

# Independent Accident Investigation— The Right of Each Citizen and Society's Duty

Pieter van Vollenhoven

In this article I want to turn a spotlight on a subject that is very close to my heart— independent investigations into the causes of transport-related accidents and incidents. My interest dates from my national service days as a pilot in the Royal Netherlands Air Force. I gained my first experience of investigating accidents as a lawyer and reserve officer and after returning to civilian life, I have been privileged to chair a number of boards on transport safety, starting first with the Dutch Road Safety Board. Although the main task of this Board is to advise the Dutch government on road safety policy, we also managed to gain some experience of investigating accidents. I have also chaired the Railway Accident Board, which was established 43 years ago to carry out independent investigations into the causes of accidents. The Dutch Transport Safety Board (DTSB) was established on 1 July 1999 for the same purpose to investigate accidents and incidents occurring anywhere in the transport sector—even including pipelines.

## Why A Right to Independent Investigations?

Because independent investigations are the only way to establish exactly what happened and by establishing exactly what happened, they put an end to any public concern in the aftermath of the accident. In addition to the humane aspect of helping the victims and their families come to terms with their suffering, independent investigations teach lessons for the future to prevent similar accidents happening again. Furthermore, independent investigations make our actions transparent, which helps democracy function properly. In other words, independent investigations are of great significance to society. But only if people have a right anchored in law to independent investigations can we guarantee that they will be carried out.

## But Why Independent Investigations?

Let me now turn to the need for independence. Why do I believe that accidents and incidents should be investigated independently? Because a judicial inquiry attempting to apportion blame (and perhaps financial compensation for the victims) is not the right 'instrument' for finding exactly what happened. If lessons are to be learned for the future and steps are to be taken to prevent the same thing happening again, it is essential to find out what went wrong and caused the accident.

In fact, it has been known since 1951 that a different type of accident investigation, or what we now call in-depth investigation, is needed. Although the term 'independent' was not used at the time, Annex 13 to the International Civil Aviation Organization (ICAO) Convention adopted in 1951 specified that an investigation into the causes of an accident had to be held separately from the investigation into the party or parties to blame.

Although this was a major conceptual

step, it was limited in some ways because the required investigation was not specifically independent and only applied to the aviation sector. I believe this was because society of the 1950s was unaware that the scope of a criminal inquiry is restricted to discovering the direct cause of an accident, not the underlying causes. Moreover, any possible suspects identified during such a criminal inquiry are not obliged to make statements that might incriminate them.

Clearly, establishing the truth by independent investigation requires statutory guarantees to ensure that witnesses are free to tell the truth without fear of legal consequences. An independent investigation cannot be successful if a government simply establishes a committee. Successful, independent investigations need to be anchored in law with regulations and provisions governing the investigators' powers, such as the power to decide which statements and reports can be made public. Moreover, the final report may not be used as admissible evidence in subsequent judicial or civil proceedings. In other words, we are talking about two



Mr van Vollenhoven (second from left) at site of fatal railway crossing accident in Voorst on 16 June 2000 (DTSB)

entirely different methods—independent and judicial—with a completely different legal framework for the independent investigation. I have many reasons for feeling so strongly about the need for independent investigations—transparency is one reason. Safety is a complex subject in all business sectors and is beset by many conflicting interests. All too often, safety takes a back seat when profits come into play. Indeed, in some cases, the parties involved stand to gain if the true causes of an accident are never revealed.

Some examples of where safety has played a secondary role to other interests include designers cutting the number of expensive emergency exits in tunnels; haulage companies dangerously overloading trucks to increase profits; ferry boat operators who avoid port delays by not chaining down vehicles in bad weather; or individuals like you and me breaking speed limits because we are in a hurry to meet a deadline or get to a meeting.

A recently leaked letter in the aviation sector said, 'It is not the purpose of maintenance to discover defects, but to establish whether the plane can still safely be used for the coming period.'

In short, business is often a question of priorities and sadly, safety is not always a priority. I feel that this fact alone is sufficient to justify the need for independent investigations.

Long before the Space Shuttle *Challenger* crash, there had been memoranda with warnings about possible leaks in the O-rings of the solid-fuel boosters, but suspending the space shuttle programme would have been very expensive.

Two days before the 2000 Hatfield rail crash, Railtrack Chief Executive Gerald Corbett said that the British railway privatization had made the nation's railways less safe and more chaotic. Privatization put a structure in place to produce maximum returns for Railtrack shareholders with profits taking priority over safety. Railtrack admitted

responsibility for the accident, which was caused by unrepaired track, when it said that it knew the track section was in poor condition and that 81 more sections were in a similar state. At the time of the 1999 Paddington crash, Railtrack was making profits of £1.9 million a day but found better safety systems too expensive to install!

I should like to give two examples that clearly demonstrate the striking difference between investigation to apportion blame, and investigation into the causes of an accident. In Holland, a motorist caused a very serious accident by apparently ignoring a red light. Witnesses stated that the light was red, but he *insisted* that he had not seen the light. To the police, it seemed quite obvious that he was to blame. But a similar accident occurred at the same junction 2 years later and the witnesses' statements were almost identical to those of the previous accident. Subsequent accident investigation showed that a wet road in combination with light at a certain angle produced an optical illusion that prevented motorists seeing the traffic lights.

My second example has to do with a train that jumped wrongly switched points at 120 km/h when the normal maximum speed for the points in that switched position was 40 km/h. Luck prevented the train derailling at high speed but the police were interested because two track workers were killed. The points were being serviced when the disaster nearly happened and had moved because the maintenance workers had not secured them according to the rules. At first it seemed clear who was to blame but independent investigation showed that no-one had been following the written rules for years. Why? Because if the workers followed the book they could only service one or two sets of points each day, but they were expected to service six or seven sets.

Moreover, train services were not to be disrupted by the maintenance work. In

other words, the rules of practice—which were being applied even in training—were at odds with the paper rules. And it turned out that the engineers who had written the rules had never discussed matters with the maintenance workers or *vice versa*.

In the end, the independent investigation led to very different conclusions about the causes of the accident and the report of the Safety Board led to the decision to drop all criminal charges.

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### **Tensions between Independent and Criminal Investigations**

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It cannot be denied that there is some tension between the two types of investigations. The body of civil law on the subject is expanding rapidly and where criminal proceedings are instituted, there is an increasing tendency to prosecute rather than to drop charges. Moreover, it is impossible to give watertight legal guarantees that the results of independent investigations will not be used in criminal or civil proceedings. This conflict has been the subject of many international conferences but experience has shown that independent investigations can be carried out in good faith. People attach so much value to them that the general view expressed at conferences is that there is a moral obligation to enhance safety through independent investigations and if litigation is a risk, then so be it.

But there is one another essential difference between two criminal and independent investigations. I refer here to independent investigations called incident studies, which are very important in enhancing safety.

Since prevention is better than cure, safety boards are now increasingly turning their attention to incident studies. I recall an incident involving a Boeing 747 that had been cleared for take-off to Los Angeles at the same moment a tractor was given permission to tow an aircraft across the

runway. Weather conditions were poor, but the Boeing 747 pilot was able to abort the take-off at the last minute. It is unlikely that any of the passengers would have survived had there been a crash. Although criminal justice authorities take no action when such incidents occur, they are of vital importance to independent investigations.

Despite the strict distinction between the two types of investigation, there is some cooperation with the justice authorities. At the start of an investigation, the police can play a useful role as fact finders. In the Netherlands, the DTSB gives police officers extra training to enable them to carry out on-the-spot investigations. We also brief them on the type of accident that should be getting their closest attention.

The police reports are sent to both the justice authorities and the DTSB. In turn, the DTSB has agreed to report serious offences that it encounters in the course of its work. We do not report more minor offences. For example, if we come across a captain who has been sailing a ship without proper papers, we will point this out to him ourselves.

But if independent investigations are used, any serious accident will require simultaneous independent and criminal investigations, which can lead to problems but is not a reason to abandon independent investigations.

**Is the Need for Independent Investigations Still a Subject of Debate?**

Whenever a serious accident occurs, the media, general public, victims and their families, members of parliament and the government usually all call for an independent investigation. In short, no-one questions the need for them. But how independent are these investigations in practice? Since serious accidents happen infrequently, few countries have permanent independent committees

solely responsible for investigating their causes. Not only were such committees regarded as unnecessary, but it was also felt that their members would soon lose their expertise due to lack of work. Therefore, in many cases, independent investigations are carried out by government inspectors. The government has increasingly adopted responsibility for safety, and is responsible for both drafting regulations and monitoring compliance. In fact, modern society identifies government with safety so strongly that safety and government have long been two sides of the same coin.

In some cases, to ensure the independence of an investigation, the government appoints a special committee, chaired by an independent person, such as a judge. But the committee itself is usually made up of government inspectors, or people working for them. After all, they have the needed expertise and society usually accepts this. Furthermore, this setup is often the only practical way of performing an investigation apart from calling in private consultants or university experts. More

recently, the public has begun questioning the worth of such investigations. If the intention is to learn and if so many conflicting interests are involved, investigations must be carried out independently of all interests except one—safety. There must not be even the slightest hint that any other interest has influenced the investigation's findings or recommendations. But government inspectors can never be truly independent because they are closely involved in drafting regulations and monitoring compliance, making them both judge and jury. As a consequence, people—especially victims—have increasingly started asking what any involved parties might be concealing, although there is nothing to conceal. Any hint of partiality is enough to lead to a public outcry.

In short, the call for truly independent investigations into the causes of accidents has become louder and louder but the word 'independent' has many different interpretations. The *American Heritage Dictionary* defines independent as 'free from the influence, guidance, or control of another or others.' Regrettably, this



Getting to Amsterdam Airport Schiphol by train is convenient. It is only 15 minutes from Amsterdam Central Station to Schiphol Station directly underneath the airport. (Amsterdam Airport Schiphol)

definition does not apply to many independent investigations.

In my experience as Chairman of the International Transportation Safety Association (ITSA), I have found governments reluctant to relinquish their authority for holding independent investigations. They are convinced that their inspectors act in good faith and they often interpret critical findings as a motion of no confidence. But what governments fail to understand is that however well they carry out investigations, they are always open to criticism that can only be stopped by setting up independent safety boards that are publicly funded, anchored in law, and address recommendations directly to the concerned parties.

Of course, total independence can never be achieved because a board has to be appointed and funded by government. Although some existing safety boards have their own budgets, they do not have the \$60 million needed to salvage an aeroplane that has crashed into the sea like the TWA 800 crash off Long Island and the Swiss Air crash off Halifax.

However, both methods of making appointments and providing funding can be transparent and free of allegations of partiality.

Another factor making the subject of safety so complex is what I would call pigeon-holing. As I have pointed out, safety has slowly but surely become a government responsibility. Often several government departments are responsible for the many issues that fall under the safety heading. As a result, the wheel is being invented many times over and safety thinking has become very sectional with the result that independent investigations may be completely accepted in one sector and a taboo subject in another.

As an example, in the Netherlands we now have 32 different inspectorates as well as the regular police force. These inspectorates compete with each other and have different enforcement regimes.

Work frequently gets done twice or not at all. In practice this means we are faced with an army of inspectors and supervisors responsible for enforcing a maze of laws and regulations. The enforcers seldom know the powers that each group has or what problems they can expect to find. They have no idea when the other groups will be holding inspections or what they will inspect. Situations like this are both a breeding ground for corruption and a threat to safety in general. And when it comes to projects, safety is often overlooked completely as in the previous example of tunnel designs with insufficient fire escapes.

These types of problems became so commonplace in the Netherlands that government ministries introduced Safety Impact Reports using checklists covering all safety aspects to prevent corners being cut by planners, etc.

A third factor that complicates matters is the changing notion of safety as a shared responsibility. Since the 1980s, government has started to view safety as a responsibility of society as well. This change has its roots in crime prevention as an increasing number of agreements and social 'covenants' call on the public to do their share in crime prevention. I am alarmed at the speed with which this notion is spreading to other safety-related fields. In its report on the TWA 800 crash, the White House Commission on Aviation Safety and Security (Gore Commission) recommended, '...that government and industry come together in a new partnership—this new partnership is in fact our first recommendation.'

I am convinced that public-private partnerships of this kind will leave a mark on the way we tackle the whole issue of safety in the future.

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### **Establishment of European Transport Safety Council**

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In the late 1980s, Europe's roads were

claiming the same number of lives each year as the number of American soldiers lost in 14 years of war in Viet Nam. This huge loss clearly could not be allowed to grow unchecked and in February 1990, as Chairman of the Dutch Road Safety Council and acting on behalf of the Deutsche Verkehrssicherheitsrat and the British Parliamentary Advisory Council for Transport Safety I advised Mr Karel van Miert, the European Transport Commissioner to set up a European Road Safety Council.

In our talks, Mr van Miert asked us to investigate whether the remit could be extended to cover the entire transport sector. We presented our final report in October 1991, concluding that the European Commission (EC) did indeed need an independent advisory council for transport safety. Unfortunately, the EC did not adopt our recommendations. Although such an arrangement would be quite normal in the Netherlands, perhaps it was asking too much to expect the Commission to fund a permanent organization that could be expected to criticize it!

Consequently, in 1993 the Dutch, German and British safety boards decided to take matters into their own hands by independently establishing the European Transport Safety Council (ETSC) modelled on the British Parliamentary Advisory Council for Transport Safety (PACTS).

As a founding and board member, I am delighted to say that ETSC has grown into an authoritative advisor on transport safety, serving both the European Union (EU) and its Member States. The Council has been successful due to the inspiring leadership of our Chairman, Herman de Croon, and our Director, Jeanne Breen who brought vital experience as Executive Director of PACTS to ETSC. I also like to mention our close cooperation with the European Commission, which supports our reports financially, and the European Parliament.



Madurodam miniature city near The Hague is a 1/25 scale model of famous Dutch buildings and towns. It also has various transport modes including 4 km of railway tracks, etc. (Netherlands Board of Tourism (left) and EJRCF)

## International Transportation Safety Association

In the same year that the ETSC was established, I was working with transport safety boards in the USA, Canada and Sweden to set up ITSA with the aim of uniting all the world's multi-modal safety boards and several single-mode safety boards with responsibility for carrying out independent inquiries into the causes of accidents and incidents. ITSA members exchange a lot of information, help each other with investigations and promote independent investigations worldwide. As Chairman of ITSA, one of my jobs is promoting independent inquiries!

## The Roots of Accident Investigations

As I have already pointed out, the roots of accident investigations date from the aviation industry of the 1950s but it took some 30 years until the ICAO Convention concluded that investigations should be carried out independently.

The EU went a step further in 1994 when EU Directive 94/56 specified that accident investigations should be carried out by a permanent, independent organization.

As I have said, I firmly believe people should have a legal right to independent investigation and now they can claim that right in Europe based on this EU Directive. However, many countries have been slow to transpose both the ICAO Convention and the EU Directive into national law. In the Netherlands, for many years investigations

into aircraft accidents were linked to disciplinary procedures. Our laws were only amended in 1990 to bring them into line with the 1951 ICAO Convention. It took us 40 years to comply with an international agreement and I regret to say that the Netherlands is not an exception.

## Establishment of National Transportation Safety Board

The only truly independent accident investigation board was for many years America's National Transportation Safety Board (NTSB), which was set up in 1967. Right from the start, the NTSB was responsible for investigating all transport accidents in aviation, shipping, railways, roads and pipelines.

In general, the NTSB is the godparent of independent investigations; its independence was guaranteed because it was set up as a permanent, autonomous organization with a remit covering all transport accidents. In doing so, the Congress aimed to put safety in the spotlight and a sector-by-sector approach would have made this far more difficult.

The American experience has left a very strong mark on further developments in this field. First, since the NTSB is independent, no one questions its impartiality and its recommendations have great authority.

Second, the American experience has taught us that every accident investigation follows the same procedure. As a result, Sweden and Finland have set up accident investigation boards to investigate

accidents in every sector, not just transport. Canada, New Zealand, the Netherlands, Australia and Indonesia, and many other countries, have set up multi-modal transport safety boards.

Third, a permanent independent organization like the NTSB can ensure that its recommendations are followed up.

## Importance of Following Up Recommendations

An independent investigation can only be successful if the investigators and the report they produce are of the highest standard. The accepted procedure is to send a confidential draft report, sometimes complete with recommendations, to all parties for comments. The board approves the final report. By using this method a consensus can be reached on what exactly happened. But apart from the accident analysis, the report also contains recommendations addressed directly to the parties concerned. In the Netherlands, these parties are legally obliged to respond within 1 year of the report's publication. In the USA and Canada, only the departments of transport are obliged to report back within 90 days. Other parties respond on a voluntary basis! However, the NTSB places the recommendations (and the names of the people involved) on a Most Wanted list. As a consequence, 80% of the NTSB's 11,000 recommendations on improving safety issued over 35 years have been followed up. I chaired the Dutch Road Safety Board for nearly 20 years. Looking back, our recommendations disappeared into desk drawers much more often than the

NTSB's recommendations! In short, NTSB has taught us many useful lessons.

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### Single-sector or Multi-modal Boards?

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Another sensitive issue is the question of whether independent investigations should be organized sector-by-sector or on a multi-modal basis. Are we talking about an Aviation Safety Board, a Railway Accident Investigation Board or a multi-modal Transport Safety Board?

Experience shows that each transport sector is extremely reluctant at first to work together in a multi-modal board. Typically they ask, 'What has aviation to do with shipping, or shipping with railways?' Most multi-modal safety boards are set up under pressure from parliament usually through motions of individual members.

I do not advise countries to set up single-sector boards. The trend is now towards an integrated approach to safety. Investigators need training and investigations always follow the same procedure whatever the accident. Recommendations have to be followed up and the procedure is the same whatever the accident. Practice has shown that separate boards are too poorly equipped to do their job properly and they are always at risk of cost-cutting.

The key to high-quality investigations is to join forces, to work together, both nationally and internationally. I do not know of a single multi-modal transport safety board that would want to split into five separate sector-based boards. The international trend is to set up multi-modal boards.

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### National or Single EU Board?

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This brings me to my final point—should Europe be aiming for national boards or a single European board? I believe our first aim should be to set up national boards under the umbrella of a European

organization like ETSC that would both provide a European viewpoint on the various recommendations of the boards and identify where the EC needs to act. Later, the national boards could merge into a single European Safety Board comparable to the NTSB.

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### Proposals

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To sum up, I would like to make the following comments.

- Independent investigations into disasters, accidents and incidents are invaluable to society in general and to ensuring safety. They put an end to public concern in the wake of an accident, help the victims and their families to come to terms with what has happened, teach lessons for the future, and prevent the same thing happening again.

They are an important aid in safeguarding democracy by making our actions transparent.

- In many cases, investigations to apportion blame are not the right instrument to discover exactly what went wrong because they tend to look at direct causes and not underlying causes. Moreover, suspects are not obliged to make self-incriminating statements.
- Under the provisions of the ICAO Convention and EU Directive 94/56, people can only claim a legal right to independent investigations in the aviation sector. However, there is no legal or moral logic to restricting

independent investigations to this sector.

- Independent investigations should be anchored in law so that they can be kept strictly separate from judicial investigations to apportion blame. Whenever a serious accident, disaster or incident occurs, two separate investigations will be needed: one into the causes and another to assign blame.
- Members of Parliament, government ministers, victims and their families, the media, and the public should actively lobby for independent inquiries in their countries.
- The EC should declare EU Directive 94/56 applicable to all transport sectors. Later on, independent investigations can be introduced in sectors such as defense, industry, health, environment, etc.

The public has a right to live in a society where causes of accidents, etc., are investigated truly independently. I sincerely hope that the EC and the European Parliament will do all in their power to promote independent investigations in the EU. ■

### Acknowledgement

This article is a synthesis of two speeches presented in 1999 at the International Symposium on Independent Accident Investigation in Tokyo and in 2001 at the European Transport Safety Council in Brussels.



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Mr van Vollenhoven is Chairman of the International Transport Safety Association (ITSA), board member of the European Transport Safety Council (ETSC), and husband of HRH Princess Margriet of the Netherlands. After graduating in law from Leiden University in 1965 he became a pilot in the Royal Netherlands Airforce. He has been Chairman of the Dutch Road Safety Council, the Railway Accident Board and many other victim support, wildlife and other organizations.