#### POPULAR SCIENCE ARTICLE

# ITSA: the Network of Accident Investigation Agencies Worldwide

María Constanza Mones Ruiz International Relations Analyst.

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### Abstract

The International Transportation Safety Association (ITSA) was established in 1993 to contribute to public transportation safety through non-judicial investigations. Today, the association brings together accident investigation boards from more than seventeen member countries.

This article traces the history of its founding and the purpose and objectives of its work.



### What is ITSA? How was it created?

ITSA is an international network of heads of independent safety investigation authorities. ITSA covers all modes of transportation, including aviation, marine, railways, road transport, pipelines and underground infrastructure.

To better understand the emergence of ITSA, it is necessary to go back nearly six decades to the establishment of the world's first Safety Investigation Agency (SIA). The idea of conducting "independent investigations" into the causes of accidents and the concept of "safety recommendations" to improve transportation safety were established in the United States in 1967 with the creation of the National Transportation Safety Board (NTSB). These concepts became the principles that guided the creation and actions of various SIAs around the world, some of which eventually became part of ITSA.

The NTSB was the world's first independent investigation agency to cover all modes of transportation. Two decades later, with the trajectory and experience accumulated, the foundational concepts and the multimodal model of the NTSB gained momentum and were replicated worldwide. During an international conference held in Amsterdam, Netherlands, NTSB positive experiences in unifying the investigation of all modes of transportation within a single multimodal agency convinced other countries of the usefulness and necessity of promoting this philosophy of independent investigations.

Sweden, for example, established its own independent safety investigation body in 1978, initially created to investigate aviation accidents. Later, in 1990, this body was transformed into a multimodal agency called Statens Haverikommission (SHK), whose investigations began to cover not only transportationrelated matters but also all kinds of accidents and serious incidents. The example of the SHK is especially relevant, as it anticipates the trend that several SIAs around the world have followed in more recent years.

Therefore, other independent safety investigation bodies of a similar nature were created in the following years. To mention just a few of the most prominent, organizations were established in Norway in 1989; in Canada and New Zealand in 1990; in the Netherlands in 1993; in Finland in 1996; Taiwan in 1998; Australia in 1999; the Republic of Korea in 2006; and Japan in 2008. All of them are now part of ITSA.

A particular case worth mentioning due to its special nature is that of the Commonwealth of Independent States. This is a political, economic, and military organization that brings together states from Central Asia and Eastern Europe, and its current members include ten of the fifteen countries that made up the former Soviet Union. This organization established an SIA specifically focused on the aviation sector, the Interstate Aviation Committee (IAC), which is currently a member of ITSA, representing the states that comprise it.

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#### Foundation, Purpose, and Objectives of ITSA

During the first World Congress on Transportation Safety, which took place in November 1992 at the Delft University of Technology, located in the eponymous city in the western Netherlands, the leaders of the transportation safety authorities of Canada, the United States of America, the Netherlands, and Sweden agreed to begin working together to establish an international association capable of bringing together the various SIAs.

Less than a year later, on October 22, 1993, the same authorities met at Het Loo Palace in Apeldoorn, in the central-eastern Netherlands, where they agreed to establish what we now know as ITSA, thereby making the four states they represented its founding members. ITSA was founded with the objective of promoting independent and non-judicial transportation accidents investigations, in order to contribute to the safety of transportation users. To achieve this, it sought to bring together accident investigation agencies across all modes of transportation, learn from the experiences of other countries, and share safety information.

In September 2017, during a meeting held in Tokyo, Japan, the members decided to review and adopt the so-called 'ITSA Terms of Reference,' establishing an annual meeting of all member agencies. Beyond this, member agencies are encouraged to share information, and to discuss and collaborate bilaterally and outside of ITSA's formal annual meetings.

It is worth noting that the organization was created with a cooperative approach, to the extent that currently the SIAF of Finland provides support for secretarial services, while the SHK manages the organization's website.

# What are the requirements for an independent investigation agency to become a member of ITSA?

Despite its global nature and the diversity of its members, not all SIAs around the world can join ITSA, as the association requires compliance with certain specific criteria to be admitted as a member. In total, there are eleven requirements, which are detailed below.

- 1. The SIA is organized as a permanent entity, separate from any regulatory body.
- 2. The legal basis for the functioning of the SIA is to be found in statutory law, such as in an act of parliament, a government regulation or similar legislative document.
- 3. The SIA enjoys a budget of its own and it does not have to rely on financial contributions on a case by case basis from any other body, including any branch of government.
- The budgetary means of the SIA shall be sufficient to allow it to have its own office space, some permanently employed qualified staff, and other necessary resources.
- 5. The task of the SIA shall be of a clearly non-judicial nature and shall have as its sole purpose to promote safety.
- Under no circumstances shall the investigations or reports of the SIA focus on issues of guilt, blame or liability.
- 7. The SIA shall have no role in approving or warranting components of a transportation system as safe for use.
- 8. The SIA is empowered to decide at its own discretion what occurrences to investigate, unless statutory law specifies such criteria.
- 9. The SIA shall have the powers necessary to initiate and fully carry out a safety investigation independently and separately from any other form of investigation into the same occurrence.
- 10. The SIA shall have the right to freely publish investigation reports, including any conclusions and safety recommendations it deems relevant, without the need for consent from any other body, including any branch of government.
- 11. The SIA is recognized by its peers as a world leader in its field as demonstrated through the

successful completion of major investigations involving multiple countries, the implementation of recommendations that result in major safety improvements in multiple countries, and/or the development of new investigation tools and techniques adopted by other countries.

#### Who are the current members of ITSA?

The organization currently has eighteen members. Seventeen of them are States, each represented by its own independent safety investigation agency (SIA). However, the eighteenth member is an SIA that represents ten countries and participates on behalf of the Commonwealth of Independent States, whose case has already been mentioned.

ITSA has a global geographical presence, with members from almost all continents: three from America, five from Asia, six from Europe, three from Oceania, and ten from the IAC, whose territories are located in Central Asia and Eastern Europe.

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From America, the following countries participate: Argentina, represented by the Transportation Safety Board (JST); Canada, by the Transportation Safety Bureau of Canada (TSB); and the United States of America, with the pioneering NTSB. It is important to highlight that, in 2021, Argentina became the only country in Ibero-America to be part of the association. Furthermore, during the 2022 annual meeting, it was unanimously decided that Argentina would preside over the organization in the 2023-2024 period and would be responsible for organizing the next annual congress.

From Asia, the following countries participate: Korea, represented by the Aviation and Railway Accident Investigation Board (ARAIB); India, by its Commission of Railway Safety (CRS); Japan, by the Japan Transport Safety Board (JTSB); Singapore, by the Transport Safety Investigation Bureau of Singapore (TSIB); and Taiwan, with the Taiwan Transportation Safety Board (TTSB). From Europe, the following countries participate: Finland, with the Safety Investigation Authority (SIA); France, with the Bureau d'Enquêtes et d'Analyses pour la sécurité de l'aviation civile (BEA); Norway, with the Norway Safety Investigation Authority (NSIA); the Netherlands, with the Dutch Safety Board (DSB); the United Kingdom of Great Britain and Northern Ireland, with its Board of Transport Accidents Investigators (BTAI)—which represents the local equivalents in the aviation, maritime, and rail sectors—and Sweden, with the Swedish Accident Investigation Authority (SHK).

From Oceania, the following countries participate: Australia, with the Australian Transportation Safety Bureau (ATSB); New Zealand, with the Transport Accident Investigation Commission (TAIC); Papua New Guinea, with the Accident Investigation Commission (AIC); and finally, as a special case, the Commonwealth of Independent States, represented by the IAC.

#### 2023 ITSA Annual Meeting

The JST played a prominent role during the recent Annual Meeting of the International Transportation Safety Association (ITSA), as it assumed the presidency for the upcoming term (June 2023 to June 2024), and Buenos Aires will host next year's meeting. It also presented several panels: one titled 'Legal Challenges' focused on the difficulties safety boards face when the parties involved in investigations do not adequately cooperate. In the second panel, titled 'Safety Management System, Database, and Training,' the differences in developing training plans for frontline staff were discussed, as well as the challenges of establishing an international safety data repository. The presentation received approval from the ITSA 2023 Organizing Committee, and a comprehensive presentation was prepared to share with attendees.





The JST International Relations Area interviewed Janes Meares, President of the Transport Accident Investigation Commission of New Zealand (TAIC) and Vice President of the Electoral Commission of New Zealand.

## In your opinión, what are the advantages of being part of ITSA?

Although international legislation requires the existence of independent organizations focused on safety, not all countries (to my knowledge) have created them, nor are all of them multimodal. For example, while maritime investigators might be part of MAIIF, ITSA covers a range of different areas. In New Zealand, we investigate aviation, maritime, and rail accidents. The International Transportation Safety Association (ITSA) is a group of 16 independent authorities for safety investigation. Its mission is to improve transportation safety in each member country by learning from each other's experiences. I have been with New Zealand's independent transportation safety agency, the Transport Accident Investigation Commission since 2016, and I had the honor of attending my first ITSA meeting in Tokyo in 2017. I was struck by the similarity of the issues we face and how we are established as independent bodies. I also know that if we had a serious accident here in New Zealand, we could seek help from our associated agencies around the world.

## How does cooperation among ITSA members work during investigations?

Investigations are often carried out by a single country; however, for example, the investigation into the sinking of the ferry Estonia requires cooperation among several countries. I understand that the Swedish and Finnish transportation safety authorities (both ITSA members) have collaborated with Estonian investigators to review the causes and circumstances of this terrible accident, which claimed the lives of 852 people. Closer to home, we reached out to our Australian counterparts, the ATSB (Australian Transport Safety Bureau), regarding the sinking of a commercial vessel, the 'Gulf Livestock,' in the South China Sea. Although Panama conducted the investigation as the flag State, New Zealand and Australia were stakeholders as they lost citizens in that tragedy. Additionally, we have collaborated with the ATSB, with our Canadian counterparts (the TSB -Transportation Safety Board of Canada), and with the RAIB of the United Kingdom to review our processes and provide assistance in peer reviews. Furthermore, we reach out to our ITSA counterparts to assist us with specialized technical knowledge when necessary.

#### Your panel at ITSA was titled 'Trends as a Consequence of Climate Change and COVID-19.' Why do you think it is important to analyze these phenomena from the perspective of transportation safety?

We eventually focused on climate change. While we must always be prepared for another pandemic, the challenges posed by the operation of COVID-19 seem to have largely been left behind or have become commonplace. Climate change will present many challenges to the transportation sector. For example, in New Zealand, we have recently experienced three derailments caused by unexpected and severe flooding, and our main international airport in Auckland had to close in January due to complete flooding. Severe weather conditions cause various problems, such as the dangers of having to use firefighting planes and helicopters when extreme heat triggers wildfires, and the potential need for airplanes to carry additional fuel to divert in case of bad weather. As I write this, I read that Phoenix, Arizona, is expected to reach temperatures of 43.3 degrees Celsius. It's not hard to imagine wildfires, bending railway lines, and melting runways. Making our transportation infrastructure safe under these circumstances will be a challenge for all countries.

## What are the advantages of different countries hosting ITSA, and what do you think about the next meeting being held in Argentina?

Many of the challenges we face may not be identical, but they are similar enough for us to learn from each other. We are all small agencies with limited resources, and sharing experiences—not only about investigations but also about the best ways to organize ourselves—has invaluable value. The JST is the only South American member of ITSA. One of the requirements of our mandate is that each member should be willing to host an ITSA meeting. It is wonderful that the JST has accepted to be the host in 2024. I am very excited to go to Buenos Aires. We have much to learn from each other.

## Is there a particular topic you would like it to be discussed next year?

I believe we need to think more about space. It has been quite an important topic this year, and people clearly felt that they would have liked to know more about what different agencies are doing in this regard. Many countries are developing their space capabilities and reviewing what constitutes airspace and what constitutes outer space. For example, while New Zealand has space capability, with regular launches from a reasonably remote part of New Zealand called the Mahia Peninsula, we are not the agency responsible for investigating an accident that could arise from it. Many things are happening in this area. While the ICAO - International Civil Aviation Organization - was established in 1944 to promote the safe and orderly development of civil aviation worldwide, there is currently no comparable international organization for the development of space travel and exploration. Since ITSA members could become the agencies responsible for conducting non-punitive safety investigations related to space, it is very important for us to understand what is happening in this area.

#### ITSA has a planning committee and a membership committee: How do they work? What are the main requirements for being part of them?

The ITSA terms of reference specify who must be part of the planning committee and who must be part of the membership committee. They ensure a diverse range of attendees from different parts of the world. The planning committee is always chaired by the president of ITSA, who will currently be Dr. Julián Andrés Obaid, in his capacity as president of the JST. The planning committee also includes the president of the last organization that hosted the annual meeting (in this case, Taiwan), and one member from each of the agencies from the Americas, Europe, Asia, and Oceania. The membership committee consists of three ITSA members who represent at least two of the agencies from the Americas, Europe, Asia, and Oceania. I currently chair the membership committee, representing Oceania (and the ATSB is part of the planning committee, also representing Oceania). The membership committee reviews requests for observer status and membership applications. There are certain criteria that any entity requesting membership must meet, particularly the need for independence. However, we only need to meet when a new application arrives, which is relatively rare. Argentina has been the latest addition to the ITSA family.