# **NIB Network**

EUROPEAN NETWORK OF RAIL ACCIDENTS NATIONAL INVESTIGATING BODIES

# GUIDANCE ON THE ESTABLISHMENT AND WORK OF THE NATIONAL INVESTIGATING BODIES

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# **Document History**

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This document has been developed by the NIB Network to support the NIBs in their work and is made publicly available for transparency purposes and as a reference for any other interested party. Any use of it should be made in the adequate context and refer to its title, date and to the NIB Network.

# **NIB Network**

The European Network of Rail Accidents National Investigating Bodies is an informal network created for the fulfilment of article 22.7 of Directive (EU) 2016/798 of the European Parliament and of the Council, of 11 May 2016, on railway safety, composed of representatives from the bodies in charge of the safety investigation of railway accidents of the European Union Member States plus Norway and Switzerland.

The NIB Network, with the support of the European Union Agency for Railways, undertakes an active exchange of views and experience for the purposes of the development of common investigation methods, drawing up common principles for follow up of safety recommendations and adaptation to the development of technical and scientific progress.

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# 2 Acronyms and definitions

# 2.1 Acronyms

CSI Common safety indicators EC European Community

ECM Entity in Charge of Maintenance ERA European Union Agency for Railways

EU European Union

IM Infrastructure Manager

MOU Memorandum Of Understanding

NIB National Investigating Body
NSA National Safety Authority
RSD Railway Safety Directive
RU Railway Undertaking
SPAD Signal Passed At Danger

TF Task force

# 2.2 Definitions

Definitions according to Article 3 of Directive (EU) 2016/798 (RSD):

'investigator-in-charge' means a person responsible for the organisation, conduct and control of an investigation.

**'investigation'** means a process conducted for the purpose of accident and incident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and, when appropriate, the making of safety recommendations.

'accident' means an unwanted or unintended sudden event or a specific chain of such events which have harmful consequences, accidents are divided into the following categories: collisions, derailments, level crossing accidents, accidents to persons involving rolling stock in motion, fires and others.

'serious accident' means any train collision or derailment of trains resulting in the death of at least one person or serious injuries to five or more persons or extensive damage to rolling stock, the infrastructure or the environment, and any other accident with the same consequences which has an obvious impact on railway safety regulation or the management of safety, 'extensive damage' means damage that can be immediately assessed by the investigating body to cost at least EUR 2 million in total.

**'incident'** means any occurrence, other than an accident or serious accident, affecting the safety of railway operations.

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# 3 Intended Users of this Guidance

Managers and members of the national investigating bodies (NIBs) who are dealing with safety investigations.

For information purposes:

- > Members of national safety authorities (NSAs) who are concerned with reports and recommendations by Investigating Bodies.
- > Members of the European Union Agency for Railway (ERA) who are concerned with reports and recommendations by Investigating bodies.
- Members of other bodies who are the subject of reports and recommendations by investigating bodies (e.g. entity in charge of maintenance (ECM), certification bodies, road authorities, emergency services).
- The railway undertakings (RUs), infrastructure managers (IMs) and other actors in the railway sector who are interested in the processes of accident and incident investigation.

# 4 Introduction

The Directive 2016/798 sets out the principles for the safety investigation<sup>1</sup> of accidents and incidents in the EU railway system. This guidance has two purposes. One purpose is to guide governments in setting up a national investigating body and the second purpose is to be a reference manual for national investigating bodies. The guidance is not intended as a substitute for legal text. The guidance comprises good practice and proven experience of NIBs.

The guidance will be regularly reviewed by the NIB network and, if necessary, updated to reflect the progress of the European legal acts and standards, as well as to reflect the experience deriving from accident investigation over time. The reader is invited to consult the designated NIB Network webpage for the latest available edition of the guidance.

# 5 Principles for this Guidance

The guidance aims to support Member States and the managers of the NIBs in organising the investigation processes and investigators in investigating railway accidents and incidents.

To facilitate the reading of this guidance, the original text of Directive 2016/798 (EU), Commission Implementing Regulation (EU) 2020/572 and other secondary legislation that is applicable at European level, is stated before the corresponding item of guidance and/or integrated in the text. To differentiate this legal text from the guidance, it is presented in "Bookman Old Style" Italic Font, exactly as here.

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<sup>&</sup>lt;sup>1</sup> However not defined explicitly, the term "safety investigation" is used within the recitals of the RSD. This term has been proven as successfully e.g. in the aviation sector e.g. to make a clear distinction to the juridical investigation. It describes the investigation of accidents and incidents in terms of the RSD.

# **6** Obligation of the Member State

Serious accidents on the railways are rare. However, they can have disastrous consequences and raise concern among the public about the safety performance of the Union rail system. All such accidents should therefore be investigated from a safety perspective to avoid recurrence with the results of the investigations being made publicly available. Other accidents and incidents should also be subject to safety investigations when they involve significant precursors to a serious accident.<sup>2</sup>

The national investigating bodies **play a core role in the safety investigation process**. Their work is of the utmost importance in determining the causes of an accident or incident. It is therefore essential that they should possess the financial and human resources required to conduct effective and efficient investigations<sup>3</sup>.

# 6.1 Establishment of a NIB

The establishment for each Member State, of an accident and incident investigating body is foreseen in Article 1 (e) of the directive.

This directive lays down provisions to ensure the development and improvement of the safety of the Union rail system and improved access to the market for rail transport services by:

(e) Requiring the establishment, for each Member State, of a national safety authority and an **accident and incident investigating body**;

Member States shall ensure that an investigation is carried out by the investigating body referred to in Article 22 after any serious accident on the Union rail system. The objective of the investigation shall be to improve, where possible, railway safety and the prevention of accidents.<sup>4</sup>

The objective of accident and incident investigation conducted by national investigating bodies is to learn lessons regarding safety and through recommendations promote the implementation of those lessons, thereby improving railway safety and potentially preventing reoccurrence.

#### Directive Article 22(1):

Each Member State shall ensure that investigations of the accidents and incidents referred to in Article 20 are conducted by a permanent body, which shall comprise **at least** one investigator able to perform the function of investigator-in-charge in the event of an accident or incident.

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<sup>&</sup>lt;sup>2</sup> Recital 37 of the Directive 2016/798

<sup>&</sup>lt;sup>3</sup> Recital 36 of the Directive 2016/798

<sup>&</sup>lt;sup>4</sup> Article 20 (1) of the Directive 2016/798

#### **Good practice**

To determine the number of employees the Member States are using criteria like:

- the obligation to guarantee the permanent availability of at least one investigator able to perform the function of investigator-in-charge, taking into consideration conditioning factors such as, a 24/7 roster, vacations, sick leave, etc.
- > the number of accidents and incidents

The number of occurrences is a very important criterion when deciding the number of employees. The experience of NIBs shows that a comprehensive investigation requires appropriate number of human resources.

the scale of accidents

The NIB needs to have the resources to handle the largest likely accident. This influences the required resources for on-site investigation and for the later stages of information collection. Larger accidents can have a long on-site investigation phase, which could necessitate the availability of a relief crew. The number of accidents that can occur around the same time may need considered.

- > the dimension of the railway network and number of trains running on it.
- > The time-to-arrival and accessibility for investigators of any location on the railway network Some Member States have defined objectives for the maximum time needed between the notification of an occurrence and the arrival at the accident site, e.g. 2 3 hours. Depending on the overall approach (local branches, internal or external staff) they have defined the number of employees taking into account the accessibility.
- y general tasks of the NIB

The general tasks of the NIB (e.g. administration, training, liaison with other stakeholders, participation in and cooperation with the NIB Network, reporting) should duly be taken into account when setting up a NIB.

> the number of RUs and the amount of international railway transport on the national railway network

When setting up an investigating body, Member States have taken into account the number of RUs and the amount of international railway transport on the national railway network. This has influence on:

- the probability for the need to deal with different actors. Experience shows that this
  may lead to increased time and effort to conduct an investigation,
- the probability for the need of cooperation with other NIBs. Experience shows that this may lead to increased time and effort to conduct an investigation,
- o the necessity to re-open a line after an occurrence.

# Article 22 (4):

The investigating body may combine its tasks under this Directive with the work of investigating occurrences other than railway accidents and incidents as long as such other investigations do not endanger its independence.

### **Good practice**

Several Member States have established the NIB only for the rail mode of transport. Other Member States have chosen the multi-modal approach - one body for safety investigation for several modes of transport, e.g. railway and aviation, the maritime sector and/or cable-cars, etc. **Multi-modal bodies** have proven to be effective and powerful because

- the factors involved in accidents and incidents can be similar in all transport modes and some industrial areas, in particular related to human factors and the management of safety. For multi-modal bodies it might be easier to employ staff with specific background, e.g. on psychology and human factors and easier to lead common / trans-disciplinary studies,
- of for multi-modal bodies it might be easier to be well-known by other authorities and the public.

**Single modal investigation bodies**, limited to the safety investigation within the railway system, have proven successful because

- > the lean hierarchy guarantees rapid contact with senior management and,
- fast decision-making.

Each approach has its advantages and disadvantages in terms of economy of scale and organisational complexity. It is up to each state to decide which approach to use.

# Please note

Some member states have a scope wider than defined in railway system.

As example: tramways, metro,...

#### Please note

This provision is formally addressed to the investigating body, but it is linked to the national legislation.

#### Article 20 (2):

The investigating body referred to in Article 22 may also investigate those **accidents and incidents which under slightly different conditions** might have led to serious accidents, including technical failures of the structural subsystems or of interoperability constituents of the Union rail system.

# Article 22 (6):

Member States may entrust the investigating body with the task of carrying out investigations of railway accidents and incidents other than those referred to in Article 20.

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# **Good practice**

Taking into account that learning from minor accidents and incidents often is more efficient than from serious accidents, a number of Member States have chosen a pro-active approach. Also investigating occurrences with minor consequences and precursors (e.g. SPADs) may help to reduce the number of serious accidents and incidents in the future.

# Good practice

In some Member States, the NIB is explicitly given the legal power to monitor, analyse and conduct studies into any matter it considers to be relevant for the effective investigation of accidents or incidents including:

- > statistics and trends relating to the railway industry including those relating to accidents and incidents,
- > technological and other developments,
- > responses of addresses of the recommendations.

## Please note

Article 22(4) refers to accidents and incidents other than occurrences in the railway system. Article 22(6) refers to railway accidents and incidents.

### Article 22 (3):

Member States shall provide for railway undertakings, infrastructure managers and, where appropriate, the national safety authority to be obliged to immediately notify the accidents and incidents referred to in Article 20 to the investigating body and to provide all available information. Where appropriate, this notification shall be updated as soon as any missing information becomes available.

# **Good Practice**

- In most Member States, a structured notification system is implemented with several levels including e.g. which occurrences must be notified immediately, which ones on a daily basis etc. Given that IMs are usually the first to become aware of each occurrence, it has proven to be sufficient to oblige IMs to notify accidents and incidents to the NIB.
- > Several NIBs have direct access to the IM's log file on accidents and incidents.
- > In some Member States, the NIB is linked with the national emergency call system to receive all notifications on accidents on or close to railway network.
- > Most NIBs have made provisions to ensure availability 24/7.

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# 6.2 Legal Power of the NIB

### Article 21(1):

Member States shall define, within the framework of their respective legal system, **the legal status of the investigation** that is to enable the investigators-in-charge to carry out their task in the most efficient way and within the shortest time.

#### **Good practice**

NIBs have reported that the following provisions have proved to be useful:

- > comparable legal status of safety investigation and juridical investigation,
- > legal power for the NIB to access the accidents site without delay,
- > legal power for the NIB to interview witnesses independently of any other interview,
- > legal power to request all information that the NIB considers necessary from all relevant bodies and organisations including images from surveillance and forward-facing cameras:
  - o during an investigation,
  - o during a preliminary investigation/examination,
  - o at any time e.g. to conduct studies or to support other NIBs,
- > legal provisions to enable efficient cooperation with other NIBs, including provisions on the collection of information from all bodies and organisation at the request of another NIB.
- > legal protection of the NIB against the use of the investigation findings in the determination of blame or liability of any interested parties,
- within the context of national legislation, a NIB needs to define what evidence must be shared, what may be shared and what cannot be shared,
- > provisions that the appointment, employment and reward of the NIB staff cannot be influenced by any organisation from which the NIB must be functionally independent.
- ability of the NIB to recruit and retain sufficient permanent experienced staff, through an employment and reward regime competitive within the sector.

#### Please note

A preliminary investigation<sup>5</sup> is an internal process often necessary before taking a decision whether to open an investigation. This can sometimes last over a month, but should not take longer than 2 months after the NIB has been notified of an accident or incident.

# Please note

It is important that the national legal framework provides for the collecting of evidence prior to the decision to investigate.

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<sup>&</sup>lt;sup>5</sup> The term "preliminary investigation" describes the phase in which the NIB is collecting immediate facts of the occurrence but has not yet taken the decision to investigate. Although the RSD does not make this distinction, giving this activity a formal label contributes to an useful and clearer overview of the investigation process and procedures.

# Article 20 (4):

The investigation shall in no case be concerned with apportioning blame or liability.

# Article 21 (2):

In accordance with their national legislation, Member States shall ensure full cooperation by the authorities responsible for any judicial inquiry, and shall ensure that the **investigators are given access as soon as possible to information and evidence** relevant for the investigation.

# Article 21(3):

The investigation shall be carried out **independently of any judicial inquiry**.

#### **Good practice**

According to the experience of some NIBs, legal provision or agreements ("Memorandum of understanding") with the police, other juridical authorities or the responsible ministry, enabling the NIB to perform its safety investigation completely independent from the judicial investigation, has proved to be useful.

Examples of provisions:

- the cases in which the NIB investigation will take precedence over a judicial investigation. Ideally a precedence for the investigation unless there is a clear indication that the accident was caused by terrorism, vandalism or similar criminal activity. In any case, the legal provisions or the agreement ("MOU") could assist to give the precedence to the party that could best serve the public interest,
- considering the requirements of the other party and not preventing the other party from investigating,
- > who may interview witnesses first,
- how to share evidence, including a mechanism for sharing results of testing of evidence and prior consultation if the evidence is to be tested to destruction,
- insurance that witness statements taken by the NIB will not be shared with the judicial authorities and third parties,
- whether and how the NIB's investigators could give opinion or statements in the court. In some Member States this obligation is limited to technical information excluding the obligation to give opinion,
- whether and how the NIB's investigation reports may be admissible in court. In some Member States it is not allowed at all. In others, it is allowed only if it is favourable for defendants,
- > which do not authorise the judicial authorities to seize material collected by the NIB,
- which do not allow any pressure on the conduction of the investigation taken by the NIB or its investigators,
- which ensure that the NIB's reports can be drafted completely independently of any other parallel investigation and will not be used in any parallel investigation,
- > how to avoid disputes between the parties and/or resolve disputes.

# 6.3 Independence of NIB

# Article 22(1):

Each Member State shall... [That **body shall be independent** in its organisation, legal structure and decision-making from any infrastructure manager, railway undertaking, charging body, allocation body and conformity assessment body and from any party whose interests could conflict with the tasks entrusted to the investigating body. It shall, furthermore, be functionally independent from the national safety authority, from the Agency and from any regulator of railways].

The independence includes not only the hierarchical position:

- Independence in organisation,
- the freedom to decide to open an investigation,
- as well as to conduct the investigation, to publish the report and make recommendations,
- > and also the availability and the control of financial and human resources.

There should be a process in place for providing the NIB with sufficient resources to conduct independent investigations, including sufficient funds. This process should take into account an exceptionally costly investigation and allow additional funding if needed.

# 6.3.1 <u>Independence in organisation</u>

### **Good practice**

For achieving independence in organisation, NIBs have reported that the following provisions have proved to be useful:

- establishment of the NIB as a separate, independent and permanent body, ideally outside of any ministry,
- > sufficient resources including people, budget and premises,
- the possibility of receiving an additional budget in special circumstances, e.g. of a major accident.

# 6.3.2 Availability of financial and human resources

# Article 22(2):

The investigating body shall perform its tasks independently of the other entities referred to in paragraph 1 and shall be able to obtain sufficient resources to do so. Its investigators shall be afforded status giving them the necessary guarantees of independence.

# **Good practice**

Most NIBs have a dedicated budget, and a full control of it, which sufficiently takes into account the needs determined by:

- > The number of employees,
- The number of investigations,
- > Need for external experts and laboratories,
- Suitable located premises,

- > Equipment, including maintenance,
- Training, skills of investigators,
- All other tasks of the NIB.

In addition, usually the NIB has a means of obtaining extra financial resources if they have to investigate a major accident.

#### Please note

The experience gained from investigations is very important to the development of the NIB staff. Therefore, the NIB should be able to have in place the adequate capability to retain its staff, in competitive environment with the sector.

# 6.3.2.1 Skill of investigators

The NIB should have a systematic approach for ensuring competence of its staff, containing:

- > Competence profiles for investigators,
- > Selection and recruitment of staff, taking into account knowledge, skills and attitude needed for a specific job/role/task. Consideration should also be given to which competencies can be acquired through training,
- > Training plans and programmes in place,
- > Process of monitoring and updating the staff competence as needed, to enable complementary and/or refreshment training depending on the tasks to be performed,
- > Process of deploying suitably qualified and equipped investigators or teams to the accident site or other locations in a case of an accident or incident.

# **Good practice**

Some NIBs have regular conduct of staff and real-life exercises in collaboration with other actors. Some NIBs organise training with investigators of RU and IM. Some NIBs participate in real life exercises with Emergency services and other actors. Some NIBs share experience with other NIBs.

# 6.3.2.2 Human Resources

#### Article 23(2):

For each accident or incident the body responsible for the investigation shall arrange for the appropriate means, comprising the necessary operational and technical expertise, to carry out the investigation. The expertise may be obtained from inside or outside the body, depending on the character of the accident or incident to be investigated.

#### **Good practice**

When setting up its organisation, larger NIBs have reported on the following tasks taken by own permanent employees:

- On-duty coordinator 24/7 who has responsibility to decide whether to mobilize in real time, manage the site and coordinate other organisations in the early stages of the investigation,
- > Senior NIB point of contact 24/7 coordinator for referring decisions as appropriate (also on call) and senior management of major investigations,

- > For response to major accidents hierarchy of tactical and strategic command (this will be country specific and would be coordinated with the police and emergency services hierarchy of command),
- > Investigators on call, fit for duty and have access to the equipment and transport,
- > Chief investigator responsible for making decision on whether to open an investigation, investigation review and approval,
- > Specialists or readily available approved contractors assist in collecting evidence and analysis,
- > Investigation operations manager monitor resources issues,
- > Independent legal advice,
- Administrative support database management, reporting, publishing etc.,
- > Person in charge of maintaining equipment (calibration etc.),
- Person in charge for the cooperation within the NIB Network and Task forces.
- > Communication support 24/7.

In smaller NIBs, these tasks are adapted according to the size and needs of the NIB. Special expertise, e.g. on metallurgy, chemical analysis or human factors, is covered by internal staff only in some NIBs. For such issues, most NIBs involve external experts or laboratories where necessary.

Several NIBs have implemented provisions (internal or external) for post-traumatic care for investigators after serious accidents.

# 6.3.2.3 Technical expertise

# **Good practice**

For achieving independence by technical expertise and to be able to make some analysis in-house and, when needed, have the technical background to contract and critically assess any required specialist external expertise, it has proved to be useful to enable the NIB to recruit sufficient permanent and technically competent staff.

In order to assist the NIB in carrying out these activities, the NIB may request assistance or information from

- > the NSA,
- > any other public body or person,
- > the NIB of other Member State or,
- > the Agency.

# 6.3.2.4 Technical equipment

#### **Good practice**

Most NIBs have the appropriate equipment to go to any accident site and to collect the evidence, such as<sup>6</sup>:

- > access to suitable vehicle(s) to proceed to any accident site (e.g. off-road car),
- > communication devices (mobile phone, laptop, tablet etc.),
- personal protective equipment,
- > local/route maps/GPS,
- > camera,
- > voice recorder,
- > tools (equipment and software) for reading data recorder, some NIBs have reported support by manufacturers,
- > material sampling equipment,
- > secure containers/locations for perishable (non-metallic) evidence,
- > measuring equipment including gauges (rail profile measuring device),
- > hardware and software for the reconstruction of the occurrence.

Often, other investigating parties (e.g. the police) have special equipment, which as far as possible could be shared, e.g. special photography measurement devices or measurement equipment. From the NIBs' reported experience, it could be agreed in advance how the NIB could use such equipment. Another option is to share the measurement data.

#### 6.3.2.5 Location

# **Good practice**

For the decision on the location, the NIBs have considered the following criteria:

- Access to the road network or, if applicable, or other means of transport (for example helicopter) to any possible accident site,
- Access to the main lines and the core areas of the rail network,
- Reachability of frequently contacted organisations, e.g. the ministry, the NSA and the railway industry,
- > Attractive environment for gathering qualified staff.

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<sup>&</sup>lt;sup>6</sup> List is not exhaustive

# 6.3.3 Independence in decision making

# Article 20(2):

... The investigating body may decide whether or not an investigation of such an accident or incident is to be undertaken.

# Please note

This provision is formally addressed to the investigating body, but it is linked to the national legislation.

# **Good practice**

For achieving independence in decision making, NIBs have reported that following provisions have proved to be useful:

- > full power of the NIB to decide on the opening of an investigation,
- power of the NIB to:
  - o require other people or organisations to provide assistance in investigations,
  - use external experts to perform technical inspections, analyses or evaluations on its behalf,
  - o freeze the site, this means that nobody is allowed to make any changes at the accident site, except the rescue services and the police,
  - o direct enabled actors to collect evidence on its behalf,
  - ensure that externals providing assistance are independent and that there are no conflicts of interest,
- > sufficient resources.

# 7 Missions of a NIB

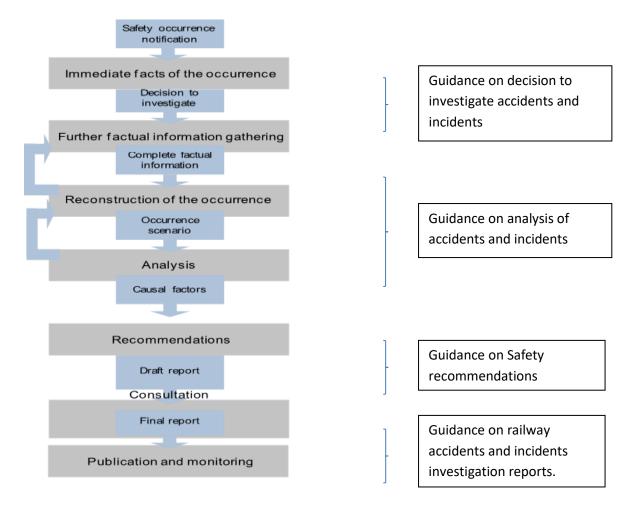
# 7.1 Investigation

# Article 22 (4-6):

The investigating body shall decide, without delay and in any event no later than 2 months after receipt of the notification concerning the accident or incident, whether or not to start the investigation.

- 4. The investigating body may combine its tasks under this Directive with the work of investigating occurrences other than railway accidents and incidents as long as such other investigations do not endanger its independence.
- 5. If necessary, and provided it does not undermine the independence of the investigating body as provided for in paragraph 1, the investigating body may request the assistance of investigating bodies from other Member States or from the Agency to supply expertise or to carry out technical inspections, analyses or evaluations.
- 6. Member States may entrust the investigating body with the task of carrying out investigations of railway accidents and incidents other than those referred to in Article 20.

The process of an investigation is in the organigram below. A reference to the several guidance is made for each phase of the investigation.



The NIB should have a process for the decision whether or not to investigate an accident or an incident, taking into account the principles as agreed by the NIB Network and published in the "Guidance on the decision to investigate accidents and incidents".

The NIB should have a process to analyse an accident or an incident, taking into account international good practice and the principles as agreed by the NIB Network and published in the "Guidance on the analysis of accidents and incidents".

# 7.2 Cooperation during an investigation with other NIBs

## Article 23(1):

An accident or incident referred to in Article 20 shall be investigated by the investigating body of the Member State in which it occurred. If it is not possible to establish in which Member State it occurred or if it occurred on or close to a border installation between two Member States, the relevant investigating bodies shall agree which of them is to carry out the investigation or agree to carry it out in cooperation with each other.

Investigating bodies from other Member States shall be invited, if appropriate, to participate in an investigation where:

(a) a railway undertaking established and licensed in one of those Member States is involved in the accident or incident, or

(b) a vehicle registered or maintained in one of those Member States is involved in the accident or incident.

Investigating bodies from invited Member States shall be provided with the powers necessary to enable them, when requested, to assist in the collection of evidence for another Member State's investigating body.

Investigating bodies from invited Member States shall be provided with access to the information and evidence necessary to enable them to participate effectively in the investigation with due respect for national laws relating to judicial proceedings.

This paragraph shall not preclude Member States from agreeing that the relevant bodies shall carry out investigations in cooperation with each other in other circumstances.

The NIB should have a process in place to ensure that other NIBs will be informed and invited to participate in the investigation in certain cases. At this stage of the investigation process, this is only a matter of communication.

Two situations are here identified:

# 1. The accident or incident's location is well determined.

It shall be investigated by the concerned Member State.

If stakeholders from other countries (operator, manufacturer, etc) or if common installations (transborder tunnel, etc) with another Member State are involved in the event, the concerned NIBs can be invited. The invitation is either to participate in the investigation or to assist in providing information. It can be set up as a cooperation or as an assistance. The leading NIB is the one of the Member State where the accident or incident occurred.

If both NIBs open an investigation in their own country, they have full rights and responsibilities.

It is complementary with the other situations presented in §8.77.3 Assistance of other NIBs or the Agency.

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2. <u>It is not possible to establish in which Member State it occurred or if it occurred on or close to a</u> border installation between two Member States.

A cooperation on an investigation shall be settled between the two NIBs and this can take the form of a binational co-working team, or one national team leading the investigation while fully informing the other team. The identification of the investigator or the team of investigators has to be communicated to the other cooperating NIB.

# **Good practice**

- > To decide an organisation within the NIBs (collecting, writing, publishing) will clarify the tasks and involvement of each.
- > To have one leading NIB to collect information in a formal or informal way through a specific arrangement.
- > To produce one common report allows clarity and credibility. The report should be written in both languages.

Whether it is a cooperating team or a leading NIB:

- > In the factual information collecting investigation phase, the cooperating NIBs have to share all information. They shall decide on any adequate organisation to collect information.
- > In the analysis phase, a common determination of causes should be found.
- > The safety recommendations should be the result of a consensus from both NIBs. However, a national context may lead to specific instructions.
- > Special care should be taken regarding coordination of the information to be communicated to the media, to avoid any inconsistencies.

#### Please note

The juridical context is different from one country to another and can have more or less significant impacts on each phase of a railway safety investigation.

Before any accident or incident occurs, it can be helpful if a Convention or Memorandum of Understanding exists, allowing to decide on general principles, disconnected from any complicated and/or urgent context.

# **Good practice**

- Some NIBs have co-written and signed a Memorandum (MoU) of co-operation in case of an accident or incident close to a boarder. This MoU can indicate: the purposes of the MoU, the respective legal framework for technical investigations, the rules for exchange of information on becoming aware of an accident or incident, what to do in case of opening an investigation by one of the NIBs or both of them.
- The MoU can set the coordination of the NIBs' activities during an investigation and the liaison with national authorities and others involved. The investigator's power and confidentiality and the management of evidence and information to be released, can also be described. Finally, the decided arrangements on investigation reports and recommendations can be listed in the MoU.
- > Some NIBs also agree to settle regular meetings and to engage common studies.

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# 7.3 Assistance from other NIBs or the Agency

# Article 22(5):

If necessary and provided it does not undermine the independence of the investigating body as provided for in paragraph 1, the investigating body may request the assistance of investigating bodies from other Member States or from the Agency to supply expertise or to carry out technical inspections, analyses or evaluations."

#### **Good practice**

It can be helpful for the NIB to have a process for requesting assistance from other bodies such as other NIBs and the Agency when required. This could, eventually, be facilitated by the NIB Network, e.g. by compiling a list of technical expertise in NIBs.

# **7.3.1** Assistance from other NIBs

In the factual information gathering investigation phase, NIB's assistance should be considered for example when:

- an accident or incident occurs close to the border of another Member State. If available, the neighbouring NIB may be asked for assistance e.g. in the collection of evidence at the accident site, such assistance must be in line with the national legislation,
- > rolling stock, involved in an accident or incident, might have continued the trip to another member state,
- railway undertaking concerned, ECM, or the manufacturer of the rolling stock or infrastructure devices, or organisations holding information useful to the investigation, are established in another Member State.

In the analysis phase, NIB's assistance should be considered for example when:

- one NIB has a special laboratory for conduction of technical analyses.
- the ECM, the manufacturer of the rolling stock or infrastructure devices, or organisations holding information useful to the investigation, are established in another Member State.

# **Good practice**

As far as possible, the assistance of another NIB, should be subject of a previous agreement, e.g. a memorandum of understanding (MoU).

Collection of information can also take place outside of formal assistance, as the Directive permits it.

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# 7.3.2 Assistance from the Agency

In the factual information gathering phase, the Agency's assistance can be considered for example when specific information is necessary on the European level.

The Agency also may help with providing contact to the NSA Network.

During the analysis phase the Agency's assistance can be considered for example when the NIB needs:

- > experts in special fields,
- an impartial assessment on the conduct of an investigation.

As the Agency might have been an interested party, potential conflict of interest should be considered if the Agency's assistance is being sought.

# 7.4 Reports

# Article 24(1):

An investigation of an accident or incident referred to in Article 20 shall be the subject of reports in a form appropriate to the type and seriousness of the accident or incident and the relevance of the investigation findings. The reports shall state the objectives of the investigations as referred to in Article 20(1) and shall contain, where appropriate, safety recommendations.

# Article 24(2)

The investigating body shall make public the final report in the shortest possible time and normally not later than 12 months after the date of the occurrence. If the final report cannot be made public within 12 months, the investigating body shall release an interim statement at least on each anniversary of the accident, detailing the progress of the investigation and any safety issues raised.

There is a clear obligation to publish the investigation report. The NIB must be aware that with the publication of the reports, its work becomes transparent to the public. Hence, the implementation, by the NIB, of some verification processes, to be carried out prior the consultation and prior to the publication of the final report, can ensure the increase in the quality of the published report.

The NIB should establish a process, which in normal circumstance will enable the NIB to publish the final report not later than 12 months after the occurrence, this includes the time needed for the processes between the finalisation of the "technical" work and the publication date.

#### **Good practice**

The NIBs might have to consider the accessibility to different groups. For example, write the report in a language explaining technical terms for the general public and media, translate the report to several languages used in the country or make the report available for people with disabilities.

Some NIBs are in possession of Website (multilanguage), active on LinkedIn,...

The NIB should have a process for the drafting of a report taking into account the principles as agreed by the NIB Network and published in the **Guidance on railway accident and incident investigations reports.** 

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# 7.5 Information to be sent to the Agency

#### Article 25:

- 1. Within 7 days of the decision to open an investigation, the investigating body shall inform the Agency thereof. The information shall indicate the date, time and place of the occurrence, as well as its type and its consequences as regards fatalities, injuries and material damage.
- 2. The investigating body shall send the Agency a copy of the final report referred to in Article 24(2) and of the annual report referred to in Article 24(3).

The NIB should have a process in place allowing a structured communication with the Agency. The Agency will provide guidelines on how this requirement should be fulfilled.

# 7.6 Communication

# Article 23(3):

The investigation shall be carried out with as much openness as possible, so that all parties can be heard and can share the results. The relevant infrastructure manager and railway undertakings, the national safety authority, the Agency, victims and their relatives, owners of damaged property, manufacturers, the emergency services involved, and representatives of staff and users shall be given an opportunity to provide relevant technical information in order to improve the quality of the investigation report. The investigating body shall also take account of the reasonable needs of the victims and their relatives and keep them informed of the progress made in the investigation.

The NIB should have a process in place allowing the structured communication with other parties involved in an accident or incident. There should also be communication between all parties who investigate this occurrence. As far as possible, all relevant parties involved in the occurrence should agree on the chain of events.

# **Good practice**

NIBs perform regular meetings with the stakeholders and share their technical evidence and results with others.

It is within the scope of the NSA, the RUs, the IMs and other bodies and organisations to take measures according to the allocation of responsibilities as set out in the RSD. For that reason, all relevant parties must be regularly informed, in particular in cases of safety relevant findings, which might require immediate reaction.

Openness can take place during the different phases of the investigation. Studies<sup>7</sup> demonstrate that openness in the accident investigation process leads also to support for the results of the investigation and recommendations.

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<sup>&</sup>lt;sup>7</sup> Guidelines for Preparing a Training Toolkit in Event Investigation and Dynamic Learning (ESReDA, 2015) Strategies for dealing with resistance to recommendations from accident investigations (Lundberg et al., AA&P, 2012)

However, when applying the principle on openness, the NIB may not negotiate or discuss with the organisations about their interests, this could threaten the independence of the NIB.

In any case, the NIB has the final decision on sharing of evidence or information in particular if the NIB believes that sharing would affect an on-going investigation.

Safety critical findings, which may have impact on other railway sector organisations in the EU, should be reported to the Agency's <u>safety information system (SIS)</u>. This enables an exchange of information between the NIBs and the NSAs.

#### **Good practice**

The NIBs have implemented processes to enable the organisations to learn during the NIB's investigation and have the opportunity to take effective measures also at a short notice. It has been observed some variety between the Member States on how the principle on openness is applied:

- > In some Member States, the preliminary investigation findings, draft conclusions and draft recommendations are shared with the organisations by means of dialogue and interaction which, for example, take the form of interviews, discussions, regular meetings, workshops and seminars.
  - In other Member States, the NIB informs the stakeholders only on important safety-critical findings during the investigation process.
- > In some other Member States, the NIB follows both procedures, depending on the type and complexity of the investigation and relevance of the findings.

# **Good practice**

Some NIBs have a communication process towards families, stakeholders and media particularly for larger accidents.

# 7.7 Monitoring

#### Article 26(3):

The Agency, the national safety authority and other authorities or bodies or, where appropriate, other Member States to which recommendations have been addressed, shall report back periodically to the investigating body on measures that are taken or planned as a consequence of a given recommendation.

To fulfil the requirements on the content of the annual report, the NIB should implement a process to monitor the feedback of the addressees of the NIB's recommendations. For further details, see the "Guidance on safety recommendations".

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# 7.8 Annual Reports

# Article 24 (3):

By 30 September every year the investigating body shall publish an annual report accounting for the investigations carried out in the preceding year, the safety recommendations that were issued and actions taken in accordance with recommendations issued previously.

The NIB should have arrangements to publish an annual report by 30 September. The annual report must contain at least the following elements:

- > the investigations carried out in the preceding year,
- the safety recommendations that were issued,
- > actions taken in accordance with recommendations issued previously.

The publication of safety recommendations issued by the NIB and the responses of the NSA and other addressees of the recommendations provides transparency of "lessons learned" from accidents.

# **Good practice**

Some NIBs receive updates, quarterly or yearly, from the NSA on the status of open recommendations and uses this information in the annual report.

Article 24(3) does not prescribe a special form for this content.

## **Good practice**

Some NIBs have put information such as (but not limited to):

Foreword (introduction with the principal issues of the year, important themes based on accidents and incidents investigated, principal trends of the investigation activities, organisational challenges, possible issues with resources, ...).

Description of the investigation unit

- legal status,
- organisation and resources,
- > independence,
- > budget,
- > total staff,
- localisation,
- organisation chart,
- **..**

#### Description of the activities

- > Number of Investigations opened and closed
- > Number of preliminary investigations to take the decision
- Participation to the Network (plenary meeting, Task Force,...)
- Meetings / Seminar
- > Training

Brief description of the investigations opened and closed.

Follow up of recommendations.

# 7.9 Exchange of views and experience

# Article 22 (7)

The investigating bodies shall conduct **an active exchange of views and experience** for the purposes of the development of common investigation methods, drawing up common principles for follow up of safety recommendations and adaptation to the development of technical and scientific progress.

This is done through **the NIB Network**, which holds plenary meetings of representatives of its members for:

- > the exchange of experiences,
- > producing and updating guides relative to investigation activities,
- > conducting peer-reviews,
- > facilitating common training, whenever possible.

The NIB Secretariat provided by the Agency is supporting the NIBs in this task.

To comply with this requirement, the investigation bodies should regularly join and actively participate in the NIB Network meetings and activities. The participation of each single investigating body in the work of the NIB Network Task Forces is appreciated.

Time and effort for this cooperation should be taken into account in calculating the necessary resources of the investigating body. Experience shows, particular in smaller NIBs, a benefit from the exchange of information and experience, the additional workload will be rewarded by accelerating the process of learning and establishing.

#### **Good practice**

Besides the participation in the NIB Network, most NIBs are participating actively in Task Forces, regional groups of NIBs, or conduct a regular informal exchange of views by phone, e-mail of other means.

#### 7.10 Peer Review

# Article 22 (7):

The investigating bodies, with the support of the Agency in accordance with Article 38(2) of Regulation (EU) 2016/796, shall establish a programme of peer reviews where all investigating bodies are encouraged to participate so as to monitor their effectiveness and independence. The investigating bodies, with the support of the secretariat referred to in Article 38(2) of Regulation (EU) 2016/796, shall publish:

- (a) the common peer-review programme and the review criteria; and
- (b) an annual report on the programme, highlighting identified strengths and suggestions for improvements.

The peer review reports shall be provided to all investigating bodies and to the Agency. Those reports shall be published on a voluntary basis.

In compliance with Article 22(7), the NIB Network has established a **Peer Review Programme**. This programme is open for any NIB to participate, to monitor their effectiveness and independence, by considering its organisation, processes and outputs (e.g. accident reports, safety recommendations,

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annual reports).

Participation of NIBs in the programme is voluntary but it is strongly recommended, not only to help the NIBs in implementing the requirements of the RSD, but also as a means to demonstrate effective self-regulation of the investigation bodies and reinforce their image to the stakeholders.

The Peer Review process also seeks to assist development of all NIBs by sharing with them strengths and suggestions for improvement identified during the reviews.

This process and guidance for the reviewers and the NIB involved can be found in the Peer Review Handbook developed by the NIB Network and published on NIB network website.

The NIB Network publishes the peer review annual reports highlighting identified strengths and suggestions for improvements resulting from the peer-reviews undertaken to NIBs in each year.

When adopted by the NIB Network, annual reports are published on the NIB website and submitted to the Agency by the NIB Network Chairperson. Annual Peer Review Reports are owned by the NIB Network.

#### **Good practice**

Several NIBs have committed to be peer-reviewed and to supply investigators to participate in peer-review panels.

# 7.11 Quality management

A NIB will need processes to ensure the quality of its investigations.

A certified quality management system is not mandatory for NIBs but, as in all organisations, would be beneficial to improve the processes in place, thus ensuring consistency in investigations, especially in larger organisations.

### **Good practice**

Many NIBs have implemented a quality management process to ensure the quality of the investigation process and the final report. Key features are:

- Defined processes for
  - o the planning of all phases of the investigation process,
  - o the allocation of the resources directly after the decision to investigate,
- Defined processes for the
  - o the preparation,
  - o the checks,
  - o the approval of calculations, analysis, tests, reports (draft and consultation),
- > Guidance for the considerations that must take place for
  - o the decision whether or not to investigate,
  - o internal reviews,
- Means to verify that
  - o all analysis is based on evidence,
  - o all conclusions are based on analysis,

- Constant review whether the scope of the investigation still fits the purpose as new information becomes available. Should the scope be enlarged, further limited or change of direction is needed, cost, time and potential for safety learning should be considered,
- > Periodic review of recommendations to learn which
  - o did not get implemented,
  - o despite implementation allows recurrence (why),
  - o extent changes in the report are made as a result of a consultation process,
- > System to review procedures (on basis of experience) which regulate investigation process,
- > Means of tracking/recording and proper handling of evidence, equipment and procedures,
- Competence management system,
- > Calibration and maintenance of equipment.