident or incident if it occurred in circumstances justifying such an investigation (7 decisions by the Chairman of the Commission);
- making recommendations to entities to improve security, during ongoing investigations (14 recommendations),
- cooperation with the public prosecution service and the police, at the scene of the incident and in the later stages of the proceedings in accordance with the agreement and the applicable legislation,
- cooperation with the organisers of training courses and conferences to present the work of the Commission and the way in which investigations relating to railway incidents (serious accidents, accidents and incidents) are carried out by railway committees and participation in meetings and briefings at railway undertakings on assessing the safety situation in rail transport,
- participation of Commission members in seminars and conferences on rail safety,
- cooperation with public road authorities at various levels (district, municipal) following railway incidents at level crossings,
- cooperation with national investigative authorities of other EU countries,
- participation in meetings and working groups and cooperation with the European Union Agency for Railways (EUAR),
- cooperation with the units of the Ministry of the Interior and Administration in the area of drafting amendments to national legislation,
- cooperation with the office serving the Minister for Administration and Internal Affairs, as provided for in Article 28d of the Act,
- cooperation with the General Inspectorate of Road Transport (GITD) – on devices monitoring drivers' offences in the area of railway and road crossings.

8. Summary

In 2021, the total number of incidents reported to the Commission increased by 36.8% in comparison to the previous year. In 2021, there were 2403 reported, occurring incidents and in 2020 – 1739 (i.e. an increase of 646 incidents) (Figure 1).

It should be mentioned that since July 2021, the PKBWK has received a higher number of incident reports. The above is related to the extension of the provisions of *Chapter 5a of the Railway Transport Act* to the entities defined in Article 3 of that Act. The amendment was introduced by the Act amending the Railway Transport Act of *30 March 2021* - Article 1(3)(b) (Journal of Laws no. 780) and applies to managers of railway networks that are functionally separate from the railway system and intended only for provincial or local transport, and to railway operators that operate only within these railway networks (including WKD and narrow gauge railway lines).

The increase in the number of incidents, is also a result of the lifting of movement restrictions due to the COVID-19 pandemic and the gradual return to normality – after they have been repealed.

Notwithstanding the above, there has been a significant increase in the overall number of incidents, and this applies in particular to incidents occurring at level crossings.

There was a 50.0% decrease in serious accidents, while there was a 31.7% increase in accidents and 39.2% increase in incidents.

In 2021, there were 3 serious accidents – all at level crossings: 1 at a category C level crossing and two at a category D level crossing. By contrast, there were 6 serious accidents in 2020 – including 4 at level crossings: 1 each at a category B and D level crossing and two at a category C crossing.

At category A crossings 6 accidents occurred, an increase of 1 accident compared to the previous year (5 accidents occurred in 2020). No serious accidents were recorded at Category A crossings in 2021, and no serious accidents were recorded in 2020 either.

There were 19 accidents at category B level crossings in 2021 and 12 accidents and 1 serious accident in 2020. Category C level crossings had 1 serious accident and 33 accidents in 2021, while in 2020 – 2 serious accidents and 25 accidents.

A worrying development was the increase in accidents by 8 at category C level crossings in 2021.

In 2021, there were more than 50 incidents involving a road vehicle entering and striking the side of a railway vehicle on a train when crossing category D, C and also B level crossings.

The worrying increase in serious accidents and accidents at level crossings compared to 2020 (i.e. from 149 incidents in 2020, an increase to 211 incidents in 2021). In 2021, there was an increase in serious accidents and incidents at level crossings – up 41.6 per cent compared to 2020.

An analysis of the number of incidents that have occurred shows that there has also been a worrying increase (by 229 incidents) in incidents classified as category C64 (585 incidents were recorded in 2021 and 356 in 2020), i.e. *malicious, hooligan or reckless mischief (e.g. throwing stones at a train, stealing cargo from a moving train or marshalling yard, placing an obstruction on the track, vandalising power, communications, signalling or track-surface equipment and interfering with such equipment)*,

without victims or adverse consequences to property or the environment, posing a risk to passengers or train personnel. Incidents involving road vehicles entering and remaining in the danger zone of a crossing, between closed semi-collars (barriers), are classified as C64 by the railway commissions.

In 2021, there were 585 category C64 incidents, including: more than 498 at level crossings and 78 train flips and other incidents (theft, obstruction laying and other hooligan acts).

Events (incidents) at level crossings – failure of a road vehicle to stop in front of a closed barrier (half-barrier) and damage to the barrier or traffic signals (i.e. incidents category C66 – 122); malicious, hooligan or reckless mischief, with no casualties or adverse consequences to property or the environment, posing a risk to passengers or train personnel (i.e. incidents category C64 – 498).

A total of 620 incidents were recorded at level crossings – involving a road vehicle failing to stop in front of a closed horn (half-horn) and damaging it or traffic signals (i.e. category C66 incidents) and malicious, hooligan or reckless misconduct, posing a danger to passengers or train staff, including road vehicle closures at crossings, damage to horns (i.e. category C64 incidents).

It should be mentioned that the figures presented for incidents at level crossings, including road vehicle closures in the danger zone at Category B level crossings, are based only on information provided by the railway commissions in the *Final Findings Reports*. In practice, however, there is a much larger number of such incidents – some of which are also categorised as C66. It should be emphasised that not all incidents are reported (since, once a train has left a level crossing without collision, the driver of the road vehicle lifts the barriers automatically allowing him or her to drive away with impunity, despite the failure to comply with traffic regulations when crossing these crossings).

Infrastructure managers should take steps to ensure that incidents of road vehicles remaining between closed barriers without contact with railway vehicles are in any case only classified as cat. C64. As part of a safety culture, operators should take steps to ensure that drivers and drivers of railway vehicles always report to the infrastructure manager's personnel the fact that road vehicles remain between closed barriers.

The significant increase in incidents (accidents and incidents) at level crossings in 2021 (Chart 5) should mobilise infrastructure managers to take effective measures to improve safety (reduce the number of these incidents) .

There was a slight increase in the number of injured (killed) in the record of all railway accidents, i.e. by 2.0%. Attention should be drawn to category B34, which has been updated as at 19 August 2022. The number of incidents in the statistics in this category is significantly lower than that recorded as at 31 December 2021 due to completed prosecutions and the reclassification of some of the category B34 incidents as suicides or suicide attempts.

A negative development is the increase in the number of category C68 incidents – train disconnecting without running off (281 occurred in 2021 and 221 incidents occurred in 2020). The number of these incidents is very high, which should mobilise the railway committees to analyse the causes and clarify the circumstances of the incidents more thoroughly, in order to minimise the risks. In 2021, there were 10 category B08 accidents and four category C47 incidents (i.e. running off of railway vehicles).

The Railway Event Recording System (RIRS) has noted an increase of over 44.4% in C50 category incidents (from 27 incidents in 2020 to 39 in 2021) relating to improper loading, unloading and securing of cargo. This is a worrying development given that, despite the recommendation made on this issue in the 2020 Annual Report, the number of these incidents has increased in 2021. However, in 2019, there have been 17 incidents cat. C50. The above calls for increased oversight and greater involvement of carriers and responsible parties (this includes those responsible for maintenance (ECM)) in the organisation of freight transport.

Thorough analysis and elimination of hazards (irregularities) shall cover events cat. C54, i.e. wagon faults or fault conditions detected by detection equipment and confirmed under workshop conditions (hot axle boxes, hot brake resulting in a displaced rim), as well as other faults on moving railway vehicles noticed by operating personnel. There has been an increase in these incidents from 191 occurring in 2020 to 226 – 2021.

In the 2021 records, there was a significant increase of 39.2% in reported incidents compared to the previous year (Figure 1). With regard to accidents, incidents generate less material damage and fewer people injured. Nevertheless, the persistence of a large number of them provides important information about existing hazards that rail market operators should monitor as part of their safety management and maintenance management systems. Category C54 (226), C64 (585), C68 (281) incidents together account for more than 62.8% of all incidents occurring in 2021.

Incidents occurring during the course of investment and modernisation works should be thoroughly analysed and risks (irregularities) eliminated. Investment-related events are most often categorised as B09 and C51. Incident categories B09 and C51 related to damage or poor maintenance of structures also include improper execution of investment and modernisation works (e.g. invasion by a railway vehicle or equipment (materials) left on the track or in the track gauge). Furthermore, in addition to the above categories, incidents occurring in connection with irregularities during infrastructure repairs, capital works and upgrades were classified by the railway commissions in other categories. In the previous year, there was an increase in the number of category B09 incidents, from 33 in 2020 to 58 in 2021, and an increase in category C51 incidents, from 38 in 2020 to 42 in 2021. The number of these incidents continues to be significant and should be given careful consideration by those overseeing and organising these works.

The most common inadequacies related to investment and upgrade events and track and pavement repairs are:

- **failure to comply with the temporary rules and regulations** for the conduct of works and the manager's internal instructions,
- **drawing up regulations in a simplified manner** that does not cover all the safety risks of the work being carried out,
- **inadequate site protection** – collisions between railway vehicles and objects on the working track - most often with vehicles working on the construction site (excavators, dumpers), improperly stored materials (sleepers, rails, etc.), collisions with road vehicles resulting from the lack of guarding of the level crossing by an authorised worker, damage to rolling stock by ballast from the ballast cleaning machine working on the adjacent track, or sandblasting the structure of the repaired bridge,
- **incorrect behaviour by users of level crossings** located within the area of the works,
- **failure to exercise due care when carrying out the works** – workers being hit by trains travelling on the active track without speed limit, in the vicinity of the works **being carried out**,
- **incorrect route alignment** – correct route alignment not verified by signalling equipment, disabled due to works in progress,
- **failing to stop the vehicle where it is supposed to stop** (e.g. in front of a shunting yard or turnouts when leaving a worksite, starting a journey without the required authorisation without consulting the traffic officer),
- lack of close cooperation in the area of investment and operation, lack of proper communication between the Investment Realisation Centres and the Railway Works of PKP PLK.

From the analysis of incidents on railway sidings in 2021 – shows a significant increase in incidents in 2021. (i.e. –180 incidents occurred, including 149 accidents and 31 incidents) while in 2020 a total of 141 incidents occurred (including 110 classified as railway accidents and 31 as railway incidents).

Railway sidings incidents in 2021 account for 7.5% of the total number (2403) of incidents reported to PKBWK, accidents (149) account for 22.5% of the total number (661) of railway incidents reported to PKBWK, and incidents (31) account for 1.8% of the total number of railway incidents (1739).

In this report, the Commission has made recommendations to, in its view, improve safety in rail transport.

The Commission fulfilled its statutory obligations in 2021 while staying within the 2021 budget. It carried them out in effective cooperation with a wide range of actors, notably: railway commissions, national investigative bodies of other EU countries, infrastructure managers and railway undertakings, UTK and the European Union Railway Agency.

APPENDIX "A" to the 2021 Annual Report of the State Commission on Railway Accident Investigation.

Information on the implementation of PKBWK recommendations made in 2021.

(in accordance with the information of the President of the Office of Rail Transport)

Within the framework of the supervision of the implementation of the recommendations issued by PKBWK by the entities of the railway market, the President of UTK analysed the recommendations addressed to him and having made changes to their content, forwarded them for implementation to infrastructure managers, railway undertakings, entities responsible for the maintenance of railway vehicles and entities operating special vehicles.

- 1) REPORT No. PKBWK 01/2021 from the investigation of a serious accident of category A 13 occurring on 09 March 2020 at 04:15 at Szymankowo station, in track no. 2, at km 287.360 of railway line No. 9 Warszawa Wschodnia Osobowa – Gdańsk Główny
- 2) REPORT No. PKBWK 02/2021 from the investigation of a serious accident of category A20 occurring on 21 October 2020 at 12:52 on a category C level crossing, located on the Rokiciny – Baby route, on track no. 2, at 120.779 km of the railway line no. 1 Warszawa Zachodnia – Katowice
- 3) REPORT No. PKBWK 03/2021 from the investigation of a serious accident of category A21 occurring on 03 September 2020 at 13:50 at the category D level crossing, located on the route Przybówka – Jasło Towarowa, in track no. 1, at 55.924 km of the railway line no. 106 Rzeszów Główny – Jasło
- 4) REPORT No. PKBWK 04/2021 from the investigation of a serious accident of category A20 occurring on 18 August 2020 at 07:29 on a category C level crossing, located on the Lublin Główny – Przeworsk route, on track no. 1, at 119.080 km of the railway line no. 68 Lublin Główny – Przeworsk
- 5) REPORT No. PKBWK 05/2021 serious railway accident occurring on 26 January 2021 at 07:39 a.m. on category D level crossing at the station located on the route Zbąszynek – Lutot Suchy on track no. 1, at 10.196 km of railway line no. 367 Zbąszynek – Gorzów Wielkopolski;
- 6) Annual Report for the year 2020 on the activities of the State Commission on Railway Accident Investigation.

Analysis of information on the implementation of individual recommendations – from the responses declared by rail market operators

The average percentage of implementation of the recommendation is indicated under each recommendation.

The average percentage of implementation of the recommendations was determined by UTK based on the declarations of the addressees of the respective recommendation.

- I. Recommendations forwarded by the President of the UTK after the analysis of a report no. PKBWK 01/2021** from the investigation of a serious accident of category A 13 occurring on 09 March 2020 at 04:15 at Szymankowo station, in track no. 2, at km 287.360 of railway line No. 9 Warszawa Wschodnia Osobowa – Gdańsk Główny

PKBWK 01/2021_1 Authorised Infrastructure Managers, in accordance with their Safety Management Systems (SMS), will carry out a risk assessment in relation to the hazards identified in the Report that contributed to the occurrence of the incident or were other anomalies related to the incident under investigation. Authorised infrastructure managers shall also take appropriate measures to mitigate the risks of the aforementioned hazards. WKD and PKM shall implement the aforementioned recommendation pursuant to the procedures and internal regulations other than the Safety Management System (SMS).

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, WKD, PKM
AVERAGE PERCENTAGE OF IMPLEMENTATION: **96%**

PKBWK 01/2021_2 Authorised Infrastructure Managers, Certified Railway Undertakings shall complete the hazard register with the following hazard: use of mobile phones for giving orders related to railway traffic operation instead of measures allowed by internal regulations and shall assess the risk and take appropriate measures to mitigate the risk of this hazard occurring. WKD and PKM shall implement the aforementioned recommendation pursuant to the procedures and internal regulations other than the Safety Management System (SMS).

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, certified railway operators, WKD, PKM

AVERAGE PERCENTAGE OF COMPLETION: **85%**

PKBWK01/2021_3 Authorised Infrastructure Managers, based on the risk assessment carried out, shall review the frequency and effectiveness of internal controls from the scope referred to in the 2013 PKBWK Annual Report, i.e.:

- a) an obligation to periodically (in accordance with internal instructions) listen to calls made using communications and radio communications,
- b) the correctness of the entries in the technical and operational documentation kept at the traffic stations, including the operating logs, in particular with regards to their legibility and current validity,
- c) the types and recurrence frequencies of signalling equipment faults and their legibility.

WKD and PKM shall implement the aforementioned recommendation pursuant to the procedures and internal regulations other than the Safety Management System (SMS).

ADDRESSEES OF THE RECOMMENDATION: Authorised infrastructure managers, WKD, PKM
AVERAGE PERCENTAGE OF COMPLETION: **92%**

PKBWK 01/2021_4 authorised Infrastructure Managers and WKD and PKM shall include in the training programme the rules related to the entry, exit and passage of trains and the organisation of the work process by the train dispatcher, giving orders, issuing authorisations and communicating with the driver and the driver of the working train. Zarządca infrastruktury PKP Polskie Linie Kolejowe S.A. opracuje ww. program szkoleń w oparciu o wymagania wynikające z § 23 i § 61 Instrukcji o prowadzeniu ruchu pociągów (Ir-1), zwanej dalej „Instrukcją Ir-1”

ADDRESSEES OF THE RECOMMENDATION: Authorised infrastructure managers, WKD, PKM
AVERAGE PERCENTAGE OF COMPLETION: **91%**

PKBWK 01/2021_5 The infrastructure manager PKP Polskie Linie Kolejowe S.A. and the carrier HSL Polska sp. z o.o. shall take measures to eliminate other irregularities, not causally related to the incident, included in item IV.6 of the Report.

ADDRESSEES OF THE RECOMMENDATION: PKP Polskie Linie Kolejowe S.A., HSL Polska sp. z o.o.

AVERAGE PERCENTAGE OF COMPLETION: **100%**

PKBWK 01/2021_6 Authorised Infrastructure Managers, Certified Railway Undertakings and WKD and PKM shall implement the recommendation included in the PKBWK Annual Report 2011 and communicated by letter from the Vice President of the Office of Rail Transport dated 30 May 2012, ref. no.: DBK-550/R-03/KB/2012, consisting of a ban on the use of mobile phones during official duties related to the operation of railway traffic, train shunting work related to closures. The addressees of the recommendation shall implement systematic mechanisms of supervision for the ongoing monitoring of compliance with the restriction.

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, certified railway operators, WKD, PKM

AVERAGE PERCENTAGE OF COMPLETION: **83%**

PKBWK 01/2021_7 Authorised Infrastructure Managers and WKD and PKM shall enforce the use of the obligation to signal a closed track with a "D1" disc together with the use of auxiliary measures (warning signs). Infrastructure manager PKP Polskie Linie Kolejowe S.A. shall enforce the obligation expressed above pursuant to provisions of § 53 section 6 of Instruction Ir-1

ADDRESSEES OF THE RECOMMENDATION: Authorised infrastructure managers, WKD, PKM

AVERAGE PERCENTAGE OF COMPLETION: **89%**.

II. Recommendations issued by the President of the UTK following the analysis of report

PKBWK 02/2021 from the investigation of a serious accident of category A20 occurring on 21 October 2020 at 12:52 on a category C level crossing, located on the Rokiciny – Baby route, on track no. 2, at 120.779 km of the railway line no. 1 Warszawa Zachodnia – Katowice

PKBWK 02/2021_1 Authorised railway infrastructure managers and WKD shall take measures to oblige employees in positions directly related to the operation and safety of railway traffic, in particular the personnel of traffic stations reporting incidents at level crossings to the Emergency Call Centre, to use the level crossing identification number, which will contribute to a faster activation of the rescue action. These entities shall regulate the above matter in the technical regulations of the stations.

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, WKD

AVERAGE PERCENTAGE OF COMPLETION: **85%**

PKBWK 02/2021_2 Authorised infrastructure managers, certified railway undertakings, WKD and PKM shall include in the subject matter of periodic instructions, for employees working in positions directly related to the operation and safety of railway traffic, the principles of conduct in case of traffic safety hazards and railway incidents included in § 48 – 58 of Chapter 7 of the Ordinance of 23 January 2015 on general conditions for railway traffic operation and signalling (consolidated text: Journal of Laws of 2015, item 360, as amended).

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, certified railway operators, WKD, PKM

AVERAGE PERCENTAGE OF COMPLETION: **71%**

PKBWK 02/2021_3 Authorised rail infrastructure managers and WKD shall take measures to improve cooperation with road managers during the design, implementation and final acceptance stages of investment tasks in accordance with the applicable regulations for access to level crossings.

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, WKD

AVERAGE PERCENTAGE OF COMPLETION: **97%**

PKBWK 02/2021_4 Authorised Rail Infrastructure Managers and WKD, during diagnostic testing of all level crossings, will each time check whether there are power cabinets for SSP equipment or other objects obstructing the visibility of the train front end from the access roads from 5 metres from the crossing. In the event the aforementioned objects are discovered, they must immediately remove them or move them to another location in order to improve visibility.

The infrastructure manager PKP Polskie Linie Kolejowe S.A. will dismantle the unused control-signalling equipment supply cabinet situated on the right-hand side of the cat. C level crossing at 120.779 km of railway line no. 1 Warszawa Zachodnia – Katowice.

Authorised railway infrastructure managers and WKD shall physically and urgently decommission the inoperable equipment and facilities after operational acceptance.

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, WKD

AVERAGE PERCENTAGE OF COMPLETION: **88%**

PKBWK 02/2021_5 Infrastructure manager PKP Polskie Linie Kolejowe S.A. shall accelerate measures for the installation of innovative security systems at level crossings enabling:

- alerting drivers about the approach to a crossing and
- monitoring their compliance with the applicable regulations, resulting in the imposition of fines in the event of offences.

ADDRESSEES OF THE RECOMMENDATION: PKP Polskie Linie Kolejowe S.A.

AVERAGE PERCENTAGE OF COMPLETION: **100%**

PKBWK 02/2021_6 the carrier PKP Intercity S.A. will take measures to ensure that parameters are correctly registered in the recorders installed on powered railway vehicles. In addition, PKP Intercity S.A. shall include carrying out additional inspections of the correctness of parameter recordings in the recorders of powered railway vehicles as part of the safety improvement programmes of the safety management system (SMS).

ADDRESSEES OF THE RECOMMENDATION: PKP Intercity S.A.

AVERAGE PERCENTAGE OF COMPLETION: **100%**

PKBWK 02/2021_7 the carrier PKP Intercity S.A. shall continue to systematically equip powered railway vehicles, including locomotive EP07-411, with route monitoring systems (digital cameras).

ADDRESSEES OF THE RECOMMENDATION: PKP Intercity S.A.

AVERAGE PERCENTAGE OF COMPLETION: **100%**

III. Recommendations issued by the President of the UTK following the analysis of report

PKBWK 03/2021 from the investigation of a serious accident of category A21 occurring on 03 September 2020 at 13:50 at the category D level crossing, located on the route Przybówka – Jasło Towarowa, in track no. 1, at 55.924 km of the railway line no. 106 Rzeszów Główny – Jasło

PKBWK 03/2021_1 Infrastructure manager PKP Polskie Linie Kolejowe S.A., due to local conditions and the applicable train speed (100 km/h) at the level crossing cat. D at 55.924 km of railway line 106 shall carry out an operational risk assessment to determine whether it is necessary to implement a safety measure in the form of a reduction in the running speed of trains along the length of sections in cases where the front of the train is visible from the public road.

ADDRESSEES OF THE RECOMMENDATION: PKP Polskie Linie Kolejowe S.A.

AVERAGE PERCENTAGE OF COMPLETION: **100%**

PKBWK 03/2021_2 Authorised railway infrastructure managers and WKD will, during periodic briefings and ad hoc training, remind the employees concerned of the obligation to use the individual level crossing identification number, especially when dealing with accidents and calling emergency services, in order to

eliminate the situation referred to in Report No. PKBWK / 02/2021 (i.e. the delay in activating emergency services caused by not providing the operator with the identification number of the level crossing where the incident occurred).

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, WKD
AVERAGE PERCENTAGE OF COMPLETION: **99%**

PKBWK 03/2021_3 Authorised managers of railway infrastructure, users of railway sidings, narrow gauge railways and WKD, in the event of discovering irregularities in the maintenance and organisation of traffic in the area of access roads to level crossings, will immediately inform the relevant road managers, indicating the irregularities that have occurred and their location, and monitor the implementation of corrective measures within the framework of risks caused by parties outside the railway system.

RECOMMENDED ADDRESSES: authorised managers of railway infrastructure, users of railway sidings, narrow gauge railways, WKD
AVERAGE PERCENTAGE OF COMPLETION: **81%**

PKBWK 03/2021_4 certified railway undertakings and WKD operating powered railway vehicles equipped with an “emergency braking” device will include in train driver training topics related to the ways and principles of braking trains in emergency situations, i.e. the use of the emergency brake (mushroom) to reduce the braking distance.

ADDRESSEES OF THE RECOMMENDATION: certified railway operators, WKD
AVERAGE PERCENTAGE OF COMPLETION: **71%**

GDPRK 03/2021_5 certified railway undertakings and WKD will introduce requirements for vehicle manufacturers and maintenance services concerning the installation of emergency power supply for video recorders so that the continuity of recording of images from cameras mounted on railway vehicles is maintained (when procuring by stating in the ToR), thus properly implementing the recommendation of GDPRK No. GDPRK-076-305/RL/R/11 of 22 November 2011 communicated for implementation to railway undertakings by letter of the President of the Office of Rail Transport no. DBK-550/R03/KB/12 of 30 May 2012, on the obligation to install pre-field recording devices – digital cameras or video recorders in railway vehicles newly built and in service. In addition, certified railway operators and WKD shall inspect the correct operation of the video recorders and the compliance of their use with the operating instructions by employees driving the railway vehicles.

ADDRESSEES OF THE RECOMMENDATION: certified railway operators, WKD
AVERAGE PERCENTAGE OF COMPLETION: **68%**

IV. Recommendations issued by the President of the UTK following the analysis of report PKBWK 04/2021 from the investigation of a serious accident of category A20 occurring on 18 August 2020 at 07:29 on a category C level crossing, located on the Lublin Główny – Przeworsk route, on track no. 1, at 119.080 km of the railway line no. 68 Lublin Główny – Przeworsk

PKBWK 04/2021_1 the infrastructure manager PKP Polskie Linie Kolejowe S.A. will assess the significance of the change and the risk taking into account the anomalies included in items 11.1.5., IV.5.3., IV.5.4., IV.6. Report.

ADDRESSEES OF THE RECOMMENDATION: PKP Polskie Linie Kolejowe S.A.
AVERAGE PERCENTAGE OF COMPLETION: **100%**

- An assessment of the significance of the change was carried out along with the identification of risks.

- A team has been set up to carry out a risk analysis based on the change in the railway infrastructure including all the anomalies identified in the recommendation together with how they will be addressed. Taking corrective action.

PKBWK 04/2021_2 authorised railway infrastructure managers, users of railway sidings, operators of narrow gauge railways and WKD shall extend the obligations to carry out inspections of:

- a. visibility of the crossing from the access roads, b. correctness of the visibility triangles,
 - c. correct positioning of traffic signal compartments and their visibility from access roads,
 - d. the validity of the crossing metrics and their correspondence to the parameters on the ground,
- for all employees carrying out maintenance procedures as well as inspections and diagnostic tests of rides.

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers, users of railway sidings, operators of narrow gauge railways and WKD

AVERAGE PERCENTAGE OF COMPLETION: **85%**

PKBWK 04/2021_3: Authorised Rail Infrastructure Managers will, as part of their Safety Management System (SMS), take measures to:

- a. improving the efficiency of the implementation of SMS procedures, in particular those related to the maintenance of railway lines in technical and organisational condition and those related to change management,
- b. improving the efficiency of the checks and diagnostic tests carried out on level crossings.

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers

AVERAGE PERCENTAGE OF COMPLETION: **83%**

V. Recommendations issued by the President of the UTK following the analysis of report

PKBWK 05/2021 from the investigation of a serious railway accident occurring on 26 January 2021 at 07:39 a.m. on category D level crossing at the station located on the route Zbąszynek – Lutot Suchy on track no. 1, at 10.196 km of railway line no. 367 Zbąszynek – Gorzów Wielkopolski;

PKBWK 05/2021_1 Railway undertaking POLREGIO sp. z o.o. is going to carry out an inspection in all railway vehicles used in the company aiming to inspect the correctness of functioning of installed front view cameras and will undertake proper actions to ensure the technical fitness of these recorders.

ADDRESSEES OF THE RECOMMENDATION: POLREGIO S.A.

AVERAGE PERCENTAGE OF COMPLETION: **100%** (by implementation stage – as at 30 March 2022)

PKBWK 05/2021_2 The manager of the class L municipal road together with the manager of the railway infrastructure shall adjust the access to the level crossing over a length of at least 34 m, to a width of 2 x 2.75 metres (in accordance with the provisions of § 15 section 1 item 5 of the Regulation of the Minister of Transport and Maritime Economy of 2 March 1999 on the technical conditions which must be fulfilled by public roads and their location (consolidated text: Journal of Laws of 2016, item 124, as amended). The current width of the road meets the requirements set out in § 14(3)(1) of the aforementioned Regulation and it is acceptable for the duration of the construction or for the reconstruction of the road.

ADDRESSEES OF THE RECOMMENDATION: PKP Polskie Linie Kolejowe S.A.

AVERAGE PERCENTAGE OF COMPLETION: **40%** (in progress; from information provided by PKP PLK S.A. estimated completion date 30 June 2023, the task is the responsibility of the administrator of the communal road, who is represented by the Mayor of the town and commune of Trzciel)

Representatives of PKP Polskie Linii Kolejowe S.A. participated in a meeting with the road manager, i.e. the Trzciel Town and Commune Office. During this meeting, an agreement was reached that the two managers would endeavour to implement the provisions of the recommendation. The Mayor of the Town and Municipality of Trzciel, informed of the actions taken to repair the road, i.e. the development of a project to repair the communal road No. 006323F Chociszewo – Mago. Work on the reconstruction of the road is scheduled to start in mid-2022.

PKBWK 05/2021_3 the railway infrastructure manager is going to maintain the 60 km/h train speed limit until the width of the access road is adjusted to the width of the level crossing platform.

ADDRESSEES OF THE RECOMMENDATION: PKP Polskie Linie Kolejowe S.A.

AVERAGE PERCENTAGE OF COMPLETION: **100%**

From 2 September 2021, a train speed limit of 60 km/h in both directions at the level crossing cat. D at km 10.196 of the railway line No. 367 Zbąszynek – Gorzów Wielkopolski on the Zbąszynek – Lutol Suchy route, as a so-called time restriction. This restriction as of 12.12.2021 has been carried over, as a permanent restriction included in the 2021/2022 timetable, and can be found in Appendix 2 to the internal timetable containing the List of fixed warnings and road speeds on the main tracks of the main junction stations within the Railway Facilities: Ostrów Wlkp., Poznań, Zielona Góra, with a note on the narrow access road to the crossing. Warning indicators W6b at km 9.780 and at km 10.620 have been set.

VI. Recommendations forwarded by the President of UTK after the analysis of the Annual Report 2020

Annual Report 2020_1 Authorised Rail Infrastructure Managers, Rail Siding Users and WKD shall implement recommendation 2 of the 2018 Annual Report (repeating the recommendation made in 2019 and published in the 2018 Annual Report) which reads: “Infrastructure managers shall eliminate exit barriers for automatic crossing systems at category B level crossings for solutions with four semi-crossings and, where justified by local conditions, shall notify the road manager of the need to protect the access to a category B level crossing against the possibility of road vehicle access by a lane allowing the closed barrier to be bypassed, in particular through the use of separation strips or separators. The current condition does not comply with the provisions of Appendix 4, item 6.2 of the Regulation of the Minister of Infrastructure of 3 July 2003 on detailed technical conditions for road signs and signals and road traffic safety devices and their placement conditions on the roads (consolidated text: Journal of Laws of 2019, item 2311, as amended), which states as follows: “U-13a and U-13b full-width barriers shall be used on category A level crossings, while U-13c half-barriers shall be used on category B crossings. The half-barriers shall be placed so that the right half of the roadway is closed on each side of the crossing (also when half-barriers are used on one-way carriageways).”

*) ADDRESSES OF THE RECOMMENDATION: authorised managers of railway infrastructure, users of railway sidings, operators of narrow-gauge railways and WKD

AVERAGE PERCENTAGE OF COMPLETION: **83%**

Measures taken:

- Carrying out additional surveys of level crossings;
- Verification of the installation and operation of automatic crossing systems at level crossings cat. B including the number of barriers used in terms of the impact on the safety of rail traffic and users of level crossings including the causes and number of incidents and potentially dangerous situations at these crossings;
- Consideration of the recommendation during the reconstruction, modernisation and installation of new automatic crossing systems;

– Inspection of siding documentation and equipment on the ground.

**) According to PKP PLK, implementation 100%: “development of automatic crossing systems equipped with two barriers at level crossings category “B” should take place when the lanes are separated (in the opposite directions). In other cases, fitting two or four barriers on cat. B level crossing should be based on the local conditions of the road in the crossing area and the value of the traffic volume at the level crossing. In view of the above, and with a view to the implementation of this recommendation at PKP PLK S.A., a verification of the installation and operation of the automatic crossing systems at level crossings cat. B including the number of barriers used in terms of the impact on the safety of rail traffic and users of level crossings including the causes and number of incidents and potentially dangerous situations at these crossings.*

The above principles will also be taken into account in the conversion, modernisation and installation of new automatic crossing systems.

As a result of the aforementioned verification, in some cases it was decided to leave the current crossing security system in place due to the correctness of their installation in accordance with the requirements in force and on the basis of the security level check carried out, and in several cases it was decided to upgrade or rebuild the crossing security system, as a result of which the exit barriers will be removed.

It should also be borne in mind that, in the vast majority of cases, the width of the access road and the road layout in the area of the level crossings does not allow for the installation of traffic separators. Their development could cause, among others, road accidents, stuck or impassable cars with trailers or trucks, and cause damage to crossing facilities.

In addition, the percentage of completion indicated was determined for the alternative measures referred to above that have been implemented. However, on the other hand, considering the activities of upgrading and possibly physically removing the exit barriers at level crossings, these activities, due to the scope of the work, will be implemented over a multi-annual period.”

Annual Report 2020_2 Authorised railway infrastructure managers, users of railway sidings, narrow gauge railways and WKD shall implement Recommendation No. 9 of Report No. PKBWK/02/2018, which reads as follows: “PKP Polskie Linie Kolejowe S.A., and the other railway infrastructure managers, shall inspect level crossings for the correct road gradient in relation to the platform at level crossings, and if unevenness is found at level crossings, will request the road manager to erect A-11 “uneven road” signs.”

ADDRESSES OF THE RECOMMENDATION: authorised managers of railway infrastructure, users of railway sidings, narrow-gauge railways, WKD
AVERAGE PERCENTAGE OF COMPLETION: **78%**

Annual Report 2020_3 Certified rail (freight) operators shall increase supervision of the preparation and integration of wagons (railway vehicles) into traffic, with a consequent reduction in the number of category C50 incidents, and shall communicate the recommendation for use to those responsible for organising freight transport and those responsible for loading, unloading and securing cargo or other loading operations and apply effective mechanisms to control the implementation of this recommendation within their safety management systems.

ADDRESSEES OF THE RECOMMENDATION: certified railway operators (freight)
AVERAGE PERCENTAGE OF COMPLETION: **80%**

Annual Report 2020_4 Authorised railway infrastructure managers and users of railway sidings will take appropriate measures to avoid or minimise the number of accidents of category B15 - premature dissolution of the route or override of a closure and switch under the railway vehicle.

ADDRESSEES OF THE RECOMMENDATION: authorised railway infrastructure managers, users of sidings
AVERAGE PERCENTAGE OF COMPLETION: **77%**

Annual Report 2020_5 Certified Railway Undertakings shall implement appropriate measures to further reduce the number of category C44 and B04 incidents involving the failure of a railway vehicle to stop before a “Stop” signal or where it should have stopped, or the starting of a railway vehicle without the required authorisation.

ADDRESSEES OF THE RECOMMENDATION: certified railway operators

AVERAGE PERCENTAGE OF COMPLETION: **81%**

Annual Report 2020_6 Authorised managers of railway infrastructure, in order to increase traffic safety in the signalling circle in case of simultaneous train movement on the main line in the same direction – same station and failure to stop a train (red) with the signal “stop” given on the home signal to cause an earlier change of the enabling image to the “stop” signal for a train (blue) approaching the adjacent track to the home signal with the transmitted signal “proceed,” shall introduce: in control-command and signalling systems equipped with unoccupied track section control, the relation as shown in the examples in the following figures, which are in the running order behind the entrance semaphores from multi-track routes and which are part of their mutually conflicting routes:

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers

AVERAGE PERCENTAGE OF COMPLETION: **93%**

IN PKP PLK 90%: “The requirements will be included in the forthcoming revision of the Technical Guidance for the Construction of Railway Control Equipment Ie-4 (WTB-E10), which is planned for implementation by the end of 2022, and will apply in a uniform form to all manufacturers of station control systems.

– Functionality will be provided in the computerised signalling systems installed as part of the station upgrades being carried out.

Alternative measures have been taken at PKP PLK: It has been established that the majority of computerised signalling systems currently manufactured and installed have a function to control lateral protection areas, meeting the requirement set out in this recommendation (...). In order to standardise the requirements, discussions are being held to also take into account other cases occurring at traffic stations that were not indicated in the PKBWK recommendation. The developed requirements will be included in the forthcoming revision of the Technical Guidance for the Construction of Railway Control Equipment Ie-4 (WTB-E10), which is planned for implementation by the end of 2022, and will apply in a uniform form to all Station Control System Manufacturers. In the case of systems made with older technologies, implementation of the expected functionality is very difficult and would practically require redesign (rebuilding of entire dependencies).”

Annual report for 2020_7 Rail Infrastructure Managers shall identify level crossings where the angle of the crossing of the railway line with the road does not meet the condition set out in § 26 section 2 of the Regulation of the Minister of Infrastructure and Development of 20 October 2015 on the technical conditions to be met by the crossings of railway lines and railway sidings with roads and their location (Journal of Laws, item 1744 as amended), assess the risk of incidents occurring at these crossings and take appropriate preventive action in accordance with their safety management systems.

ADDRESSEES OF THE RECOMMENDATION: authorised infrastructure managers

AVERAGE PERCENTAGE OF COMPLETION: **77%**.

APPENDIX “B” to the Annual Report 2021 of the State Commission on Railway Accident Investigation

Information on the implementation of PKBWK recommendations made in 2021 to other stakeholders (Article 281 section 8 of the Railway Transport Act)

I. Recommendations contained in Report no. PKBWK 02/2021 from the investigation of a serious accident of category A20 occurring on 21 October 2020 at 12:52 on a category C level crossing, located on the Rokiciny – Baby route, on track no. 2, at 120.779 km of the railway line no. 1 Warszawa Zachodnia – Katowice

PKBWK 02/ 2021_recommendation_1- The Tomaszów Mazowiecki District Road Administration shall complete the F-6a road sign at the road approaching district road No. 4321E (access road to the crossing) on the left side of the railway-road crossing at km 120.779 of railway line no. 1.

ADDRESSEE OF THE RECOMMENDATION: District Road Administration in Tomaszów Mazowiecki

PERCENTAGE OF COMPLETION: 100% – fulfilled (confirmation of the implementation of the recommendation by the County Roads Authority in Tomaszów Mazowiecki by letter ZDP.4176.88.6.2021 dated 2022-07-19)

PKBWK 02/ 2021_recommendation_2 The Tomaszów Mazowiecki District Road Administration will take steps to ensure that any irregularities reported by the infrastructure manager PKP Polskie Linie Kolejowe S.A. resulting from inspections and diagnostic tests of level crossings carried out by the infrastructure manager PKP PLK S.A. are immediately rectified.

ADDRESSEE OF THE RECOMMENDATION: District Road Administration in Tomaszów Mazowiecki

PERCENTAGE OF COMPLETION: 100% – fulfilled (confirmation of the implementation of the recommendation by the County Roads Authority in Tomaszów Mazowiecki by letter ZDP.4176.88.6.2021 dated 2022-07-19)

PKBWK 02/ 2021_recommendation_3 The Tomaszów Mazowiecki District Road Administration will remove the B-20 signs at the level crossing at km 120.779 of railway line no. 1 and at the remaining level crossings cat. C located on the vehicular roads under its management in agreement with the railway infrastructure manager in accordance with the applicable regulation of the Minister of Infrastructure and Development issued pursuant to Article 7 section 2 item 2 and section 3 item 2 of the Act of 7 July 1994 Construction Law. The above constitutes an obligation for all road managers.

ADDRESSEE OF THE RECOMMENDATION: District Road Administration in Tomaszów Mazowiecki

PERCENTAGE OF COMPLETION: 100% – fulfilled (confirmation of the implementation of the recommendation by the County Roads Authority in Tomaszów Mazowiecki by letter ZDP.4176.88.6.2021 dated 2022-07-19)

PKBWK 02/ 2021_recommendation_4 The Tomaszów Mazowiecki District Road Administration will carry out measures to remove trees and bushes at level crossings to ensure the continued visibility of traffic lights, barrier devices and road signs.

ADDRESSEE OF THE RECOMMENDATION: District Road Administration in Tomaszów Mazowiecki

PERCENTAGE OF COMPLETION: 100% – fulfilled (confirmation of the implementation of the recommendation by the County Roads Authority in Tomaszów Mazowiecki by letter ZDP.4176.88.6.2021 dated 2022-07-19)

II. Recommendations contained in Report no. PKBWK 05/2021 serious railway accident occurring on 26 January 2021 at 07:39 a.m. on category D level crossing at the station located on the route Zbąszynek – Lutot Suchy on track no. 1, at 10.196 km of railway line no. 367 Zbąszynek – Gorzów Wielkopolski;

PKBWK 05/2021_recommnedation_1 The road manager, the Mayor of Trzciel, shall take measures to immediately remove the irregularities found during diagnostic tests or during inspections at crossings, as stated in the railway infrastructure manager's findings.

ADDRESSEE OF THE RECOMMENDATION: Road Manager, Mayor of Trzciel Town and Municipality

PROCESS OF IMPLEMENTATION: in progress (a declaration of completion of the works related to the construction of a 34 m long access to the railway-road crossing in their entirety by 31 December 2022 was submitted to the PKBWK by the Mayor of the Municipality of Trzciel).